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Board Members (1 copy each)

- Mr B Simcock (Chair)
- Ms S Webb (Deputy Chair)
- Ms S Christie
- Ms C Beavis
- Mr M Gallagher
- Mrs MA Gill
- Ms T Hodges
- Mr D Macpherson
- Mrs P Mahood
- Ms S Mariu
- Dr C Wade

Executive Management Team

- Dr N Murray, Chief Executive
- Mr B Paradine, Executive Director, Waikato Hospital Services
- Ms M Chrystall, Executive Director, Corporate Services
- Mr N Hablous, Chief of Staff
- Mr D Hackett, Executive Director, Virtual Care and Innovation
- Mrs S Hayward, Director of Nursing & Midwifery
- Ms M Berryman, Executive Director, Maori Health (acting)
- Dr T Watson, Chief Medical Advisor
- Mr I Wolstencroft, Executive Director, Strategic Projects
- Ms J Wilson, Executive Director, Strategy and Funding
- Dr D Tomic, Clinical Director, Primary and Integrated Care
- Mr D Wright, Executive Director, Mental Health & Addictions Service
- Mr M Spittal, Executive Director, Community & Clinical Support
- Ms M Neville, Director, Quality & Patient Safety
- Ms L Aydon, Executive Director, Public and Organisational Affairs
- Ms T Maloney, Commissioner, Women's Health Transformation Taskforce
- Prof R Lawrenson, Clinical Director, Strategy and Funding
- Mr C Cardwell, Executive Director, Facilities and Business
- Mr M ter Beek, Executive Director, Operations and Performance
- Mr P Mayes, Ministry of Health
- Minute Secretary
- Board Records

Contact Details:
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Next Meeting Date: 24 May 2017

Waikato District Health Board

WAIKATO DISTRICT HEALTH BOARD

Agenda

Board

Date: **26 April 2017**

Time: **1.30pm**

Place: **Level 1**
Hockin Building
Waikato Hospital
Pembroke Street
HAMILTON

Meeting of the Waikato District Health Board

to be held on Wednesday 26 April 2017
commencing at 1.30pm at Waikato Hospital

AGENDA

Note: Board member only session will be held at 1pm

Item

1. Apologies

2. **INTERESTS**
- 2.1 Schedule of Interests
- 2.2 Conflicts Related to Items on the Agenda

3. **MINUTES AND MATTERS ARISING**
- 3.1 Board Minutes: 22 March 2017
- 3.2 Committees Minutes:
  - 3.2.1 Iwi Maori Council: No meeting held in March 2017
  - 3.2.2 Performance Monitoring Committee: 12 April 2017
  - 3.2.3 Health Strategy Committee: 12 April 2017

4. **CHIEF EXECUTIVE REPORT**

5. **FINANCE**
- 5.1 Finance Report

6. **PERFORMANCE REPORTING**
- 6.1 Health Targets
- 6.2 Provider Arm Key Performance Dashboard
- 6.3 Strategy and Funding Key Performance Dashboard

7. **PLANNING**
- 7.1 Health Care Home
- 7.2 Creating Our Futures Programme Business Care – Strategic Assessment

8. **WAIKATO DHB POSITION STATEMENTS AND POLICIES**

No items

9. **PRESENTATION**

No items

10. **PAPERS FOR INFORMATION**

No items

11. **NEXT MEETING**

11.1 24 May 2017

RESOLUTION TO EXCLUDE THE PUBLIC
NEW ZEALAND PUBLIC HEALTH AND DISABILITY ACT 2000

THAT:

(1) The public be excluded from the following part of the proceedings of this meeting, namely:

Item 12: Minutes – Various
- **(i) Waikato District Health Board for confirmation: Wednesday 22 March 2017 (Items taken with the public excluded)**
- **(ii) Audit and Corporate Risk Management Committee – to be adopted: Wednesday 22 March 2017 (All items)**
- **(iii) Performance Monitoring Committee – to be adopted: Wednesday 12 April 2017 (Items 14-16)**
- **(iv) Midland Regional Governance Group – to be received: Friday 3 March 2017**
- **(v) Midland Regional Governance Group – to be received – Friday 31 March 2017**

Item 13: Risk Register – Public Excluded
Item 14: Chief Executive's Report – Public Excluded
Item 15: Taylors Linen and Laundry Contract – Public Excluded
Item 16: Iwi Maori Council Representatives on Board Statutory Committees – Public Excluded

(2) The general subject of each matter to be considered while the public is excluded, and the reason for passing this resolution in relation to each matter, are as follows:

GENERAL SUBJECT OF EACH MATTER TO BE CONSIDERED		REASON FOR PASSING THIS RESOLUTION IN RELATION TO EACH MATTER
Item 12(i-v): Minutes		Items to be adopted / confirmed / received were taken with the public excluded
Item 13:	Risk Register	Avoid inhibiting staff advice about organisational risks
Item 14:	Chief Executive's Report: Mediation, Medical School	Negotiation will be required
Item 15:	Linen and laundry contract	Negotiation will be required
Item 16:	IMC nominations on the Board's statutory committees	Protect the privacy of natural persons

(3) This resolution is made in reliance on Clause 33 of Schedule 3 of the NZ Public Health & Disability Act 2000 and the grounds on which the resolution is based, together with the particular interest or interests protected by the Official Information Act 1982 which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public are as follows:

Item 12:	**As shown on resolution to exclude the public in minutes.**
Item 13:	**Section 9(2)(c) of the Official Information Act 1982 – To avoid prejudice to measures protecting the health or safety of members of the public.**

Item 14-15:	**Section 9(2)(j) of the Official Information Act 1982 – To enable the Waikato DHB to carry on negotiations without prejudice or disadvantage.**
Item 16:	**Section 9(2)(a) of the Official Information Act 1982 – To protect the privacy of natural persons.**

Item

12. MINUTES – PUBLIC EXCLUDED

12.1 Waikato District Health Board: 22 March 2017
To be confirmed: Items taken with the public excluded

12.2 Audit and Corporate Risk Management Committee: 22 March 2017
To be adopted All items

12.3 Performance Monitoring Committee: 12 April 2017
To be adopted: Items 14-16

12.4 Midland Regional Governance Group: 3 March 2017
To be received: All items

12.5 Midland Regional Governance Group: 31 March 2017
To be received: All items

13. RISK REGISTER – PUBLIC EXCLUDED

14. CHIEF EXECUTIVE'S REPORT – PUBLIC EXCLUDED

15. TAYLORS LINEN AND LAUNDRY CONTRACT – PUBLIC EXCLUDED

16. IWI MAORI REPRESENTATIVES ON BOARD STATUTORY COMMITTEES – PUBLIC EXCLUDED

RE-ADMITTANCE OF THE PUBLIC

THAT:

(1) The Public Be Re-Admitted.

(2) The Executive be delegated authority after the meeting to determine which items should be made publicly available for the purposes of publicity or implementation.

Waikato District Health Board

Interests

SCHEDULE OF INTERESTS AS UPDATED BY BOARD MEMBERS TO MARCH 2017

Bob Simcock

Interest	**Nature of Interest** *(Pecuniary/Non-Pecuniary)*	**Type of Conflict** *(Actual/Potential/Perceived/None)*	**Mitigating Actions** *(Agreed approach to manage Risks)*
Chair, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Chair, Remuneration Committee, Waikato DHB	Non-Pecuniary	None	
Member, Performance Monitoring Committee, Waikato DHB	Non-Pecuniary	None	
Member, Health Strategy Committee, Waikato DHB	Non-Pecuniary	None	
Member, Audit & Corporate Risk Management Committee, Waikato DHB	Non-Pecuniary	None	
Member, Sustainability Advisory Committee, Waikato DHB	Non-Pecuniary	None	
Member, Board of Clinical Governance, Waikato DHB	Non-Pecuniary	None	
Chairman, Orchestras	TBA	TBA	
Member, Waikato Regional Council	Pecuniary	Perceived	
Director, Rotoroa LLC	TBA	TBA	
Director, Simcock Industries Ltd	TBA	TBA	
Trustee, RM & AI Simcock Family Trust	TBA	TBA	
Wife is CEO of Child Matters, Trustee of Life Unlimited which holds contracts with the DHB, Member of Governance Group for National Child Health Information Programme, Member of Waikato Child and Youth Mortality Review Group	Pecuniary	Potential	

Sally Webb

Interest	**Nature of Interest** *(Pecuniary/Non-Pecuniary)*	**Type of Conflict** *(Actual/Potential/Perceived/None)*	**Mitigating Actions** *(Agreed approach to manage Risks)*
Deputy Chair and Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Deputy Chair, Remuneration Committee, Waikato DHB	Non-Pecuniary	None	
Member, Performance Monitoring Committee, Waikato DHB	Non-Pecuniary	None	
Member, Health Strategy Committee, Waikato DHB	Non-Pecuniary	None	
Member, Audit & Corporate Risk Management Committee, Waikato DHB	Non-Pecuniary	None	
Member, Sustainability Advisory Committee, Waikato DHB	Non-Pecuniary	None	
Chair, Bay of Plenty DHB	TBA	TBA	
Member, Capital Investment Committee	TBA	TBA	
Director, SallyW Ltd	TBA	TBA	

Note 1: Interests listed in every agenda.

Note 2: Members required to detail any conflicts applicable to each meeting.

Crystal Beavis

Interest	**Nature of Interest** *(Pecuniary/Non-Pecuniary)*	**Type of Conflict** *(Actual/Potential/Perceived/None)*	**Mitigating Actions** *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Deputy Chair, Performance Monitoring Committee, Waikato DHB	Non-Pecuniary	None	
Member, Health Strategy Committee, Waikato DHB	Non-Pecuniary	None	
Member, Sustainability Advisory Committee, Waikato DHB	Non-Pecuniary	None	
Member, Remuneration Committee, Waikato DHB	Non-Pecuniary	None	
Director, Bridger Beavis & Associates Ltd, management consultancy	Non-Pecuniary	None	
Director, Strategic Lighting Partnership Ltd, management consultancy	Non-Pecuniary	None	
Life member, Diabetes Youth NZ Inc	Non-Pecuniary	Perceived	
Trustee, several Family Trusts	Non-Pecuniary	None	
Employee, Waikato District Council	Pecuniary	None	

Sally Christie

Interest	**Nature of Interest** *(Pecuniary/Non-Pecuniary)*	**Type of Conflict** *(Actual/Potential/Perceived/None)*	**Mitigating Actions** *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Chair, Performance Monitoring Committee, Waikato DHB	Non-Pecuniary	None	
Member, Remuneration Committee, Waikato DHB	Non-Pecuniary	None	
Partner, employee of Workwise	Pecuniary	Potential	

Martin Gallagher

Interest	**Nature of Interest** *(Pecuniary/Non-Pecuniary)*	**Type of Conflict** *(Actual/Potential/Perceived/None)*	**Mitigating Actions** *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Member, Performance Monitoring Committee, Waikato DHB	Non-Pecuniary	None	
Member, Audit & Corporate Risk Management Committee, Waikato DHB	Non-Pecuniary	None	
Member, Hamilton City Council	Pecuniary	Perceived	
Board member Parent to Parent NZ (Inc), also provider of the Altogether Autism service	Pecuniary	Potential	
Trustee, Waikato Community Broadcasters Charitable Trust	Non-Pecuniary	Perceived	
Alternate Member, Waikato Spatial Plan Joint Committee	Non-Pecuniary	Perceived	
Wife employed by Selwyn Foundation and Wintec (contracts with Waikato DHB)	Pecuniary	Potential	

Note 1: Interests listed in every agenda.

Note 2: Members required to detail any conflicts applicable to each meeting.

Mary Anne Gill

Interest	Nature of Interest *(Pecuniary/Non-Pecuniary)*	Type of Conflict *(Actual/Potential/Perceived/None)*	Mitigating Actions *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Member, Performance Monitoring Committee, Waikato DHB	Non-Pecuniary	None	
Member, Sustainability Advisory Committee, Waikato DHB	Non-Pecuniary	None	
Employee, Life Unlimited	Pecuniary	Perceived	
Son is an employee of Hongkong and Shanghai Banking Corp Ltd (NZ)	Non-Pecuniary		

Tania Hodges

Interest	Nature of Interest *(Pecuniary/Non-Pecuniary)*	Type of Conflict *(Actual/Potential/Perceived/None)*	Mitigating Actions *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Chair, Sustainability Advisory Committee, Waikato DHB	Non-Pecuniary	None	
Deputy Chair, Health Strategy Committee, Waikato DHB	Non-Pecuniary	None	
Member, Remuneration Committee, Waikato DHB	Non-Pecuniary	None	
Member, Iwi Maori Council, Waikato DHB	Non-Pecuniary	None	
Iwi: Ngati Pahauwera, Ngati Ranginui, Ngati Haua, Tuwharetoa, Maniapoto	Non-Pecuniary	Perceived	
Director/Shareholder, Digital Indigenous.com Ltd (contracts with Ministry of Health and other Government entities)	Pecuniary	Potential	
Trustee/Shareholder, Whanau.com Trust	Pecuniary	None	
Director, Ngati Pahauwera Commercial Development Ltd	Pecuniary	None	
Director, Ngati Pahauwera Development Custodian Ltd	Pecuniary	None	
Director, Ngati Pahauwera Tiaki Custodian Limited	Pecuniary	None	
Trustee, Ngati Pahauwera Development and Tiaki Trusts (Deputy Chair)	Pecuniary	None	
Justice of the Peace	Non-Pecuniary	None	

Dave Macpherson

Interest	Nature of Interest *(Pecuniary/Non-Pecuniary)*	Type of Conflict *(Actual/Potential/Perceived/None)*	Mitigating Actions *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Member, Performance Monitoring Committee, Waikato DHB	Non-Pecuniary	None	
Member, Audit & Corporate Risk Management Committee, Waikato DHB	Non-Pecuniary	None	
Councillor, Hamilton City Council	Pecuniary	Perceived	
Deputy Chair, Western Community Centre, Inc	Non-pecuniary	Potential	
Partner is Chair of Ngaruawahia Community House, Inc	Non-pecuniary	Potential	
Member, Waikato Regional Transport Committee	Non-pecuniary	Potential	
Member, Waikato Water Study Governance Group	Non-pecuniary	None	
Member, Future Proof Joint Council Committee	Non-pecuniary	None	

Note 1: Interests listed in every agenda.

Note 2: Members required to detail any conflicts applicable to each meeting.

Pippa Mahood

Interest	Nature of Interest *(Pecuniary/Non-Pecuniary)*	Type of Conflict *(Actual/Potential/Perceived/None)*	Mitigating Actions *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Member, Health Strategy Committee, Waikato DHB	Non-Pecuniary	None	
Member, Iwi Maori Council, Waikato DHB	Non-Pecuniary	None	
Chair, Waikato Health Trust	Non-Pecuniary	None	
Life Member, Hospice Waikato	TBA	Perceived	
Member, Institute of Healthy Aging Governance Group	TBA	Perceived	
Board member, WaiBOP Football Association	TBA	Perceived	
Husband retired respiratory consultant at Waikato Hospital	Non-Pecuniary	None	

Sharon Mariu

Interest	Nature of Interest *(Pecuniary/Non-Pecuniary)*	Type of Conflict *(Actual/Potential/Perceived/None)*	Mitigating Actions *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Chair, Audit & Corporate Risk Management Committee, Waikato DHB	Non-Pecuniary	None	
Deputy Chair, Sustainability Advisory Committee, Waikato DHB	Non-Pecuniary	None	
Member, Health Strategy Committee, Waikato DHB	Non-Pecuniary	None	
Director/Shareholder, Register Specialists Ltd	Pecuniary	Perceived	
Director/Shareholder, Asher Group Ltd	Pecuniary	Perceived	
Director, Hautu-Rangipo Whenua Ltd	Pecuniary	Perceived	
Owner, Chartered Accountant in Public Practice	Pecuniary	Perceived	
Daughter is an employee of Puna Chambers Law Firm, Hamilton	Non-Pecuniary	Potential	
Daughters are employees of Deloitte, Hamilton	Non-Pecuniary	Potential	

Clyde Wade

Interest	Nature of Interest *(Pecuniary/Non-Pecuniary)*	Type of Conflict *(Actual/Potential/Perceived/None)*	Mitigating Actions *(Agreed approach to manage Risks)*
Board member, Waikato DHB	Non-Pecuniary	None	Refer Notes 1 and 2
Chair, Health Strategy Committee, Waikato DHB	Non-Pecuniary	None	
Deputy Chair, Audit & Corporate Risk Management Committee, Waikato DHB	Non-Pecuniary	None	
Member, Sustainability Advisory Committee, Waikato DHB	Non-Pecuniary	None	
Member, Board of Clinical Governance, Waikato DHB	Non-Pecuniary	None	
Shareholder, Midland Cardiovascular Services	Pecuniary	Potential	
Trustee, Waikato Health Memorabilia Trust	Non-Pecuniary	Potential	
Trustee, Waikato Heart Trust	Non-Pecuniary	Potential	

Note 1: Interests listed in every agenda.

Note 2: Members required to detail any conflicts applicable to each meeting.

Trustee, Waikato Cardiology Charitable Trust	Non-Pecuniary	Potential	
Patron, Zipper Club of New Zealand	Non-Pecuniary	Potential	
Emeritus Consultant Cardiologist, Waikato DHB	Non-Pecuniary	Perceived	
Cardiology Advisor, Health & Disability Commission	Pecuniary	Potential	Will not be taking any cases involving Waikato DHB
Fellow Royal Australasian College of Physicians	Non-Pecuniary	Perceived	

Note 1: Interests listed in every agenda.
Note 2: Members required to detail any conflicts applicable to each meeting.

Waikato District Health Board

Minutes
and
Matters Arising

WAIKATO DISTRICT HEALTH BOARD

Minutes of the Board Meeting held on Wednesday 22 March 2017 commencing at 1.30 pm in the Board Room, Hockin Building at Waikato Hospital Campus

Present:
Mr B Simcock (Chair)
Mrs S Webb (Deputy Chair)
Mrs S Christie
Ms C Beavis
Ms T Hodges
Ms S Mariu
Dr C Wade
Mr M Gallagher
Mrs P Mahood
Ms MA Gill
Mr D Macpherson

In Attendance:
Dr N Murray (Chief Executive)
Mr N Hablous (Chief of Staff)
Mr A McCurdie (Chief Financial Officer)
Mr B Paradine (Executive Director, Waikato Hospital Services)
Ms L Aydon (Executive Director, Public and Organisational Affairs)
Mr M Spittal (Executive Director, Community and Clinical Support)
Mrs M Chrystal (Executive Director, Corporate Services)
Mr M ter Beek (Executive Director, Operations and Performance)
Mrs J Wilson (Executive Director, Strategy and Funding)
Mrs S Haywood (Director, Nursing and Midwifery)
Ms V Aitken (Director, Mental Health and Addictions Service)
Ms T Maloney (Commissioner, Women's Health Transformation Taskforce)
Ms M Neville (Director, Quality and Patient Safety) for part of the meeting

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ITEM 1: APOLOGIES FOR ABSENCE

There were no apologies for absence recorded at this meeting.

ITEM 2: INTERESTS

2.1 Register of Interests

No changes to the Register of Interests were noted.

2.2 Interest Related to Items on the Agenda

No conflicts of interest were foreshadowed in respect of items on the current agenda. There would be an opportunity at the beginning of each item for members to declare their conflicts of interest.

ITEM 3: MINUTES OF THE PREVIOUS MEETING AND MATTERS ARISING

3.1 Waikato District Health Board Minutes: 22 February 2017

Resolved
THAT
The part of the minutes of a meeting of the Waikato District Health Board held on 22 February 2017 taken with the public present were confirmed as a true and accurate record.

3.2 Special Waikato District Health Board Minutes: 14 February 2017

Resolved
THAT
The part of the minutes of a special meeting of the Waikato District Health Board held on 14 February 2017 taken with the public present were confirmed as a true and accurate record.

3.3 Committees

3.3.1 Iwi Maori Council: 2 March 2017

Resolved
THAT
The Board noted the minutes of this meeting.

3.3.2 Performance Monitoring Committee: 8 March 2017

Resolved
THAT
The Board noted the minutes of this meeting.

3.3.3 Health Strategy Committee: 8 March 2017

Resolved
THAT
The Board adopted the minutes of this meeting.

ITEM 4: CHIEF EXECUTIVE REPORT

The Chief Executive provided the Board with a verbal update on:

4.1 Waikato Medical School - The Waikato Times had published an article that discussed the merits and challenges of creating New Zealand's third medical school. Otago and Auckland Medical Schools had pitched rival bids.

Sir Owen Glenn had made a $5m pledge to the proposal to the Waikato Medical School Proposal.

4.2 The "fake psychiatrist" Dr Mohamed Siddiqui had appeared in the Hamilton District Court and pleaded guilty to the charges laid. Board members requested a synopsis of the learning from this episode. The Chief Executive will provide a report to the May Board Meeting.

4.3 SmartHealth – A presentation on SmartHealth will be given at the Health Strategy Committee meeting in April.

Resolved
THAT
The Board received the verbal update.

ITEM 5: FINANCE REPORT

The Chief Financial Officer asked that his report for the month of February 2017 be taken as read highlighting the following:

- The DHB has a budged for a surplus of $4.5m.
- The provider was unfavourable to budget for 28 February 2017:

    1. Revenue unfavourable to budget $4.3m (0.8%) due to lower than planned Provider volumes.
    2. Employed personnel costs were unfavourable to budget $5.6m the dominant variances being within nursing and a smaller positive offset by medical personnel.
    3. Outsourced personnel unfavourable to budget $8.54m – this related to medical locums ($2.8m), Nursing ($0.9) and admin/management contractors for the National Oracle Solution (NOS) project ($4.4m) which had an offset in other revenue (3.0m).
    4. Outsourced services were favourable at $0.7m.
    5. Clinical supplies were favourable at $0.2m.
    6. Infrastructure and non-clinical supplies were unfavourable to budget at $1.7m.
    7. Interest depreciation and capital charges were favourable to budget $4.3m.

    It was noted that:

    - Acute cases excluding ED: episodes 2.2% above plan; case-weights 5.8% above plan
    - Elective cases: episodes 12.6% below plan; case-weights 19.4% below plan
    - Overall 1.8% below plan for cases and 1.9% below plan for case weights
    - ED attends: YTD ED attends are 1.7% higher than the same period last year
    - The result for the Funder was favourable due to favourable Provider payment costs
    - The result for Governance was on budget.

The Board members asked for the average cost per day to be included in future reports.

Resolved
THAT
The financial statements of the Waikato DHB for the month to 28 February 2017 were received.

ITEM 6: PERFORMANCE REPORTING

6.1 Health Targets

The Health Targets report was submitted for information.

Management noted:

- **Shorter stays in the Emergency Department** – the most recent result was 88.6%.

  An update on recruitment noted that interviews had been arranged for SMO and nursing vacancies.

  A Full Capacity Protocol had been introduced to assist with additional temporary bed provision during times of pressure.

- **Improved Access to Elective Surgery** – most recent result was 104.6%.

- **Faster Cancer Treatment** – the target for quarter one showed a result of 86.1%.

- **Better help for smokers to quit – primary care** – 87% was the most recent result.

- **Better help for smokers to quit – maternity** – 98% was the most recent result.

- **Increased immunisation for 8 month olds** – the most recent result was 90.4%.

- **Raising healthy kids** – The latest quarterly result was 79%.

On behalf of the Board, the Chair passed on their thanks to the staff for all of the good work that they do in assisting the DHB to meet its targets.

Resolved
THAT
The Board received the report.

6.2 Provider Arm Key Performance Dashboard

The high level Provider Arm Key Performance Dashboard for February 2017 was submitted for the Board's information.

Clinical and Community Support

The report was taken as read and no areas of concern in the KPI Report were noted.

Mental Health and Addictions Service

Vicki Aitken attended for this item. The report was taken as read. Management noted:

- **ED Presentations** – There had been 69 presentations to ED for mental health related conditions for the month of February. 11 cases breached the six hour timeframe, 9 were overdose/suicide presentations.

- **Seclusion** – work continued to reduce seclusion rates.

- **Inpatient occupancy** – occupancy during January was 101%. Large numbers of clients had short term leave that pushed the actual occupancy to 119%.

- **Sick leave taken** - 2.8% - the slight increase was affected a by a flu outbreak on Ward 34 that resulted in 8 staff being absent from work.

- **Complaint Resolution** – four complaints had gone over the 20 days. The reason for this was that they were awaiting meetings with the complainants. It was anticipated that all would be closed by the end of the week.

- **Better help for smokers to quit** – Better help for smokers to quit - Ms Aitken advised that the focus was on assisting people to give up although some people find it difficult and will continue to smoke.

  There was some discussion about people smoking on the public pathways surrounding the hospital.

  The Executive Director, Community and Clinical Support advised the Board members that a range of issues had been identified around the campus; however, it was not just a mental health issue. A working group was to be established to review and strengthen the Smoking Policy. Board members asked to be kept informed of the progress made on this issue.

Waikato Hospital Services

Management noted:

- **Long wait patients on outpatient waiting lists** – work continued on a daily basis with a number of specialties to improve the Ministry of Health ESP12 target with initiatives that managed in flows, recruitment and implementation of the orthopaedic action plan well underway.

- **Number of long wait patients on inpatient waiting lists** – this target continued to challenging with significantly reduced elective operating theatre capacity as a result of anaesthetic RMO vacancies and demand increased pressure on anaesthetic SMO numbers.

Resolved
THAT
The Board received the report.

6.3 Strategy and Funding Key Performance Dashboard

The Strategy and Funding key performance dashboard was submitted for the Board's information.

Management noted:

- **Proportion of older people waiting greater than 20 days for assessment or reassessment** – Interim results indicated an expected efficiency gain would be achieved for this quarter.

- **Cervical Screening** – information from the national screening programme had been released based on ethnicity that showed small but consistent improvements over the last few years

- **Two year old immunisations** – this result remained static at 92%.

Resolved
THAT
The Board received the report.

ITEM 7: PLANNING

There were no items this month.

ITEM 8: WAIKATO DHB POSITION STATEMENT AND POLICIES

Waikato DHB Position Statements and Policies

Mo Neville presented a policy that was intended to guide staff in the:

- Preparation of new clinical and non-clinical policies, procedures, protocols, clinical pathways and guidelines.
- Review existing policies and guidelines.
- Endorsement and publication of policies and guidelines.

Resolved
THAT
The Board approved the Waikato DHB Management of Policies and Guidelines Policy.

ITEM 9: PRESENTATION

Programme Business Case: Midland eSPACE Programme 2015-20

Maureen Chrystall, Dr Andrew Darby and Dr Ian Martin attended for this presentation and discussion.

The eSPACE Programme will provide a single point of access for clinical information across the Midland region to deliver a consistent and accurate view of regional patient records and medication to support sound clinical decision-making and reduce risk and improve the experience of patient, clinicians and administrators.

Resolved
THAT

1) The Board received the report.
2) Approved:
   a) The funding envelope of $75 million over a five year period from 2015 to 2020.
   b) The programme scope and approach outlined in the eSPACE Programme Business Case.
   c) The Programme Governance structure and Senior Responsible Officer (SRO) having the delegated authority to make project by project decisions within the approve programme scope and funding envelope on behalf of the Midland DHBs.
   d) The programme delivering agreed scoped projects within the authorised funding envelope, subject to proper governance controls and funding through annual budget processes, without the need for subsequent individual project business cases.

3) Agreed:
   a) That the eSPACE Programme submit this Programme Business Case, on behalf of the region, for Ministry of Health endorsement and Ministerial/Cabinet approval as appropriate.
   b) That all Midland DHBs would deploy the Midland Clinical Portal to replace possible, within the programme timescales.
   c) Midland DHB would, within the programme scope, prioritise programme implementation alongside local priorities.
   d) That any projects not within approved scope and outside of the agreed funding envelope will be required to submit either formal change control or individual business cases.

4) Noted:
   a) Maureen Chrystall (Executive Director, Corporate Services, Waikato DHB) is the Senior Responsible Officer.
   b) That the whole-of-life-costs are estimated at $109 million.
   c) Costs will be funded by the five DHBs on a population based funding formula (PBFF) share unless there is a more appropriate method identified and agreed by the five DHBs.

The Board passed on their thanks to Doctor Darby, Doctor Martin and their colleagues across the Region for their work on this project.

ITEM 10: PAPERS FOR INFORMATION

Mental Health & Addictions Services s99 (Mental Health (CAT) Act 1992) Inspection Report Action Plan)

This update on the progress of the recommendations into the s99 (Mental Health Act) Inspection Report Action Pan was submitted for the Board's information.

Resolved
THAT
The Board received the report.

ITEM 11: NEXT MEETING

Date of Next Meeting

The next meeting to be held on Wednesday 26 April 2017, commencing at 1.30 pm in the Board Room, Hockin Building, Waikato Hospital Campus.

BOARD MINUTES OF 22 MARCH 2017

RESOLUTION TO EXCLUDE THE PUBLIC
NEW ZEALAND PUBLIC HEALTH AND DISABILITY ACT 2000

THAT:

(1) The public be excluded from the following part of the proceedings of this meeting, namely:

Item 12: Minutes - Various
- **(i) Waikato District Health Board for confirmation: Wednesday 22 February 2017 (Items taken with the public excluded)**
- **(ii) Audit and Corporate Risk Management Committee – verbal update: Wednesday 22 March 2017 to be received (All Items)**
- **(iii) Performance Monitoring Committee to be adopted: Wednesday 8 March 2017 (Items 15-16)**
- **(iv) Health Strategy Committee – to be adopted Wednesday 8 March 2017 (Items 13-14)**

Item 13: Risk Register – Public Excluded

Item 14: Waikato Working Draft Annual Plan 2017/18 – Public Excluded

(2) The general subject of each matter to be considered while the public is excluded, and the reason for passing this resolution in relation to each matter, are as follows:

GENERAL SUBJECT OF EACH MATTER TO BE CONSIDERED		REASON FOR PASSING THIS RESOLUTION IN RELATION TO EACH MATTER
Item 12 (i-iv): Minutes		Items to be adopted/ confirmed/ received were taken with the public excluded
Item 13:	Risk Register	Avoid inhibiting staff advice about organisational risks
Item 14:	Waikato DHB Working Draft Annual Plan 2017/18	Negotiations will be required

(3) This resolution is made in reliance on Clause 33 of Schedule 3 of the NZ Public Health & Disability Act 2000 and the grounds on which the resolution is based, together with the particular interest or interests protected by the Official Information Act 1982 which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public are as follows:

Item 12: **As shown on resolution to exclude the public in minutes.**

Item 13: **Section 9(2)(c) of the Official Information Act 1982 – to avoid prejudice to measures protecting the health or safety of members of the public.**

Items 14: **Section 9(2)(j) of the Official Information Act 1982 – to enable the Waikato DHB to carry on negotiations without prejudice or disadvantage negotiations.**

ACTION LIST

(Relates to Items to be reported to the Board and not implementation of substantive decisions)

	ACTION	BY	WHEN
2.	4.1 “Fake Psychiatrist” The Board requested a synopsis of the learnings from this episode. The Chief Executive to provide a report to the May Board Meeting.	NM	May Meeting
3.	A presentation on SmartHealth to be given at the Health Strategy Committee meeting in April.	NM	April Meeting

WAIKATO DISTRICT HEALTH BOARD

Minutes of the Performance Monitoring Committee Meeting held on Wednesday 12 April 2017 commencing at 8:30am

Present:
Ms S Christie (Chair)
Ms C Beavis (Deputy Chair)
Mr M Gallagher
Mrs MA Gill
Mr D Macpherson
Mr B Simcock
Ms S Webb (via web cam)

In Attendance:
Mr N Murray (Chief Executive)
Mr M ter Beek
Mr B Paradine (Executive Director Waikato Hospital Services)
Mr M Spittal (Executive Director Community & Clinical Services)
Mr D Wright (Executive Director Mental Health & Addictions Service
Mrs B Garbutt (Director Older Persons Rehabilitation and Allied)
Mr R Lawrenson (Clinical Director Strategy & Funding)
Ms J Deane (Manager Ambulatory Care)
Ms J Farley (Acting Director, Surgery, CCTVS, Care & Theatre
Ms P Fitzgerald (Acting Director Women's and Children)
Ms L Aydon (Executive Director Public and Organisational Affairs)
Mr G King (Director, Information Services)
Ms J Wilson (Executive Director Strategy and Funding)
Mrs J MacDonald (Director Finance Advisory)
Mr C Wade (Chair Health Strategy Committee)

IN THE ABSENCE OF DELEGATED AUTHORITY ALL ITEMS WERE FOR RECOMMENDATION TO THE BOARD

ITEM 1: APOLOGIES

Apologies were received for Mr K Price, and Mr P Malpass, and Ms C Beavis (for leaving early).

ITEM 2: INTERESTS

2.1 Changes to Register
No changes to the register of interests were advised.

2.2 Conflicts Related to Any Item on the Agenda
No conflicts of interest relating to items on the agenda were foreshadowed.

ITEM 3: MINUTES AND MATTERS ARISING

3.1 Performance Monitoring Committee: 8 March 2017

Resolved
THAT
The minutes of a meeting of the Performance Monitoring Committee held on 8 March 2017 be confirmed as a true and correct record.

3.2 Bay of Plenty DHB – Hospital Advisory Committee:

Next meeting 5 April 2017.

3.3 Lakes DHB – Hospital al Advisory Committee:

Minutes were noted.

A paper had been written for the regional DHB boards to confirm appointments across Committees.

The importance of capturing learnings from board training workshops was highlighted. It was suggested that regional committee members be invited to future workshops, with an expectation that committee members would be able to provide presentations on learnings from these workshops.

ITEM 4: SYSTEM LEVEL MEASURES

4.1 System Level Measures Report

Next report due 14 June 2017.

ITEM 5: OPERATIONS AND PERFORMANCE

5.1 Operations and Performance Report

Mr M ter Beek presented this agenda item.

Additional measures for inclusion in the Operations and Performance Report would be phased in over time. It was expected that, phase 2 measures (existing DHB wide measures) would be included by the 14 June meeting, with phase 4 (new measures) anticipated to be incorporated into reporting by the end of 2017.

Service level reporting would continue to be provided in the Service reports. The development of a new reporting KPI dashboard was on the project prioritisation list which would allow further “drilling down” to more detailed information.

Areas highlighted included:

- Both Waikato and Thames hospitals struggled to meet the 95% 6 hour Emergency Department target. Analysis showed that the main delay was during the ED assessment. It was acknowledged that the turnaround of non-admitted patients

from ED showed higher performance than that of admitted patients, effectively ED had 6 hours to manage patients that specialities had 3 hours to manage, albeit that ED did complete the initial assessment work that would assist specialities.

- A theatre plan has been completed for 2017/18 which included outsourcing. A Request for Proposal process would be completed to determine suppliers able to undertake the outsourcing work. Discussions were ongoing with other DHBs seeking their availability to complete some of this work. The current lack of capacity was due to a shortage of staff resource, and would likely be a 2 year project before resolved. A long term plan of theatre utilisation was being worked on. It was likely that even with the fit out of the theatre that currently exists in shell only, in the near future capacity would exceed this resource as well.
- It was intended to shortly have all DHB policies available on the website which included the Absent without Leave policy for Waikato Hospital which was about general hospital patients.

Resolved
THAT
The report be received.

ITEM 6: SERVICES

6.1 Community and Clinical Support

Presented by Mr M Spittal.

- A different model of primary care in Te Kuiti was resulting in a sustained reduction in unplanned presentations.
- Most rural hospitals are performing well against the smoke free target. Work was underway to look at other, more useful key performance indicators regarding a smoke free environment including the number of babies who live in smoke free homes.
- Tairawhiti DHB had formally requested that their breast screening services be moved from Coast to Coast to Breastscreening Midland. Mrs MA Gill challenged staff to think of opportunities of how to ensure screening volumes were increased especially in the maori population. Mr M Spittal acknowledged the lengths the breast screening team went to, to be culturally sensitive.
- Mr B Simcock suggested that perhaps a focus on achieving one or two interventions, and that the new bowel screening programme could provide an opportunity to change the way these services are delivered.

Resolved
THAT
The report be received.

6.2 Mental Health & Addictions

Presented by Mr D Wright.

- February and March 2017 had seen unprecedented demand and resultant pressure on services, following a quieter than usual December/January period.
- The Peoples Project whilst a good model only provided for homeless people in Hamilton city, which didn't cater for cross sector accommodation support for other mental health patients.
- Integrated Safety Response should be a DHB wide responsibility. Staff needed to be supported to ask the right questions of patients and data should enable, patients presenting multiple times to ED to be flagged.

Resolved
THAT
The report be received.

6.3 Waikato Hospital Services overview report

Internal Medicine Oncology, Emergency and Ambulatory Care

Ms J Deane presented this agenda item.

Points highlighted included:

- The new Waikato Hospital Leadership structure was being used to strengthen relationships due to the alignment of clinical structures with Clinical Directors now reporting direct to Clinical Unit Leaders CULs).
- Internal Medicine were working closely with the Emergency Department which included medical teams attending the 4pm daily handover meeting. CULs were also being encouraged to use the new acute flow dashboard to manage breaches in their service.

Surgical and Critical Care
This item was presented by Mrs J Farley.

It was expected that elective services would meet compliance for April. with work underway to ensure that it remained so which included business managers managing electives on a daily basis.

The consistently high cardiac waitlist over recent months was highlighted as an emergent issue.

Womens and Children Health
Ms P Fitzgerald presented on this agenda item.

The maternity day assessment unit had been officially opened on 3 April which would assist with patient flow.

Older Persons, Rehabilitation and Allied Health
Mrs B Garbutt presented this agenda item.

Mr B Paradine provided a brief update on the implementation of the new Waikato Hospital Structure, following a robust process which

included workshops with affected staff. Feedback appeared positive with expectations that 80% should be implemented within 6 weeks.

Resolved
THAT
The report be received

ITEM 7: QUALITY

7.1 Q2 Quality Report
Next report due 14 June 2017.

ITEM 8: FINANCE REPORT

8.1 Finance Report

Resolved
THAT
The report be received.

ITEM 9: PEOPLE

9.1 People and Resources Report
Next report 14 June 2017.

ITEM 10: INFRASTRUCTURE

10.1 Infrastructure Report
This report was discussed under the public excluded section due contractual information.

ITEM 11: INFORMATION SERVICES

11.1 Information Services Plan Report
Mr G King attended for this item.

A report on the IS plan was submitted for the Committee's information.

Of note:

- Cyber-attacks continued to be a concern but Waikato DHB had not and would not provide any blackmail payment. A new national government cyber entity had been set up but would not change operational business at Waikato DHB.
- Priority would be given to Infrastructure as a Service (IaaS) which may lead to a slowdown in the delivery of local programmes.

Resolved
THAT
The report be received.

ITEM 12: PERFORMANCE OF FUNDED ORGANISATIONS

12.1 Performance of Funded Organisations

Mrs J Wilson presented this item.

The primary care dashboard was the only report that had been updated since the last Committee meeting. Future primary care dashboards would provide a long term view and for the unenrolled population, separate people living outside the Waikato District. It was highlighted that it would be useful to have an ethnicity breakdown of unenrolled people presenting to the Emergency Department. If unenrolled patients show as having high attendance at ED then the focus needs to be on primary care. It was suggested that an initial workshop between the Performance Monitoring Committee and the Health Strategy Committee could be on child health and Maori health intervention.

Raising healthy kids target provides a snap shot but more detailed information is required to drill down into nutrition reasons.

ITEM 13: DATE OF NEXT MEETING: 14 JUNE 2017

Committee members voiced their commitment to agenda items being heard in the public part of the meeting as much as possible. The infrastructure report contained information around commercial aspects and contract negotiations. It was agreed that future reports would be heard in the public section, with anything deemed necessary to be in public excluded separated into a separate report.

Resolved
THAT
Any reference to lease renewal and contractual negotiations in the12 April 2017 Facilities and Business paper be redacted and the paper be made publically available.

PERFORMANCE MONITORING COMMITTEE MINUTES OF 12 APRIL 2017

RESOLUTION TO EXCLUDE THE PUBLIC
NEW ZEALAND PUBLIC HEALTH AND DISABILITY ACT 2000

THAT:

(1) The public be excluded from the following part of the proceedings of this meeting, namely:

Item 14: Minutes: Performance Monitoring Committee 8 March 2017 (items taken with the public excluded)
Item 15: Infrastructure Report – Public Excluded
Item 16: Screening Programme – Public Excluded

(2) The general subject of each matter to be considered while the public is excluded, and the reason for passing this resolution in relation to each matter, are as follows:

GENERAL SUBJECT OF EACH MATTER TO BE CONSIDERED	REASON FOR PASSING THIS RESOLUTION IN RELATION TO EACH MATTER
Item 14: Minutes	Items to be adopted/ confirmed/ received were taken with the public excluded
Item 15: Infrastructure report	Negotiations will be required
Item 16: Screening Programme	Negotiations will be required

(3) This resolution is made in reliance on Clause 33 of Schedule 3 of the NZ Public Health & Disability Act 2000 and the grounds on which the resolution is based, together with the particular interest or interests protected by the Official Information Act 1982 which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public are as follows:

Item 14: As shown on resolution to exclude the public in minutes.

Items 15-16: Section 9(2)(j) of the Official Information Act 1982 – To enable the Waikato DHB to carry on negotiations without prejudice or disadvantage.

WAIKATO DISTRICT HEALTH BOARD

Minutes of the Health Strategy Committee held on Wednesday 12 April 2017 commencing at 12.30pm

Present:
Mr C Wade (Chair)
Ms T Hodges (Deputy Chair)
Mr B Simcock
Ms S Webb
Ms S Mariu
Mrs P Mahood
Mr F Mhlanga
Mr D Slone

In Attendance:
Ms J Wilson, Executive Director, Strategy & Funding
Ms N Middleton (Minutes)
Dr N Murray, Chief Executive
Ms MA Gill, Waikato DHB Board member
Ms S Christie, Waikato DHB Board member
Mr M Gallagher, Waikato DHB Board member
Prof R Lawrenson, Clinical Director, Strategy and Funding
Mr M ter Beck, Executive Director, Operations and Performance
Ms L Aydon, Executive Director, Public and Organisational Affairs
Ms T Maloney, Commissioner, Women's Health Transformation Taskforce
Mr D Hackett, Executive Director, Virtual Care and Innovation
Mr D Tomic, Clinical Director, Primary and Integrated Care
Mr M Spittal, Executive Director, Community and Clinical Support
Ms E McKenzie Norton, Strategy and Funding
Ms J Hudson, Strategy and Funding
Ms F Dibley-Mason, Strategy and Funding
Ms N Parker, Change Team
Ms B Wills, Commissioner

IN THE ABSENCE OF DELEGATED AUTHORITY ALL ITEMS WERE FOR RECOMMENDATION TO THE BOARD

ITEM 1: APOLOGIES

Apologies from Mr J McIntosh and Ms C Beavis were received.

Resolved
THAT
The apologies were received.

ITEM 2: LATE ITEMS

There were no late items raised at the meeting.

ITEM 3: INTERESTS

3.1 Register of Interests

There were no changes made to the Interests register.

3.2 Conflicts Relating to Items on the Agenda

No conflicts of interest relating to items on the agenda were foreshadowed.

ITEM 4: MINUTES OF PREVIOUS MEETING AND MATTERS ARISING

Resolved
THAT

1. The minutes of a meeting of the Waikato DHB Health Strategy Committee held on 8 March 2017 be confirmed as a true and correct record.

2. The minutes of a meeting of the Lakes DHB Community & Public Health Advisory Committee held on 13 February 2017 be noted.

3. The minutes of a meeting of the Bay of Plenty DHB combined Community & Public Health Advisory Committee and Disability Advisory Committee held on 1 March 2017 be noted.

ITEM 5: WORKPLAN

Discussion about the year plan, all agreed the items listed. It was noted that the priority programme plans and updates on these would be included routinely in future agendas. These was particular interest in including a focus in the workplan around the Priority programme plan for Radical improvement in Maori Health outcomes by eliminating Health inequities for Maori.

Resolved
THAT

1. The Committee received the report;
2. Addressing inequities in Maori health outcomes to be added to the workplan for 2017 with timeframes for this to be determined.

ITEM 6: STRATEGY AND FUNDING OVERVIEW REPORT

Annual Plan

The annual plan has been greatly reduced in size to 33 pages as a directive from the Ministry of Health. A draft annual plan has been submitted to the Ministry of Health. The funding envelope is expected to be released in June and will likely alter our annual plan. An annual plan update will be presented

to the Committee in June 2017. This may be a late paper due to the short turn around.

Youth Alcohol and Other Drug (AOD) services
An evaluation report for this programme has been commissioned and is estimated for release in March 2018.

Community Health Forum
A steady turnout was recorded for March with a number of items raised. . Good turn out and a number of items were raised.

Of note:

- Booking clerks continue to assign difficult appointment times for those out of the Hamilton area. All have been educated on this issue. Language can be a barrier;
- The location of Carpark full signs – Dr N Murray signal at the Community Health Forum that this will be looked into by Facilities and Business.

Resolved
THAT

1. The report be received;
2. A breakdown of providers and community participants be included within future reports.

ITEM 7: PAPERS FOR ACTION

No papers for action.

ITEM 8: PAPERS FOR INFORMATION

No papers for information.

ITEM 9: STRATEGIC PROGRAMME PLANS

9.2 Mental Health and Addictions Model of Care

Prof R Lawrenson presented the Health Needs Analysis undertaken for Waikato DHB by the University of Waikato.

As part of the Health Needs Analysis a questionnaire for GPs around Mental Health services, their services offered and capacity was being undertaken. To date there have been responses from 35 General Practices. Stakeholder interviews have occurred. A presentation was given to the Committee.

Of note:

- Mental Health Review Group are meeting monthly;
- Current review by provider arm of their services;
- Health Needs Analysis has provided a view of the burden of disease and current management;
- Next step is to review models of care.

Discussion occurred on the value of including items such as this Needs Analysis in a resource centre within Diligent books for easy

future access for committee members. This would be explored prior to the next for meeting.

9.3 SmartHealth

Mr D Hackett and Dr D Tomic attended for this presentation agenda item.

Of note:

- A key learning to date has included how the SmartHealth product is marketed to the population;
- There has been success at people choosing to sign up at community events;
- A connection with Healthline is being established;
- A SmartHealth kiosk located in the emergency department of Tokoroa hospital is due to go live in May 2017;
- User account creation using RealMe account validation has been approved;
- Ideas for events and promotion are welcomed.

9.4 Rural Project

Mr M Spittal attended for this agenda item.

This project has not made progress as intended due partly to resourcing and not being clear at a strategic board level as to how we work with providers and other key contacts in the communities.

Key issues:

- Work on a model of service for Taumarunui had not yet commenced.
- Retrievals – working down a track by solving at an ED level and ICU – difference of skill set. Will achieve in 2017.
- Definitions of rural and urban to inform analysis were being clarified and would be reported back to the committee.

A Primary Care Strategy workshop Inter Alliance partners would be occurring in the coming months.

9.5 Women's Health Transformation

Ms T Maloney attended for this agenda item.

Of note:

- 3 main areas – workforce, model of and care and education programme – all progressing well. A Clinical Director has been appointed and will start in May.

RANZCOG happy with progress.

9.6 Elective Services Improvement

Ms B Wills attended for this agenda item.

Of note:

- In March both key ESPI requirements were met;

- Volumes will not met the expected volumes in orthopaedics for the current year, but we should be able to 'wash-up' the remaining delivery;
- Intervention rates at the Waikato DHB are behind the national average in some specialties/procedures, particularly orthopaedics (excluding hip and knee operations);
- The timeframe for moving to national intervention rates for some specialties could take some time.

Resolved
THAT
The updates be received.

ITEM 10: PRIORITY PROGRAMME PLANS

Ms E McKenzie-Norton and Ms N Parker attended for this agenda item to present an update in identified progress.

Priorities 1.1 – 1.3 have been assigned 200 delivery days, the remaining priorities have 70 delivery days.

Concern was raised from the Committee members around how priorities 1.4 - 6.4 are incorporated and fit within priorities 1.1 – 1.3. The need for prioritisation across areas was suggested.

Resolved
THAT
The update be received.

ITEM 11: GENERAL BUSINESS

A strategy to prevent Suicide in New Zealand had been received and will go out for public consultation. A copy of this document would be forwarded to committee members and discussed at a June committee meeting.

Resolved
THAT
The update be noted and documents circulated to Committee members.

ITEM 12: DATE OF NEXT MEETING

14 June 2017.

RESOLUTION TO EXCLUDE THE PUBLIC
NEW ZEALAND PUBLIC HEALTH AND DISABILITY ACT 2000

THAT:

(1) The public be excluded from the following part of the proceedings of this meeting, namely:

Item 13: Minutes of the Health Strategy Committee dated 8 March 2017

(2) The general subject of each matter to be considered while the public is excluded, and the reason for passing this resolution in relation to each matter, are as follows:

GENERAL SUBJECT OF EACH MATTER TO BE CONSIDERED	REASON FOR PASSING THIS RESOLUTION IN RELATION TO EACH MATTER
Item 13: Minutes	Items were taken with the public excluded

(3) This resolution is made in reliance on Clause 33 of Schedule 3 of the NZ Public Health & Disability Act 2000 and the grounds on which the resolution is based, together with the particular interest or interests protected by the Official Information Act 1982 which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public are as follows:

Item 13: As shown on resolution to exclude the public from the minutes.

ITEM 13: PUBLIC EXCLUDED MINUTES OF THE HEALTH STRATEGY COMMITTEED DATED 8 MARCH 2017

Resolved
THAT
The minutes of the public excluded part of a meeting of the Waikato DHB Health Strategy Committee held on 8 March 2017 be confirmed as a true and correct record.

RE-ADMITTANCE OF THE PUBLIC

THAT:

(1) The Public Be Re-Admitted.

(2) The Executive be delegated authority after the meeting to determine which items should be made publicly available for the purposes of publicity or implementation

Chairperson: _____

Date: _____

Meeting Closed: 4:10pm

Waikato District Health Board

Chief Executive Report

MEMORANDUM TO THE BOARD
26 APRIL 2017

AGENDA ITEM 4

CHIEF EXECUTIVE REPORT

Purpose	For information.

Waikato Hospital Restructure

The Executive Director Hospital Services has completed a restructure of the services that report to him. The key feature is that the service groupings will be managed by a triumvirate comprising clinical unit leader, service manager, and clinical nurse director. These three will report to the director who will in turn report to the executive director. The triumvirate will work strongly as a team and a partnership agreement will set out expectations as to how this will occur.

Completing this restructure has been an immense exercise in part because of confusion around the existing structure that needed to be unpicked to ascertain current state and allow consideration of how it could be modified. While delays were unsettling for staff I am satisfied that this was an exercise worth going through.

Appointment of Executive Director Maori Health

As you have heard already I am pleased to welcome Ms Loraine Elliott as Executive Director Maori Health.

Ms Elliott is Ngati Porou and Ngapuhi.

She has had a strong commercial career working for organisations such as Telecom, Genesis, and IRD and is currently General Manager Clinical Support Services at Counties Manukau DHB. Loraine has a Bachelor of Commerce degree, a Master of Public Administration and post-graduate diplomas in marketing and human resources.

Ms Elliott's powhiri will occur on 4 May 2017, the same day as the joint Board/IMC meeting and she will commence work that day.

An induction programme is being developed that will ensure she gains an understanding of the Waikato and its communities.

This is an exciting step forward in delivering on our strategy and improving Maori health.

I wish to acknowledge the tremendous service that Ms Millie Berryman has provided as Acting Executive Director for Maori Health and in "holding the fort" until we were able to appoint Ms Elliott. Ms Berryman has done an excellent job and I am personally grateful for her contribution and advice.

Recommendation
THAT
The report be received.

DR NIGEL MURRAY
CHIEF EXECUTIVE

Financial Report

MEMORANDUM TO THE BOARD
27 APRIL 2017

AGENDA ITEM 5.1

FINANCE REPORT

Purpose	For information.

The financial result summary is attached for the Board's review.

Recommendation
THAT
The report be received.

ANDREW MCCURDIE
CHIEF FINANCIAL OFFICER

WAIKATO DISTRICT HEALTH BOARD
YEAR TO DATE FINANCIAL COMMENTARY

Waikato DHB Result for March 2017	Year to Date			Budget
	Actual $m	Budget $m	Variance $m	Jun-17 $m
Funder	38.3	33.0	5.3 F	42.9
Governance	(0.4)	(0.4)	0.0 F	(0.3)
Provider	(33.5)	(21.1)	(12.4) U	(38.1)
DHB Surplus/(Deficit)	**4.4**	**11.5**	**(7.1) U**	**4.5**
Note: $ F = favourable variance; ($) U = unfavourable variance				

FINANCIAL PERFORMANCE MONTHLY COMMENT:

This report includes commentary on current year to date performance compared to the year to date budget.

For March 2017 YTD we are unfavourable to budget by $7.1m. Specific areas of concern continue to be focused on in order to develop comfort in how we will meet our forecast results for the year. Clearly there are risks to manage in this regard and we are very actively managing such risks, with improved bottom up forecasting processes continuing to be a key tool.

Forecast:

The DHB has a budget for a surplus of $4.5m for the year.

We are currently running unfavourable to YTD plan. We have done a great deal of work to bring this back on track in order to deliver to the plan and we continue to work in this space. However, a number of unexpected and uncontrollable costs have been incurred or are expected to be incurred in FY16/17. This needs to be considered in the context of over the last few years demand and thus costs together with inflation have grown at a faster rate than revenue and this has eroded most of our ability to respond to unexpected cost aspects. We have come to the view that delivery of a surplus for FY16/17 just isn't possible. The forecast position communicated to the Ministry is thus breakeven. This forecast assumes that we will not incur ESPI penalties and also that we will find a way to deliver our elective service volume targets in order to avoid a negative washup. Delivering such break even result will be extremely challenging, thus the risk profile remains high.

There are the usual risks related to not achieving forecast including:

1. Unbudgeted costs
2. The impact of the required outsourcing to meet key targets
3. Achievement of elective service volumes and avoidance of ESPI penalties
4. The achievement of the budgeted savings or alternate savings
5. Our ability to extract favourable variances through the balance of the year to counter the current unfavourable YTD variance

Negative

Provider:

The Provider is unfavourable to budget for March 2017, variances include:

1. Revenue favourable to budget $0.8m (0.1%).
2. Employed personnel costs unfavourable to budget $4.3m, the dominant negative variance being within nursing and a smaller unfavourable variance in allied health personnel. Medical & administrative personnel have small favourable variances and support personnel are close to budget.
3. Outsourced Personnel costs unfavourable to budget $9.9m, the dominant variances relate to medical locums ($3.8m), Nursing ($1.0m) and admin/management contractors for the National Oracle Solution (NOS) project ($5.1m) which has an offset in Other Revenue of ($3.2m).
4. Outsourced Services unfavourable to budget $2.9m mainly due to higher outsourcing of electives.
5. Clinical supplies unfavourable to budget $0.7m.
6. Infrastructure & Non Clinical supplies are unfavourable to budget $1.3m.
7. Interest, depreciation and capital charge favourable to budget $5.9m mainly due to decrease in capital charge rate, reduction in interest charge after debt/equity swap and favourable depreciation cost.

It should be noted that this is in the context of:

- Acute cases, excluding ED: episodes 2.8% above plan; case-weights 6.7% above plan
- Elective cases: episodes 10.9% below plan; case-weights 17.7% below plan
- Overall 0.9% below plan for cases and 0.9% below plan for case-weights
- ED attends: YTD ED attends are 1.7% higher than the same period last year.

Funder and Governance:
The result for the Funder is favourable mainly due to favourable Provider payment costs. Governance is on budget.

RECOMMENDATION(S):

That this report on March 2017 year to date result be received.

ANDREW McCURDIE
CHIEF FINANCIAL OFFICER

WAIKATO DISTRICT HEALTH BOARD
YEAR TO DATE FINANCIAL COMMENTARY

Opinion on Result:		
The Waikato DHB YTD Variance resulted from:	**Variance $m**	**Impact on forecast**
Revenue	**$1.5 F**	Neutral
CFA Revenue		
Favourable to budget mainly due to: ● 15/16 elective surgery wash-up $1.5m received ● additional funding received which is offset by cost in External Provider Payments: Palliative Care $0.6m Rheumatic fever $0.2m ● PHO Care Plus wash-up & VLCA $0.8m ● other favourable variances $0.4m Offset by unfavourable variances relating to: ● Reduction in revenue received relating to the change in rate for the capital charge $1.7m. This reduction is offset by a reduction in capital charge paid. ● In between travel wash up relating to 2016/17 $0.8m (offset by reduced cost in External Provider payments) and to 2015/16 $0.3m. ● Reduction in revenue as a result of debt to equity conversion $1.5m (offset in reduction of interest payable)	($0.8) U	Neutral
Crown Side-Arm Revenue		
Side-arm contracts revenue favourable due mainly to: ● Funds received for the 2015/16 Colonoscopy project $0.3m ● A contract variation on the main Public health contract $0.2m (offset by costs) ● Breast screening running ahead of contract volumes $0.2m ● Gynae colps catch up on contract volumes $0.1m	$0.8 F	Neutral
Other Government and Crown Agencies Revenue		
Other Government and Crown revenue is $0.9m favourable mainly due to: ● Reimbursement of costs associated with the implementation of NOS $3.2m favourable (offset in Outsourced Personnel) ● Catch up invoicing for outreach clinics at Bay of Plenty and Lakes DHBs $0.5m ● Higher than budgeted invoicing for Blood and Laboratory $0.3m Offset by: ● ACC unfavourable $0.8m due to non acute rehab contract running lower than planned due to less discharges and the focus on Elective Service Performance Indicators meaning the elective surgical treatments contract patients are being delayed. ● Inter District Flows (IDF) in which is $2.3m unfavourable due to reduced IDF inflow when compared with Ministry of Health budget file.	$0.9 F	Neutral

The Waikato DHB YTD Variance resulted from:	Variance $m	Impact on forecast
Other Revenue		
Other revenue is favourable primarily due to higher sales in the Café than expected $0.6m and the favourable revenue washup from Urology Services Limited relating to 2015/16 of $0.2m. This is offset by lower than budget volumes of non resident patients $0.1m unfavourable and other revenue $0.1m unfavourable.	$0.6 F	Favourable

Operating expenditure including IDCC	**($8.6) U**	Unfavourable
Personnel (employees and outsourced personnel total)	**($14.2) U**	
Employed personnel are unfavourable to budget mainly due to:	($4.3) U	Unfavourable

- Medical costs are favourable by $0.9m.

  Senior Medical Officers (SMO's):

  SMO costs are $1.1m favourable mainly due to:
  - paid FTE costs favourable $1.4m arising from vacancies,
  - favourable course and conference costs which is as a result of reduced accrual for CME costs following SMO resignations $0.5m,
  - annual leave movement $0.6m unfavourable due to less leave earned offset by less leave taken
  - professional membership fees $0.2m unfavourable

  Resident Medical Officers (RMO's)

  RMO costs are $0.2m unfavourable due to vacancies offset by annual leave taken running lower than budgeted.

  The net direct financial YTD impact of the RMO strikes on personnel costs is currently:

	October 2016	January 2017
SMO claims cover RMO shifts	$0.3m	$0.5m
Savings on payments to RMO's	$0.1m	$0.2m
Net impact	$0.2m	$0.3m

  The far greater cost of the strikes is the impact on volume delivery.
- Nursing costs are unfavourable to budget by $4.8m. Paid FTE cost is $1.2m unfavourable due to budgeted vacancy savings not being achieved. In addition to this the annual leave movement is running $3.8m unfavourable. Course conference fees are running favourable by $0.2m
- Allied Health costs are unfavourable to budget by $1.0m. Base costs are $0.4m favourable offset by unfavourable overtime $0.5m and penals $0.1m due to vacancies. In addition annual leave taken unfavourable to budget $0.8m.
- Other favourable variances, largely in Management, Administration and Support $0.6m

Outsourced personnel are unfavourable mainly due to:		
• Higher than planned use of locums within medical personnel to cover vacancies $3.8m. • Nursing is $1.0m unfavourable due to external agency costs to fill roster gaps and watches.	($4.8) U	Unfavourable
• Higher than planned use of contractors in management/admin $5.1m primarily due to contractors working on the NOS implementation. Costs recovered in Other Government Revenue - $3.2m.	($5.1) U	Neutral

The Waikato DHB YTD Variance resulted from:	Variance $m	Impact on forecast
Outsourced services	**($2.9) U**	
Outsourced services are unfavourable primarily due to: ●Outsourced corporate services $1.4m favourable primarily due to reduced spend on Clinical Work Station - budget set on business case but expected spend has been revised and is lower due to reduced costs over the first months of the year. In addition the actual calculation of Health Share Limited (HSL) operating costs has come in lower than budget for the first half of the financial year. ●Outsourced clinical service costs are unfavourable to budget $4.3m due to higher than planned outsourcing of electives and unmet savings.	($2.9) U	Neutral
Clinical Supplies	**($0.7) U**	
Instruments & equipment are $0.3m favourable primarily due to favourable service contract costs.	$0.3 F	Favourable
Implants & prosthesis are $2.6m favourable due to underspends on spinal plates and screws and implants and prosthesis due to a combination of outsourcing to private providers and lower than planned orthopaedic volumes.	$2.6 F	Neutral
Treatment disposables unfavourable due to savings allocation of $4.3m offset by favourable variances across a range of areas such as dressings, staples, tubes/drainage/suction, IV fluids and rebates.	($2.2) U	Unfavourable
Pharmaceuticals $1.2m unfavourable primarily due to cytotoxic drug costs running higher than budgeted. This in part due to the newly approved melanoma treatment.	($1.2) U	Unfavourable
Diagnostic Supplies & Other Clinical Supplies - close to budget.	($0.2) U	Neutral
Infrastructure and non-clinical supplies	**($1.3) U**	
Infrastructure and non-clinical supplies are $1.3m unfavourable primarily due to: ● Savings allocation unfavourable by $1.9m, ● Cost of Goods Sold (COGS) is $1.4m unfavourable as a result of higher sales by Pharmacy on Meade resulting in higher cost of goods sold. Offset in Non Government Organisations (NGO) provider payments ($1.4m) ● IT costs $1.1m unfavourable due to minor hardware purchases and telecommunication costs for SmartHealth and timing of planned replacement of laptops and PCs ● Offset by favourable facilities variance $2.5m due to delayed start of maintenance programme and Hilda Ross House demolition and cleaning costs running favourably by $0.7m due to a focus on this contract.	($1.3) U	Neutral

The Waikato DHB YTD Variance resulted from:	Variance $m	Impact on forecast
NGO Payments	**$4.6 F**	
IDF out unfavourable by $1.9m due to increased outflow to Counties Manukau DHB due to timing of a GP practice PHO change not aligning with budget assumption. In addition, two high cost patients who have gone to Counties Manukau for treatment.	($1.9) U	Unfavourable
External Provider payments are favourable largely due to: ● a revised PHARMAC forecast $3.1m favourable. However this is offset in clinical supplies (Pharmaceutical costs - oncology drugs $0.8m) and Infrastructure costs (Retail Pharmacy COGS $1.4m). ● PHO Quality Indicator pool - prior year over accrual $0.6m ● Dental FSS volumes favourable to budget $0.7m ● Reduction in costs for in between travel (offset by reduced revenue) $0.7m ● Post acute convalescent care $0.6m favourable as the cost is being reflected in Outsourced Services ($0.2m) ● Other favourable variances across MH, DSS FFS, Urology and residential care offset by unfavourable variances arising mainly from additional costs relating to additional funding (Healthy Homes Initiative, Palliative Care, Rheumatic Fever) $0.8m	$6.5 F	Neutral
Interest, depreciation and capital charge	**$5.9 F**	
Interest charge favourable mainly due to interest costs on the Ministry of Health loan ceasing after the debt equity swap in March. Offset in CFA Revenue.	$1.3 F	Neutral
Capital charge is favourable to budget as a result of the reduction in the rate from 8% to 6%. Largely offset in CFA revenue	$2.2 F	Neutral
Non Cash Depreciation favourable mainly due to: ● Timing of capitalisation of IS projects.	$2.4 F	Favourable

TREASURY

Opinion on Result:	
Cash flows are favourable to budget	Favourable

YTD Actuals Mar-16 $'000	Waikato DHB Cash flows for year to March 2017	Year to Date Actual $'000	Year to Date Budget $'000	Year to Date Variance $'000	Budget Jun-17 $'000
	Cash flow from operating activities				
975,710	Operating inflows	1,005,898	1,016,617	(10,719)	1,355,379
(933,212)	Operating outflows	(976,826)	(959,611)	(17,215)	(1,296,243)
42,499	**Net cash from operating activities**	**29,072**	**57,006**	**(27,936)**	**59,136**
	Cash flow from investing activities				
1,259	Interest income and proceeds on disposal of assets	1,208	945	263	1,260
(16,261)	Purchase of assets	(17,610)	(51,003)	33,393	(68,003)
(15,002)	**Net cash from investing activities**	**(16,402)**	**(50,058)**	**33,656**	**(66,743)**
	Cash flow from financing activities				
1	Equity repayment	0	0	0	(2,194)
(7,234)	Interest Paid	(6,671)	(6,487)	(184)	(8,645)
(220)	Net change in loans	(153)	(151)	(2)	(198)
(7,453)	**Net cash from financing activities**	**(6,824)**	**(6,638)**	**(186)**	**(11,037)**
20,043	**Net increase/**(decrease) in cash	**5,846**	**310**	**5,536**	**(18,644)**
(8,948)	Opening cash balance	856	856	(0)	856
11,095	**Closing cash balance**	**6,702**	**1,166**	**5,536**	**(17,788)**

Cash flow variances resulted from:	Variance $m	Impact on forecast
Total Net cash flow from Operating Activities	**($27.8) U**	
• **Operating inflows**	**($10.7) U**	
Revenue received unfavourable primarily as a result of: - revenue reduction relating to the change in rate for the capital charge $1.7m - reduction in CFA revenue relating to the debt equity swap $1.5m - Interdistrict flows unfavourable by $2.3 - ACC revenue unfavourable $0.8m - reduction in revenue relating to the unfavourable washup of In Between Travel $1.1m - Increase in accrued debtors $13m - reason for non billing currently being investigated Unfavourable inflow offset by: - Prior year elective funding washup received $1.5m - Additional care and other initiatives funding $2.0m - Reimbursement of costs associated with the implementation of NOS $3.2m - Crown side arm revenue favourable $0.8m - Other favourable timing variances across various areas $2.2m	($10.7) U	

Cash flow variances resulted from:	Variance $m	Impact on forecast
• **Operating outflows**	**($17.1) U**	
○ Personnel cost variances are unfavourable against budget due to the timing of fortnightly pay runs.	($3.8) U	
○ Operating cash outflows for non-payroll costs are unfavourable as a result of: - Higher prepayments than budgeted $4.1m primarily as a result of timing of payments for IS related costs - the remaining unfavourable variance includes unfavourable P&L expenditure variances together with differences between timing of budgeted and actual payments.	($15.0) U	
○ GST cash movement is favourable due to timing variances on GST transacted.	$1.7 F	
Net cash flow from Investing Activities	**$33.8 F**	
○ Interest received is favourable due to a slightly higher than expected funds with NZHPL.	$0.4 F	
○ Capital spend is slower than planned for the year to March - refer to capital expenditure report for further details.	$33.4 F	
Net cash flow from Financing Activities	**($0.2) U**	
○ Cash flow from financing activities is unfavourable mainly due to the timing of the final payment of interest due to MoH on term loans prior to loan/equity swap.	($0.2) U	

The cash flow statement budget has been calculated on the same basis as the income statement budget. The main difference to actual cash transactions is that the cash flow budget nets off GST payments to the IRD against GST inputs and outputs.

The statement of cash flow (above) is based on the cash book values derived from the general ledger. The following forecast statement of cash flows is based on bank account balances.

WAIKATO DISTRICT HEALTH BOARD
CASHFLOW FORECAST (GST INCLUSIVE)

As at 31-Mar-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
OPERATING ACTIVITIES													
Cash was provided from:													
MoH, DHB, Govt Revenue	2,698	3,610	4,520	4,300	5,851	4,564	4,228	4,448	4,452	4,116	4,340	4,116	4,340
Funder inflow (MoH, IDF, etc)	121,810	118,565	118,565	123,065	124,542	124,523	126,378	121,680	124,523	129,203	124,523	124,523	128,638
Donations and Bequests	0	0	0	0	0	0	0	0	0	0	0	115	0
Other Income (excluding interest)	2,844	2,300	2,645	2,415	2,415	2,645	2,415	2,530	2,530	2,400	2,415	2,070	2,415
Rents, ACC, & Sector Services	3,835	2,367	2,725	2,607	2,626	2,757	2,546	2,608	2,695	2,584	2,592	2,504	2,681
	131,187	126,842	128,456	132,388	135,434	134,489	135,567	131,266	134,200	138,304	133,870	133,328	138,074
Cash was applied to:													
Personnel Costs (incl PAYE)	(50,554)	(41,096)	(46,455)	(43,215)	(42,034)	(51,461)	(45,868)	(41,974)	(49,832)	(42,064)	(51,243)	(45,808)	(42,094)
Other Operating Costs	(32,358)	(31,928)	(29,100)	(29,900)	(33,260)	(32,700)	(33,400)	(32,400)	(32,600)	(27,160)	(28,300)	(28,100)	(35,700)
Funder outflow	(49,395)	(42,705)	(44,863)	(43,995)	(45,749)	(46,419)	(49,470)	(45,981)	(46,084)	(45,079)	(45,749)	(45,079)	(49,470)
Interest and Finance Costs	(6)	(6)	(6)	(6)	(6)	(6)	(31)	(31)	(31)	(31)	(31)	(31)	(31)
Capital Charge	0	0	0	(8,251)	0	0	0	0	0	(15,721)	0	0	0
GST Payments	(7,237)	0	(14,000)	(7,000)	(7,210)	(7,210)	(7,210)	(7,210)	(7,210)	0	(14,420)	(9,000)	(7,210)
	(139,549)	(115,735)	(134,423)	(132,366)	(128,259)	(137,796)	(135,979)	(127,596)	(135,757)	(130,055)	(139,743)	(128,018)	(134,505)
OPERATING ACTIVITES	**(8,362)**	**11,108**	**(5,968)**	**21**	**7,174**	**(3,307)**	**(412)**	**3,670**	**(1,557)**	**8,249**	**(5,873)**	**5,310**	**3,569**
INVESTING ACTIVITIES													
Cash was provided from:													
Interest Income	76	75	75	75	75	75	75	75	75	75	75	75	75
Sale of Assets	0	0	0	0	0	0	0	0	0	0	0	0	0
	76	75	75	75	75	75	75	75	75	75	75	75	75
Cash was applied to:													
Purchase of Assets	(2,507)	(2,500)	(2,500)	(4,600)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)
Investment in NZHPL (Finance project)	0	0	0	0	0	0	0	0	0	0	0	0	0
	(2,507)	(2,500)	(2,500)	(4,600)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)
INVESTING ACTIVITIES	**(2,432)**	**(2,425)**	**(2,425)**	**(4,525)**	**(3,425)**	**(3,425)**	**(3,425)**	**(3,425)**	**(3,425)**	**(3,425)**	**(3,425)**	**(3,425)**	**(3,425)**
FINANCING ACTIVITIES													
Cash was provided from :													
Capital Injection	0	0	0	0	0	0	0	0	0	0	0	0	0
Transfer from NZHPL	121,181	0	8,418	6,698	0	6,758	3,837	0	5,008	0	9,298	0	0
MoH loan received	0	0	0	0	0	0	0	0	0	0	0	0	0
EECA loan received	0	0	0	0	0	0	0	0	0	0	0	0	0
	121,181	0	8,418	6,698	0	6,758	3,837	0	5,008	0	9,298	0	0
Cash was applied to:													
Capital Repayment	0	0	0	(2,194)	0	0	0	0	0	0	0	0	0
Transfer to NZHPL	(110,388)	(8,682)	0	0	(3,749)	0	0	(245)	0	(4,824)	0	(1,859)	(144)
MoH loan repaid	0	0	0	0	0	0	0	0	0	0	0	0	0
EECA loan repaid	0	0	(26)	0	0	(26)	0	0	(26)	0	0	(26)	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	(110,388)	(8,682)	(26)	(2,194)	(3,749)	(26)	0	(245)	(26)	(4,824)	0	(1,885)	(144)
FINANCING ACTIVITIES	10,794	(8,682)	8,392	4,504	(3,749)	6,732	3,837	(245)	4,982	(4,824)	9,298	(1,885)	(144)
Opening cash balance	0	0	0	0	0	0	0	0	0	0	0	0	0
Overall increase/(decrease) in cash	0	0	(0)	0	0	0	0	(0)	0	0	(0)	(0)	0
CLOSING CASH BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0
Closing Cash Balance represented by:													
General Accounts													
Cheque Account	0	0	0	0	0	0	0	0	0	0	0	0	0
Funder Account	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment funds/(loan)													
NZ Health Partnerships Ltd (NZHPL)	6,653	15,335	6,917	218	3,968	(2,790)	(6,627)	(6,382)	(11,390)	(6,566)	(15,864)	(14,005)	(13,861)
Long-term Loans													
Ministry of Health	0	0	0	0	0	0	0	0	0	0	0	0	0
EECA Loan	(299)	(299)	(273)	(273)	(273)	(247)	(247)	(247)	(221)	(221)	(221)	(195)	(195)
	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	6,354	15,037	6,644	(54)	3,695	(3,036)	(6,873)	(6,628)	(11,610)	(6,787)	(16,084)	(14,200)	(14,056)
LOANS AVAILABLE													
MoH loans	0	0	0	0	0	0	0	0	0	0	0	0	0
Working capital facility (NZHPL)	(64,367)	(64,367)	(64,367)	(64,367)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)
	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	(64,367)	(64,367)	(64,367)	(64,367)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)	(65,655)

BALANCE SHEET

Opinion on Result:	
There are no material concerns on the balance sheet and all performance indicators are within acceptable tolerances.	On Target

Prior Year Mar-16 $'000	Waikato DHB Financial Position	As at March 2017 Actual $'000	Budget $'000	Variance $'000	Budget Jun-17 $'000
49,321	Total current assets	73,616	51,405	22,211 F	50,193
(154,967)	Total current liabilities	(164,120)	(165,011)	891 F	(198,229)
(105,647)	**Net working capital**	**(90,504)**	**(113,606)**	**23,102 F**	**(148,036)**
568,417	Term assets	556,787	587,789	(31,002) U	611,664
(227,011)	Term liabilities	(14,475)	(226,936)	212,461 F	(226,771)
341,406	**Net term assets**	**542,313**	**360,853**	**181,460 F**	**384,893**
235,759	**Net assets employed**	**451,809**	**247,247**	**204,562 F**	**236,857**
235,759	**Total Equity**	**451,809**	**247,247**	**204,562 F**	**236,857**

Prior Year Mar-16 $'000	Waikato DHB Ratios	As at March 2017 Actual $'000	Budget $'000	Achieved	Trend	Budget Jun-17 $'000
54,520	Borrowing facilities available at month end	64,172	64,172	✓	⇔	46,394
0.9	Debt to Equity ratio	0.0	0.9	✓	⇔	1.0
0.5	Debt to Debt + Equity	0.3	0.6	✓	⇔	0.6
0.3	Current ratio	0.4	0.3	✓	⇔	0.3
38.2%	Equity to total assets	71.7%	38.7%	✓	⇧	35.8%
-5.1%	Return on equity	1.0%	4.7%	✓	⇩	1.9%
3.46	Interest covered ratio	8.14	8.14	✓	⇔	6.96

Balance Sheet variance's resulted from:	Variance $m	Impact on forecast
Net Working Capital		
Net working capital is favourable against budget mainly due to: - Cash held with New Zealand Health Partnerships Limited is higher than planned by $5.5m, mainly due to lower than budgeted capital spend. - Prepayments are higher than planned by $4.1m due to the timing of annual IS spend. - Total accounts receivable and accrued debtors is higher than planned by $12.1m largely due to the actual timing of cash received compared to budget assumptions. - Payroll liabilities are $2.8m higher than budgeted, mainly due to the timing of pay runs and IRD payments resulting in higher month end accruals - Other current liabilities are lower than budgeted $3.7m mainly due to lower accruals than budgeted for Pharmac $1.5m (revised forecast) and capital charge as a result of the rate reduction $1m.	**$23.1 F**	
Net Fixed Assets:		
Net Fixed Assets are under budget mainly due to slower than planned capital spend $33.4m and favourable YTD depreciation $2.4m. Please see attached for latest forecast of capital spend for the year for further detail.	**($31.0) U**	
Non Current Liabilities:		
The unbudgeted Debt to Equity swap for MOH loans was transacted in February 2017	**$212.5 F**	
Equity		
Variance mainly due to : - Debt to Equity swap for MOH loans transacted February 2017 - $212m - Unfavourable variance in overall result against budget $7.1m	**$204.6 F**	
The MoH debt to equity swap also resulted in the movement in financial ratios relating to return on equity and equity to total assets: Equity to Total Assets: Budgeted 38.7%, Actual 71.7% Return on Equity: Budgeted 4.7%, Actual 1.0%		

CAPITAL EXPENDITURE AT 31 March 2017 ($000s)

CAPITAL PLANS						CASHFLOW FORECAST							FULL PROJECT FORECAST	
Activity	Prior year Board Approvals (A)	New Approvals FY16/17 (B)	Transfers (C)	Total Board Approved Capital Plans (D) = A+B+C	1	Prior year expenditure for active Projects (H)	Expenditure FY 16/17 (Actual + Forecast) (I) = J+k+L	Actual Expenditure YTD from 1 Jul-16 to 31 Mar-17 (J)	Approved Forecast Expenditure from 1st Apr 17 to 30 Jun-17 (K)	BRRG Approval Required prior 30 Jun-17 (L)	Board Approved Forecast Subsequent Years (M)	1	Total Planned Expenditure (Actual + Forecast to Project completion) (N) =H+I+M	Total Planned Expenditure Versus Total Board Approved (O) =D - N
Total Under $50K Projects:	**2,300**		-	**2,300**		-	**2,300**	**1,587**	**-**	**713**	-		**2,300**	**0**
CLINICAL EQUIPMENT				-										
SUB TOTAL CLINICAL	**12,455**	**27,393**	**210**	**40,058**		**2,031**	**6,388**	**5,212**	**1,051**	**125**	**31,241**		**39,660**	**398**
INFORMATION SYSTEMS														
SUB TOTAL INFORMATION SYSTEMS	**30,660**	**38,198**	**-244**	**68,614**		**8,316**	**12,502**	**4,595**	**7,083**	**824**	**46,061**		**66,879**	**1,735**
PROPERTY & INFRASTRUCTURE - PLANT									-					
SUB TOTAL PROPERTY & INFRASTRUCTURE- PLANT	**1,493**	**4,601**	**-**	**6,094**		**1,180**	**964**	**606**	**345**	**13**	**3,916**		**6,060**	**34**
PROPERTY PROJECT SERVICES								-						0
SUB TOTAL PROPERTY PROJECT SERVICES	**21,188**	**8,370**	**-175**	**29,383**		**10,173**	**7,560**	**3,933**	**1,900**	**1,727**	**11,633**		**29,366**	**17**
VEHICLES								-						0
SUB TOTAL VEHICLES	**950**	**700**	**47**	**1,697**		**235**	**3**	**3**	**-**	**-**	**1,450**		**1,688**	**9**
STRATEGIC PROJECT OFFICE								-						0
SUB TOTAL STRATEGIC PROJECTS	**25,077**	**60,992**	**0**	**86,069**		**0**	**77**	**10**	**67**	**0**	**85,833**		**85,910**	**159**
CORPORATE								-						0
SUB TOTAL CORPORATE PROJECTS	**8,000**	**800**	**-691**	**8,109**		**1**	**221**	**215**	**6**	**-**	**6,793**		**7,014**	**1,095**
MOH Projects (funded externally)							-	-						
SUB TOTAL MOH PROJECTS	**426**	**-**	**-**	**426**		**197**	**230**	**135**	**95**	**-**	**-**		**427**	**(1)**
Trust Funded Projects (funded externally)							-	-						0
SUB TOTAL TRUST FUNDED PROJECTS	**-**		**-**	-		**333**	**300**	**300**	**-**	**-**	**-**		634	(634)
TOTAL CAPITAL EXPENDITURE							**30,544**	**16,596**	**10,546**	**3,402**	**186,927**		**239,937**	**2,813**
2016/17 PROJECTS NOT COMMENCED				-			36,002			36,002			**36,002**	**(36,002)**
CAPITALISED COMPLETED PROJECTS	4,189		275	4,464		3,150	1,455	1,455					**4,605**	**(142)**
REPORT TOTALS	**106,738**	**141,054**	**-578**	**247,214**		**25,616**	**68,001**	**18,051**	**10,546**	**39,404**	**186,927**		**280,544**	**-33,330**

CAPITAL EXPENDITURE AT 31 March 2017 ($000s)

CAPITAL PLANS						CASHFLOW FORECAST							FULL PROJECT FORECAST	
Activity	Prior year Board Approvals (A)	New Approvals FY16/17 (B)	Transfers (C)	Total Board Approved Capital Plans (D) = A+B+C	1	Prior year expenditure for active Projects (H)	Expenditure FY 16/17 (Actual + Forecast) (I) = J+k+L	Actual Expenditure YTD from 1 Jul-16 to 31 Mar-17 (J)	Approved Forecast Expenditure from 1st Apr 17 to 30 Jun-17 (K)	BRRG Approval Required prior 30 Jun-17 (L)	Board Approved Forecast Subsequent Years (M)	1	Total Planned Expenditure (Actual + Forecast to Project completion) (N) =H+I+M	Total Planned Expenditure Versus Total Board Approved (O) =D - N
Total Under $50K Projects:	**2,300**		-	**2,300**		-	**2,300**	**1,587**	**-**	**713**	-		**2,300**	**0**
CLINICAL EQUIPMENT				-										
Urology - Equipment	-	300	-	300		-	-	-	-	-	200		200	100
Heart Lung machines - Cardiac surgery	-	680	-	680		-	-	-	-	-	680		680	0
Heater Cooler units	-	156	-	156		-	-	-	-		156		156	0
Echo vivid - Cardiology - portable	-	400	-	400		-	-	-	-		400		400	0
Trans-Oesophageal Echo (Toe)		329		329		-	-	-	-	-	250		250	79
Cardiac output machines (critical care) EV1000	90	-		90			-	-	-	-	90		90	0
Radiation Dispenser manual - Oncology	-	90	-	90		-	-	-	-	-	90		90	0
Supra laser - Opthalmology	-	170	-58	112		-	-	-	-	-	112		112	0
Retinal Camera Head	-	-	58	58			58	58	-	-			58	(0)
Ultrasound Replacement (Endoscope, Operating Table & EMG System)	-	100	-	100		-	-	-	-	-	100		100	0
Cytogenics Incubators NICU	25	-	-	25		-	-	-	-	-			0	25
Endoscopy scope cleaning equipment	-	174		174		-	193	193	-	-	-		193	(19)
Endoscopes 16/17		1,040	-604	436		-	-	-	-		436		436	0
Endoscopy scope replacement			604	604			-	-	-		604		604	0
Ultrasound scanner replacement		175		175		-	-	-	-		175		175	0
Theatre Instruments	300	-	-	300		-	-	-	-		150		150	150
Transeosophageal Echo machine (Philips IE33)	-	226		226			-	-	-		226		226	0
Equipment and Supply Washer	50	-	-	50		-	-	-	-	-	50		50	0
Washer/Disinfector (Thames)	125	-	-92	33		-	-	-	-	-			0	33
Washer Decontaminator for Thames Sterile Services	-	-	92	92		-	92	85	7	-			92	0
II Machine (Thames)	120	-	-	120		-	-	-	-	-	120		120	0
Transport Monitors (Critical Care)	75	-	-	75		-	-	-	-	-	75		75	0
Endoscope Camera (Thames)	103	-	-	103		-	-	-	-	-	103		103	0
ENT Zeiss S21 (Theatres)	50	50	-	100		-	-	-	-	-	50		50	50
X-ray Specimen (Theatres) Faxitron	85	-	-	85		-	89	89	-	-	-		89	(4)
Gynae Urodynamics	55	-	-	55		-	-	-	-	-	55		55	0
GP Pumps (Biomed)	450	-	-	450			-	-	-		450		450	0
Bed Replacement Programme	800	-	-330	470			-	-	-		470		470	0
Bed Replacement	-	-	330	330			354	354	-	-			354	(24)
Gamma Camera (Nuclear Med Imaging Scanner)	1,200	-	-	1,200		-	1,200	880	320				1,200	(0)
Home Haemo Dialysis Replacement 16/17	-	62	-	62			-	-	-	-	62		62	0
Haematology Main Analyser (to be approved for hA negotiationing for all hospital	715	-	-	715		-	715	67	526	122	-		715	(0)
Bio Chemistry Lab - Mass Spectrometer	500	-	-	500		-	-	-	-	-	500		500	0
Linear Accelerator (approved by BRRG Nov-15)	4,000	-	-	4,000		2,031	2,192	2,192	-		-		4,223	(223)
-Rapid ARC Licences (Oncology)	123	-	-	123		-	-	-	-	-	123		123	0
PCA Pumps (Biomed)	500	-	-	500		-	-	-	-	-	500		500	0
Treon Plus Stealth station OE9823	-	450		450			-	-	-	-	450		450	0
Haemodialysis (Incentre)	650	-	-	650		-	-	-	-	-	527		527	123
Eyese Heidelberg - Theatres	200			200			-	-	-	-	200		200	0
CT Replacement - Thames (to be approved)	1,500	-	-	1,500		-	-	-	-		1,500		1,500	0
Non-Invasive Ventilator	-	-	-	-		-	-	-	-	-	-		0	0
Oversize Operating theatre table RX500	-	83	-	83		-	-	-	-		83		83	0
Bipap Respironics (CCD x 4) - Respiratory	-	120	-	120		-	-	-	-		120		120	0
Bronchosopes (CCD x $) - Respiratory	-	70	-	70		-	70	61	6	3	-		70	0
Scopes - eBus - Respiratory	-	120	-	120		-	-	-	-		120		120	0
Trolley Washer - SSU	-	276	-	276		-	-	-	-		276		276	0
Telemetry	-	800	-	800		-	-	-	-		800		800	0
Cordless Driver (incl wore collect) - Theatres	-	69	-	69		-	-	-	-		69		69	0
IMM4 Anaesthethic Monitoring system	-	114	-	114		-	-	-	-		114		114	0
LAPAROSCOPIC TOWER WITH WIRELESS SLAVE MONITORS E15750 No1	-	93		93			-	-	-	-	93		93	0
LAPAROSCOPIC TOWER WITH WIRELESS SLAVE MONITORS E15750 No2	-	93		93			-	-	-	-	93		93	0
LAPAROSCOPIC TOWER WITH WIRELESS SLAVE MONITORS E15750 No3	-	93		93			-	-	-	-	93		93	0
LAPAROSCOPIC TOWER WITH WIRELESS SLAVE MONITORS E15750 No4	-	93		93			-	-	-	-	93		93	0
LAPAROSCOPIC TOWER WITH WIRELESS SLAVE MONITORS E15750 No5	-	93		93			-	-	-	-	93		93	0
MONITOR IMM4 FM FLEXIBLE MONITOR & LIC E13191	-	60	-	60		-	-	-	-		60		60	0
Replacement of Task Operating Theatre Lighting in OT7 & OT8	-	-	70	70		-	71	71	-	-	-		71	(1)
Replacement of Task Operating Theatre Lighting in OT 9 - 12	-	-	140	140		-	140	140	-	-	-		140	(0)
Orthopeadic Cordless Driver 4300 sets x 7	-	141	-	141		-	-	-	-		141		141	0

CAPITAL EXPENDITURE AT 31 March 2017 ($000s)

CAPITAL PLANS						CASHFLOW FORECAST							FULL PROJECT FORECAST	
Activity	Prior year Board Approvals (A)	New Approvals FY16/17 (B)	Transfers (C)	Total Board Approved Capital Plans (D) = A+B+C	1	Prior year expenditure for active Projects (H)	Expenditure FY 16/17 (Actual + Forecast) (I) = J+k+L	Actual Expenditure YTD from 1 Jul-16 to 31 Mar-17 (J)	Approved Forecast Expenditure from 1st Apr 17 to 30 Jun-17 (K)	BRRG Approval Required prior 30 Jun-17 (L)	Board Approved Forecast Subsequent Years (M)	1	Total Planned Expenditure (Actual + Forecast to Project completion) (N) =H+I+M	Total Planned Expenditure Versus Total Board Approved (O) =D - N
Orthopeadic system - 6 rotary sets x 2	-	63	-	63		-	-	-	-		63		63	0
System 6 dual Trigger Rotary Hand Piece	-	65	-	65		-	-	-	-		65		65	0
System 6 Sag Saw	-	65	-	65		-	-	-	-		65		65	0
Ultrasound - diagnostic E14773	-	224	-	224		-	-	-	-		224		224	0
Cardotokograph	-	510	-	510		-	-	-	-		510		510	0
Colposcope	-	66	-	66		-	-	-	-		22		22	44
Dinamap	-	150	-	150		-	-	-	-		60		60	90
Echocadiograph (Wakids)	-	272	-	272		-	-	-	-		272		272	0
Foetal heart detector	-	100	-	100		-	-	-	-		100		100	0
Foetal monitor, CTG	170	-	-	170		-	-	-	-		170		170	0
Humidifier	-	150	-	150		-	-	-	-		150		150	0
Infusion pumps (Thames)	-	408	-	408		-	-	-	-		408		408	0
Intellivue physiologic monitor	-	352	-	352		-	-	-	-		352		352	0
Immunology - Molecular Micro Array	50	-	-	50			-	-	-	-	-		0	50
Monitor cardiac , multi parameter	-	320	-	320		-	-	-	-		320		320	0
Scanner, ultrasonic	-	300	-	300		-	-	-	-		300		300	0
Scanner, ultrasonic ob/gyn	-	320	-	320		-	-	-	-		320		320	0
Warmer, radiant, infant IW930	-	72	-	72		-	-	-	-		72		72	0
Cathlabs	-	2,500	-	2,500		-	-	-	-		2,500		2,500	0
Incubator	400	1,440	-	1,840		-	-	-	-		1,840		1,840	0
Haematology Flow Cytometry Robotics system	-	200	-	200		-	-	-	-		200		200	0
Histology Pathvision Radiographic system	-	400	-	400		-	-	-	-		400		400	0
Building Refurnishment - free up space	-	77		77			-	-	-		77		77	0
Biochemistry LC Tandom Mass Spectrometer	-	500	-	500		-	-	-	-		500		500	0
Cytogenetics Digital Imaging system	-	800		800			-	-	-		800		800	0
Scanner 3D Cone Beam (maxFac)	-	150	-	150		-	-	-	-		150		150	0
Med - Dispense Units	-	900	-	900		-	-	-	-		900		900	0
Licensing (breast screening)	-	52	-	52		-	-	-	-		52		52	0
CT Scanner	-	5,200	-	5,200		-	-	-	-		5,200		5,200	0
Digital Mobile X - ray	-	1,500	-470	1,030		-	-	-	-		1,030		1,030	0
Fluro Room units	-	750	-619	131		-	-	-	-		131		131	0
Combi Diagnost Fluoroscopy Unit			619	619		-	-	-	-		619		619	0
Mobile Image Intensifier - Waikato	-	1,500	-550	950		-	-	-	-		950		950	0
X-ray machines and Image Intensifiers	-	-	1,020	1,020		-	1,020	1,020	-	-	-		1,020	0
Ultasound (medical Photography / imaging)	-	200	-	200		-	-	-	-		200		200	0
Infusion pumps (Thames)	-	67	-	67		-	-	-	-		67		67	0
Steriliser Autoclave (Thames)	-	200	-	200		-	-	-	-		200		200	0
Blood gas analysers	-	800	-	800		-	-	-	-		800		800	0
GE Logiq - 9 Vascular Ultrasound	-	-	-	-		-	-	-	-	-	-		0	0
CEP - Pool - 2016/17	119			119		-	192	-	192	-	-		192	(73)
SUB TOTAL CLINICAL	**12,455**	**27,393**	**210**	**40,058**		**2,031**	**6,388**	**5,212**	**1,051**	**125**	**31,241**		**39,660**	**398**
INFORMATION SYSTEMS														
PLATFORM							-	-	-					
ISSP - Decommission Galen 15/16	300	-	15	315		53	261	56	206		-		314	1
ISSP - Decommission Galen 16/17	-	251	-	251			-	-	-		159		159	92
ISSP - File Server -(profile , home drive, appv)rearchitecture	-	150	-	150		-	-	-	-		150		150	0
NIPS - Local Capacity Augments	-	700	-	700		-	-	-	-		700		700	0
ISSP - Lifecycle - Infrastructure Application Workplan 16/17	-	1,000	-	1,000		-	249	52	198		750		999	1
ISSP - Lifecycle - Infrastrucure 15/16	300		-	300		232	67	65	1		-		299	1
ISSP - Clinical and Corporate Platform		500		500			-	-	-		500		500	0
ISSP - Clinical and corporate Platform SQL Server consolidation	475		-	475		99	265	79	186		-		363	112
ISSP - Disaster Recovery Solution 15_16	1,150		-	1,150		2	221	42	129	50	900		1,123	27
ISSP - Backup Capacity Augment	200		-	200		0	199	46	4	150	-		200	0
ISSP - Contingency (IS)	100		-64	36		-	36	-	36	-	-		36	0
ISSP - Windows Server Migration 2003-2008 (DIA)	491		-221	270		-	-	-	-		270		270	0
STORAGE & REPORTING							-	-	-					0
ISSP - Clinical PhotographyImage Management	-	300	-	300		-	-	-	-		300		300	0

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ISSP - DataWarehouse Phase 2 - after 16/17	-	400	-200	200		-	-	-	-		200		200	0
ISSP - Enterprise Reporting Content remediation -after 16/17	-	250	-	250		-	-	-	-		200		200	50
ISSP - Data Analyst Toolset Implementation (16/17)	-	700	-350	350		-	-	-	-		350		350	0
ISSP - Business Intelligence Toolset			350	350		-	-	-		-	350		350	0
ISSP - Lifecycle - Sharepoint Workplan (e.g. replace fileshares, online sharepoint)		1,100		1,100		-	-	-	-		1,100		1,100	0
ISSP - San Controller		322		322		-	-	-	-	-	322		322	0
ISSP - SharePoint (Doc Management Pilot)	700		-	700		230	0	0		-	455		685	15
ISSP - Data Warehouse Phase 1	400		-	400		175	145	74	71		80		400	1
ISSP - Data Warehouse Phase 2			200	200		-	6	6	-	-	193		199	1
NETWORK & COMMUNICATIONS				-			-	-	-					
ISSP - Paging System Replacement	-	350	-	350		-	350	30	320	-	-		350	0
ISSP - Unified Comms Phase 4 (16/17)	-	174	-112	62		-	-	-	-		62		62	0
ISSP - Jabber Instant Messaging and Guest			201	201		-	203	2	-	201			203	(2)
ISSP - Lifecycle - 1-2 Communication Tools Workplan	-	400	-	400		-	100	-	100	-	300		400	0
ISSP - WiFi Rollout	-	1,000	-	1,000		-	500	350	151	-	500		1,000	(0)
ISSP - Network Remediation Work Package 2015/2016	400			400		262	138	0	138	-	-		400	0
ISSP - Network Remediation Lifecycle Work Plan 16/17	300			300		-	299	219	63	17	-		299	1
ISSP - Comms Rooms remediation 2015/2016	230		-	230		44	186	34	152	-	-		230	0
ISSP - Unified Comms Phase 4	147		-	147		35	60	60	-	-	-		95	52
ISSP - Hylafax replacement	96			96		-	95	9	86	-	-		95	0
DEVICES				-			-	-	-					
ISSP - Telehealth- replacement schedule	-	1,800	-	1,800		-	-	-	-	-	1,800		1,800	0
ISSP - Telehealth- Expansion		200	-27	173		-	-	-	-	-	173		173	0
ISSP - Southern Rural Outpatient Video Units			27	27			27	25	2	-	-		27	0
ISSP - Tablets to enable mobile workforce	-	500	-	500		-	-	-	-		500		500	0
ISSP - Touch screens	-	300	-	300		-	-	-	-	-	300		300	0
ISSP - Desktop - increase coverage		200		200			-	-	-	-	200		200	0
ISSP - Desktop upgrade from windows 7 to windows 10		2,000		2,000			-	-	-	-	2,000		2,000	0
ISSP - Desktop environment replacement >$2k	100		-	100		-	-	-	-		100		100	0
ISSP - Mobile device management	90		-54	36		-	-	-	-		36		36	0
ISSP - iPads for Virtual Health	745		-	745		-	-	-	-	-	745		745	(0)
ISSP - Hardware Solution - Medication Room	20		-	20		-	9	9	-	-	-		9	11
ENTERPRISE SERVICE BUSINESS / RULES ENGINE				-			-	-	-					
ISSP - Clinical Business Rules	-	250	-	250		-	-	-	-	-	250		250	0
ISSP - Web Applications -S_Web_Services Infra_Mess Standards	-	500	-	500		-	-	-	-		500		500	0
ISSP - Web Applications -S_Web_Services Infra_Solution Select_Impl	-	500	-	500		-	-	-	-		500		500	0
TOOLS				-			-	-	-	-				
ISSP - PVS Citrix	39	-	-	39		-	15	15	-	-	-		15	24
ISSP - Citrix Sharefile	150	150	-150	150		98	47	47	-	-	-		145	5
ISSP - Archiving Tool	-	380	-	380		4	8	8	-	-	349		361	19
ISSP - TQUAL Reporting	50	50	-	100		1	54	17	36	-	-		55	45
ISSP - Toolsets (after 16/17 refer to Lifecycle plan line items)		452		452			-	-	-	-	452		452	0
ISSP - Toolsets (IS Toolsets 15/16)	563		-	563		178	384	196	188	-	-		562	1
ISSP - Toolsets (14/15)	130		-	130		72	60	36	23	-	-		131	(1)
ISSP - Toolsets (13/14)	471	-	-	471		474	5	5	-	-			479	(8)
ISSP - Citrix Netscaler10.5 upgrade	-	150	-	150		-	-	-	-		-		0	150
ISSP - Rapid Logon	-	700	-	700		-	-	-	-	-	700		700	0
ISSP - e2e Clinical Docs		499		499			-	-	-		499		499	0
ISSP - EMRAM compliance to lvl 6 - upgrade / implementation	-	700	-	700		-	-	-	-	-	700		700	0
ISSP - Lifecycle integration Tools workplan - Rhapsody etc	-	1,000	-	1,000		-	-	-	-		1,000		1,000	0
ISSP - Anivirus / Malware - Toolset upgrade / replacement	-	150	-	150		-	-	-	-		150		150	0
ISSP - Lifecycle - Desktop Workplan (Outlook, Flexplus, etc)	-	1,200	-	1,200		-	-	-	-		1,200		1,200	0
ISSP - Lifecycle - Development tools (Visual studio, Kendo etc)	-	200	-	200		-	-	-	-		200		200	0
ISSP - Team foundation Server - Source Code management	-	250	-	250		-	-	-	-		250		250	0
ISSP - LIS Reporting Development	200		-	200		83	116	19	97		-		199	1
SECURITY				-			-	-	-				0	0
ISSP - Perimeter Redesign		598	-262	336			-	-	-	-	336		336	0
ISSP - Perimeter Remediation Work Plan 16/17			173	173		-	173	1	172		-		173	0
ISSP - Lifecycle - 1-2 Security tools Workplan (cardex, etc)		600	-	600		-	-	-	-	-	600		600	0
ISSP - Perimeter Redesign	150		-	150		33	49	49	-	-	-		81	69
ISSP - Security Defence in depth	500		-122	378		29	112	34	78		236		377	1
LICENSING				-			-	-	-				0	0
ISSP - MS Licensing True-Up (16/17)	300		-	300		-	-	-	-		300		300	0

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ISSP - Other Licensing True-Up (16/17)	300		-	300		-	-	-	-		300		300	0
ISSP - Other Licensing True-Up	300		-251	49		49	16	16	-	-	-		65	(16)
ISSP - MS Licensing True-Up	300		-124	176		129	47	-	47		-		176	0
CLINICAL SYSTEMS							-	-	-				0	0
ISSP - Lifecycle: LIS Workplan	150		-79	71			-	-	-	-	71		71	0
ISSP - Healthviews DC Uploader replacement		150	-150	-			-	-	-	-			0	0
ISSP - Clinical Workstation Core Component Workplan	-	-	480	480			479	161	318				479	1
ISSP - NCAMP. 3M, MKR	250	250	-250	250		78	171	84	87		-		249	1
ISSP - NCAMP 2017			250	250		-	250	1	249		-		250	0
ISSP - Workflow eData	250	-	-	250		3	247	110	138		-		250	(0)
ISSP - Workflow eData		2,100		2,100		-	-	-	-		2,100		2,100	0
ISSP - Database Replacements		300	-	300		2	297	18	279		-		299	1
ISSP - Oral Health system		1,000	-	1,000		165	835	496	298	41	-		999	1
ISSP - eTasks	-	230	-	230		-	100	2	98	-	130		230	0
ISSP - Cardiac Dendrite Phase 3	200	200	-116	284		-	-	-	-		284		284	0
ISSP - Surgical Services Audit Systems			116	116		-	116	37	79				116	0
ISSP - eProgesa replacement impacts - NZ Blood Service	-	150	-	150		-	-	-	-	-	-		0	150
ISSP - Lifecycle - cat 1 Clinical Apps Workplan e.g. Dendrite, Med Dispense		250		250			-	-	-	-	230		230	20
ISSP - Life cycle - cat 1-2 Medical Records Workplan (eg Kofax)	-	600	-	600		-	-	-	-	-	600		600	0
ISSP - Life cycle - cat 1-5 In house Apps Workplan(eg Whitboards)	-	1,400	-350	1,050		-	-	-	-	-	1,050		1,050	0
ISSP - Cat1-5 In-House Developed Applications Work Plan	-	-	350	350		-	350	72	277	-	-		350	0
ISSP - Life cycle - cat 2 Clinical Apps Workplan(eg NHI Gateway)	-	600	-150	450		-	-	-	-		450		450	0
ISSP - Cat 2 Off-the-shelf Applications Work Plan	-	-	150	150		-	150	7	142	-	-		150	0
ISSP - Life cycle - cat 3 -5 Off shelf Apps Workplan(eg PaceArt)	-	1,400	-	1,400		-	350	67	283		1,050		1,400	0
ISSP - Life cycle - CWS / Healthviews Workplan	-	1,000	-654	346		-	-	-	-	-	346		346	(0)
ISSP - Software Upgrades (Apps Lifecycle 15/16)	250		-	250		149	101	69	32		-		250	0
ISSP - Master Data Implementation- after 16/17	-	100	-	100		-	-	-	-	-	100		100	0
ISSP - Laboratory Information Systems June 2016 GA upgrade	-	400	-	400		-	-	-	-		400		400	0
ISSP - Lab Analysers	-	600	-	600		-	-	-	-	-	600		600	0
ISSP - HealthViews - External eReferrals	-	300	-	300		-	224	4	-	220	-		224	76
ISSP - Clinical workstations - Document Tree search	-	100	79	179		-	101	2	-	99	-		101	78
ISSP - Access to community pharmacy	-	100	-100	-		-	-	-	-	-	-		0	0
ISSP - Data collection	-	100	-	100		-	-	-	-		50		50	50
ISSP - Procedure based Booking / Scheduling	-	1,250	-	1,250		-	-	-	-	-	1,250		1,250	0
ISSP - Structured programme - scanned history	-	200	-	200		-	-	-	-		200		200	0
ISSP - Cardiology - Xcelera to ISCV	-	100	-	100		-	-	-	-		-		0	100
ISSP - ipm upgrade to V10 - after 16/17	-	450	-	450		-	450	159	291		-		450	0
ISSP - SSU re-engineering	-	666	-	666		-	-	-	-	-	666		666	0
ISSP - eCWB Infrastructure	-	739	-	739		-	-	-	-	-	739		739	0
ISSP - Maternity (CleverMed)	760		-	760		12	-	-		-	740		752	8
ISSP - LIS Lifecycle upgrade (LIS Drop 6)	200		79	279		218	60	60	-	-	-		279	0
ISSP - HealthViews access to Primary Encounters (GP to Workstations)	300		-	300		69	231	226	5	-	-		300	(0)
ISSP - LIS Print solution	80		-	80		-	-	-	-	-	80		80	0
ISSP - HealthViews Internal eReferrals	300		-300	-		-	-	-	-	-	-		0	0
ISSP - Internal eReferrals			499	499		-	305	55	250		200		505	(6)
ISSP - eOrders	350		-	350		3	0	0			347		350	(0)
ISSP - Radiology - PACS/RIS Upgrade 16/17	500	200	-	700		-	-	-	-	-	653		653	47
ISSP - RIS Upgrade (Project split) (PACS Upgrade 15)	223		-	223		93	135	75	61		-		228	(5)
ISSP - RIS Upgrade 2016	124		-	124		1	122	8	114		-		124	0
ISSP - Lifecycle - cat 1 Clinical Apps Workplan e.g. Dendrite, Med Dispense	250		-	250		-	-	-	-		150		150	100
ISSP - Laboratory Phlebotomy (Te Kuiti)	40		-	40			-	-	-		40		40	0
ISSP - HealthViews - e2e Clinical Documents	350		-	350		53	314	314	-	-	-		367	(17)
ISSP - Clinical Workstation Metadata Scoping			50	50		1	51	5	-	46	-		52	(2)
ISSP - Speech Recognition			100	100		1	99	-	99		-		100	0
ISSP - Clinical Workflow Integration Work Plan			430	430		-	125	40	85		390		515	(84)
ISSP - Provation Host Tairawhiti	27		-	27		-	27	-	27		-		27	0
ISSP - e-Discharge Summaries	100		-100	-		-	-	-	-		-		0	0
CORPORATE SYSTEMS & PROCESSES				-			-	-	-				0	0
ISSP - Costpro Upgrade		103		103			-	-	-	-	103		103	0
ISSP - Costpro Tactical Improvements & Upgrade	400		-	400		238	162	1	161		-		400	0
ISSP - HRIS Lifecycle Upgrade 15_16		400	-	400		4	396	27	369		-		400	(0)
ISSP - Lifecycle HRIS / Peoplesoft Workplan		950		950		-	-	-	-	-	950		950	0
ISSP - HRIS Self Service implementation - payroll improvement	400	-	-	400		-	-	-	-		400		400	0

CAPITAL EXPENDITURE AT 31 March 2017 ($000s)

CAPITAL PLANS						CASHFLOW FORECAST							FULL PROJECT FORECAST	
Activity	Prior year Board Approvals (A)	New Approvals FY16/17 (B)	Transfers (C)	Total Board Approved Capital Plans (D) = A+B+C	1	Prior year expenditure for active Projects (H)	Expenditure FY 16/17 (Actual + Forecast) (I) = J+k+L	Actual Expenditure YTD from 1 Jul-16 to 31 Mar-17 (J)	Approved Forecast Expenditure from 1st Apr 17 to 30 Jun-17 (K)	BRRG Approval Required prior 30 Jun-17 (L)	Board Approved Forecast Subsequent Years (M)	1	Total Planned Expenditure (Actual + Forecast to Project completion) (N) =H+I+M	Total Planned Expenditure Versus Total Board Approved (O) =D - N
ISSP - Attendants System - enhancements or replacement	-	100	-	100		-	-	-	-	-	100		100	0
ISSP - Hockin Conversion	21		-	21		12	9	4	5		-		21	0
REGIONAL							-	-	-				0	0
RSSP - Regional Netscaler Reconfiguration	-	33	-	33		-	-	-	-		33		33	0
RSSP - Regioanl Microsoft Reporting Services	-	225	-	225		-	-	-	-		225		225	0
RSSP - SEEMAIL	-	26	-14	12		-	-	-	-		12		12	0
RISSP - HSL - File sharing technology	42			42		-	-	-	-		42		42	0
RISSP - HSL - ANZAC - Q1	40		-	40		-	-	-	-		40		40	0
RISSP - HSL - Core Intrastructure	644			644		-	-	-	-		644		644	0
RISSP - HSL - Enhanced Identity Management	46		-	46		-	-	-	-		46		46	0
RISSP - HSL - Enhanced Regional Integration	502		-	502		-	-	-	-		502		502	0
RISSP - HSL - e Space Clinical Workstation	7,831		-	7,831		-	-	-	-	-	7,831		7,831	0
RISSP - Risk Management Solution (Regional)	369		-	369		306	63	-	63		-		369	0
MRISSP - Pharmacy System Phase II – Implementation	2,462		-	2,462		2,356	106	-	106		-		2,462	0
RISSP - Midland Regional Platform Project	409		-	409		245	164	-	164		-		409	0
RISSP - Clinical Workstation - Phase II (License)	500	500	-	1,000		500	500	500	-		-		1,000	0
ISSP - Netscaler Infrastructure			343	343		1	342	226	116		-		342	1
OTHER PROJECTS				-			-	-	-				0	0
ISSP - FMIS Replacement - Phase I	792		-	792		499	-	-	-		-		499	293
ISSP - Clinical whiteboard - eCWB Infrastructure	442		-	442		128	90	90	-		-		218	224
ISSP - Portfolio Resource Management Upgrade	130		-	130		85	10	10	-		-		95	35
ISSP - Printer Architecture Upgrade	130		-	130		9	120	4	116	-	-		130	0
ISSP - Application Lifecycle 2014/15 WorkPlan	470			470		454	4	4	-		-		458	12
ISSP - Baseline - Infrastructure Lifecycle Management	465		-	465		318	151	25	126		-		469	(4)
ISSP - Windows 10 COE (Part deduction see below for balance of deduction	45		-	45		27	18	18	-		-		45	0
ISSP - Cobas IT 1000	120		-	120		2	118	0	118		-		120	0
ISSP - Spark Consultancy Services			64	64		-	64	16	49	-	-		64	(0)
SUB TOTAL INFORMATION SYSTEMS	**30,660**	**38,198**	**-244**	**68,614**		**8,316**	**12,502**	**4,595**	**7,083**	**824**	**46,061**		**66,879**	**1,735**
PROPERTY & INFRASTRUCTURE - PLANT									-					
Waikato Waiora Chillers	643		-	643		626	2	2	-	-	-		628	15
Waikato Distribution Board stuff 11/12	250		-	250		196	54	16	38	-	-		250	0
Waikato Switchboards - Menzies,Kemp,Waiora & ERB	-	600	-	600		-	-	-	-	-	600		600	0
Theatre - Air conditioning upgrades	-	400	-250	150		-	-	-	-	-	150		150	0
Kempthorne Plantroom Upgrade	-	-	250	250		-	252	237	15	-	-		252	(2)
Thames - Air conditioning inpatient unit upgrade	-	200	-	200		-	-	-	-	-	200		200	0
Carpark Lighting - Upgrade	-	50	-	50		-	50	37	-	13	-		50	(0)
HV System - upgrade- SCADA to BMS	-	160	-	160		-	-	-	-	-	160		160	0
Ward 32 - Air conditioning	-	45	-	45		-	-	-	-	-	45		45	0
Hockin sewage system	-	65	-20	45		-	-	-	-	-	45		45	0
Hockin Sewer Pumping Stations and Heating Controls	-	-	20	20		-	-	-	-	-	20		20	0
Marsh Insurance Items	-	150	-	150		-	-	-	-	-	150		150	0
Mothercraft Fire Panel - upgrade	-	20	-	20		-	-	-	-	-	20		20	0
NICU ERM's to 4 x 4 upgrade	-	36	-18	18		-	-	-	-	-	18		18	0
Extension to Current ERM Manifolds for NICU	-	-	18	18		-	-	-	-	-	18		18	0
Tunnel lighting	-	30	-	30		-	-	-	-	-	30		30	0
Maternity Refurb / Electrical	-	44	-	44		-	-	-	-	-	44		44	0
EWIS communications solution	-	170	-	170		-	-	-	-	-	170		170	0
Lift car upgrades	-	72	-	72		-	-	-	-	-	72		72	0
ERB chilled water buffer tank installation	-	20	-	20		-	-	-	-	-	20		20	0
ERB Fire panel upgrade	-	200	-	200		-	-	-	-	-	200		200	0
Menzies Fire panel upgrade	-	200	-	200		-	-	-	-	-	200		200	0
Avigilon DVR's in all building x9	-	117	-	117		-	-	-	-	-	117		117	0
Carpark CCTV	-	300	-87	213		-	-	-	-	-	213		213	0
Pembroke Street Car Park CCTV			87	87			-	-	-		87		87	
Convert CCTV from analogue to IP	-	60	-	60		-	-	-	-	-	60		60	0
Develop Web based payment for Multicash	-	150	-48	102		-	-	-	-	-	102		102	(0)
Change Readers X 125	-	60	-	60		-	-	-	-	-	60		60	0
Gallagher door controllers - upgrade to 6000 model	-	300	-	300		-	-	-	-	-	300		300	0
Virtual controller for Monitoring stations	-	80	-	80		-	-	-	-	-	80		80	0
Intercoms at all barrier arms	-	110	-	110		-	-	-	-	-	110		110	0
CCTV for Hockin building	-	80	-54	26		-	-	-	-	-	26		26	0
CCTV Installations	-	-	54	54			-	-	-	-	54		54	(0)
Master key - Waikato buildings (2 x bldgs)	-	112	-	112		-	-	-	-	-	112		112	0

CAPITAL EXPENDITURE AT 31 March 2017 ($000s)

CAPITAL PLANS						CASHFLOW FORECAST							FULL PROJECT FORECAST	
Activity	Prior year Board Approvals (A)	New Approvals FY16/17 (B)	Transfers (C)	Total Board Approved Capital Plans (D) = A+B+C	1	Prior year expenditure for active Projects (H)	Expenditure FY 16/17 (Actual + Forecast) (I) = J+k+L	Actual Expenditure YTD from 1 Jul-16 to 31 Mar-17 (J)	Approved Forecast Expenditure from 1st Apr 17 to 30 Jun-17 (K)	BRRG Approval Required prior 30 Jun-17 (L)	Board Approved Forecast Subsequent Years (M)	1	Total Planned Expenditure (Actual + Forecast to Project completion) (N) =H+I+M	Total Planned Expenditure Versus Total Board Approved (O) =D - N
Ward - standard install	-	120	48	168		-	-	-	-	-	168		168	0
Monitoring centre (setup, 24/7 manning)	-	50	-	50		-	-	-	-	-	50		50	0
Infrastructure Replacement Pool (15/16)	600			600		358	288	288	-	-			646	(46)
Infrastructure Replacement Pool (16/17)		600		600		-	318	25	293		215		533	67
SUB TOTAL PROPERTY & INFRASTRUCTURE- PLANT	**1,493**	**4,601**	**-**	**6,094**		**1,180**	**964**	**606**	**345**	**13**	**3,916**		**6,060**	**34**
PROPERTY PROJECT SERVICES								-						0
Priority Roading Works		565		565		-	-	-	-		565		565	0
MCC - Edge roof protection		30		30		-	-	-	-	-	30		30	0
OPRS - Roof access		30		30		-	-	-	-	-	30		30	0
ERB improvements (counter cold & wind)		150		150			-	-	-	-	150		150	0
Greening Programme	875	-	-280	595			-	-	-		595		595	0
Concept Design- Oncology/Haematology Facility	300	-	-	300		62	238	19	219				300	0
Virtual Care Office	46	-		46		57	35	35	-				92	(46)
Boiler House Upgrade	1,833	-	-	1,833		1,833	33	33	-				1,866	(33)
Hilda Ross - Remediation	3,403	-	280	3,683		-	1,934	1,251	683		1,750		3,684	(0)
Lift Upgrade	1,835	-	-	1,835		1,610	-	-	-	-	225		1,835	(0)
Electrical Systems Improvement	6,889	-	-175	6,714		5,789	925	136	-	789			6,714	0
Consolidation of CBD facilities	-	5,557	-	5,557		-	1,521	1,021	500	-	4,036		5,557	0
Office Relocations	2,000	-	-95	1,905		-	-	-	-		1,905		1,905	0
Hockin - Open planning/ Modernisation of Level 3 Executive Wing			95	95		-	95	92	3				95	0
Seismic Remediation	3,207	-		3,207		123	2,175	1,237	0	938	909		3,207	(0)
Internal Reconfiguration - Gallaghers	-	863	-	863		-	250	46	204	-	613		863	0
Internal Reconfiguration - Room Pressure	-	210	-	210		-	210	14	196				210	0
Internal Reconfiguration - Pain Clinic - L3 Menzies	-	100	-	100		-	-	-	-	-	100		100	0
Internal Reconfiguration - Coffee outlet L1 MCC	-	75	-	75		-	-	-	-		75		75	0
Internal Reconfiguration - Refurb - Waiora L2	-	200	-	200		-	-	-	-	-	200		200	0
Outdoor staff facility- Rest & Recovery off red Corridor	-	100	-	100		-	-	-	-	-	100		100	0
Ward Block A & environs	-	300	-	300		-	-	-	-		300		300	0
Landscape Ward Block A		50		50		-	-	-	-		50		50	0
Tokoroa / Te kuiti / Rhoda Road / Matariki Refurb	-	140	-140	-		-	-	-	-		-		0	0
Combining Matariki and Princess Street Bases			140	140		-	140	45	95				140	0
Legacy SCR - Still Required - decanting	800		-	800		700	4	4	-	-	-		704	96
SUB TOTAL PROPERTY PROJECT SERVICES	**21,188**	**8,370**	**-175**	**29,383**		**10,173**	**7,560**	**3,933**	**1,900**	**1,727**	**11,633**		**29,366**	**17**
VEHICLES								-						0
Vision Hearing Truck (Moblie Ear Clinic)	**200**		47	247		235	3	3	-		-		238	9
Mobile Dental Unit Replacements level 1		700		700			-	-	-	-	700		700	0
Mobile Dental Unit Replacements level 2	**750**		-	750		-	-	-	-	-	750		750	0
SUB TOTAL VEHICLES	**950**	**700**	**47**	**1,697**		**235**	**3**	**3**	**-**	**-**	**1,450**		**1,688**	**9**
STRATEGIC PROJECT OFFICE								-						0
Education; Research and supporting amenities	25,000	-		25,000			-	-	-		25000		25,000	0
Mental Health Facility - scoping	77	-	-	77		-	77	10	67		-		77	0
Mental Health Facility	-	60,992	-	60,992		-	-	-	-	-	60,833		60,833	159
SUB TOTAL STRATEGIC PROJECTS	**25,077**	**60,992**	**0**	**86,069**		**0**	**77**	**10**	**67**	**0**	**85,833**		**85,910**	**159**
CORPORATE								-						0
COS - Contingency (was CFO)	1,000		-492	508		-	-	-	-	-	508		508	0
Catalyst Initiatives	2,500		-574	1,926		-	-	-	-	-	1,826		1,826	100
Service & Capacity Planning Tool			98	98		-	-	-	-		98		98	0
BPAC eReferral Phase 2			247	247		-	-	-	-	-	247		247	0
Production & Meal ordering S/W	-	300	-	300		-	-	-	-		300		300	0
Positive NPV Projects	1,000		-	1,000		-	-	-	-		1,000		1,000	0
Oracle - Mop ups and Budgeting solution	-	500	-	500		-	-	-	-	-	500		500	0
Taleo - Transition module			30	30		-	30	24	6				30	0
Project Elevate-Upgrade to NOS			118	118		1	172	172	-				173	(55)
Audio Visual Equipment							19	19	-	-	-		19	(19)
Transition to National Oracle System	3,500		-118	3,382		-	-	-	-	-	2,314		2,314	1,068
SUB TOTAL CORPORATE PROJECTS	**8,000**	**800**	**-691**	**8,109**		**1**	**221**	**215**	**6**	**-**	**6,793**		**7,014**	**1,095**
MOH Projects (funded externally)							-	-						
National Patient Flow-Phase 2	177		-	177		174	2	2	-		-		177	0
National Patient Flow Phase 3	249			249		23	228	133	95		-		251	(2)
Telestroke Pilot	-	-	-	-		-	42	42	-	-	-		42	(42)
SUB TOTAL MOH PROJECTS	**426**	**-**	**-**	**426**		**197**	**230**	**135**	**95**	**-**	**-**		**427**	**(1)**
Trust Funded Projects (funded externally)							-	-						0
15/16 Trust Account	-			-		250	226	226	-		-		476	(476)

CAPITAL EXPENDITURE AT 31 March 2017 ($000s)

CAPITAL PLANS						CASHFLOW FORECAST							FULL PROJECT FORECAST	
Activity	Prior year Board Approvals (A)	New Approvals FY16/17 (B)	Transfers (C)	Total Board Approved Capital Plans (D) = A+B+C	1	Prior year expenditure for active Projects (H)	Expenditure FY 16/17 (Actual + Forecast) (I) = J+k+L	Actual Expenditure YTD from 1 Jul-16 to 31 Mar-17 (J)	Approved Forecast Expenditure from 1st Apr 17 to 30 Jun-17 (K)	BRRG Approval Required prior 30 Jun-17 (L)	Board Approved Forecast Subsequent Years (M)	1	Total Planned Expenditure (Actual + Forecast to Project completion) (N) =H+I+M	Total Planned Expenditure Versus Total Board Approved (O) =D - N
16/17 Trust Account				-		-	69	69	-		-		69	(69)
15/16 Other Donated Assets				-		84	5	5	-				89	(89)
SUB TOTAL TRUST FUNDED PROJECTS	-		-	-		333	300	300	-	-	-		634	(634)
TOTAL CAPITAL EXPENDITURE							30,544	16,596	10,546	3,402	186,927		239,937	2,813
2016/17 PROJECTS NOT COMMENCED				-			36,002			36,002			36,002	(36,002)
CAPITALISED COMPLETED PROJECTS	4,189		275	4,464		3,150	1,455	1,455					4,605	(142)
REPORT TOTALS	106,738	141,054	-578	247,214		25,616	68,001	18,051	10,546	39,404	186,927		280,544	-33,330

Performance Reporting

MEMORANDUM TO THE BOARD
26 APRIL 2017

AGENDA ITEM 6.1

HEALTH TARGETS REPORT

Purpose	For information.

Most recent results

Table 1 shows a summary of performance for Waikato DHB's health target results including some 2016/17 quarter three results. DHB comparison rankings for 2016/17 quarter three performance are not yet available. The most recent results in the last column give the most up to date picture of performance.

Table 1- Health targets performance summary

HEALTH TARGETS		15/16 Target	2015/16 Q2 results & ranking	2015/16 Q3 results & ranking	2015/16 Q4 results & ranking	16/17 Target	2016/17 Q1 results & ranking	2016/17 Q2 results	2016/17 Q3 results	Target achieved	2016/17 Most recent result
Shorter stays in emergency departments		**95%**	92% 16th ✗	90% 19th ✗	**91% 18th** ✗	**95%**	89.3% 19th ✗	87.6% 20th ✗	88.4%	X	88.4% Mar 17 YTD
Improved access to elective surgery		**100%**	120% 2nd ★	120% 2nd ★	**119% 2nd** ★	**100%**	108% 7th ★	106% 10th ●	106%	√	106.3% Mar 17 YTD
Faster Cancer Treatment (FCT)	Achievement	**85%**	68% 17th ✗	**73%** 13th ●	77% 10th ●	**85%**	81.4% 5th ★	86.1% 5th ★	88% prelim	√	88% Q3 preliminary
Better Help for Smokers to quit	Primary Care	**90%**	88% 7th ★	**89%** 8th ●	88% 6th ★	**90%**	87% 12th ●	87.0% 7th ★	Not available	X	87% 16/17 Q2 result
	Maternity	**90%**	89% 15th ✗	**95%** 13th ●	97% 8th ●	**90%**	93% 12th ●	98% 4th ★	Not available	√	98% 16/17 Q2 result
Increased immunisation (8 months)		**95%**	92% 13th ●	91% 15th ✗	**90% 17th** ✗	**95%**	92.3% 13th ●	92% 15th ✗	90%	X	90.4% Mar 17 3 mth rolling
Raising Healthy Kids[1]			18%	19%	31%	**95%[1]**	47% 11th ●	79% 6th ★	Not available	X	79% 16/17 Q2 result (Jun-Nov16 data)

Key: DHB rating		
★ Good	● Average	✗ Below average
Top third of DHBs	Middle group of DHBs	Bottom third of DHBs

[1] Target by Dec 2017

Target: Shorter stays in Emergency Departments (ED)

Table 2 DHB quarter results 2017

DHB Q4 result 12/13	DHB Q4 result 13/14	DHB Q4 result 14/15	**DHB Target 15/16**	DHB Q1 result 15/16	DHB Q2 result 15/16	DHB Q3 result 15/16	**DHB Q4 result 15/16**	**Q1 2016/17**	**Q2 2016/17**	**Q3 2016/17**
88.4% 18th ranking	93.0% 16th ranking	94.0% 16th ranking	**95%**	89.5% 18th ranking	91.9% 16th ranking	90.5% 19th ranking	**91%**	**89.3%**	**87.6%**	**88.4%**

Table 3 –2017 ED results for quarter ending March

Quarterly Results – by DHB total population			
	Numerator: The number of ED presentations with a length of stay of less than six hours	**Denominator: Total number of ED presentations**	**Percentage of patients admitted, discharged or transferred from ED in less than six hours**
DHB total:	24039	27201	88.4%
Waikato	15730	18458	85.2%
Taumarunui	1460	1533	95.2%
Thames	4101	4401	93.2%
Tokoroa	2748	2809	97.8%

Table 4 - Emergency Department March 2017 results by site and by clinical unit

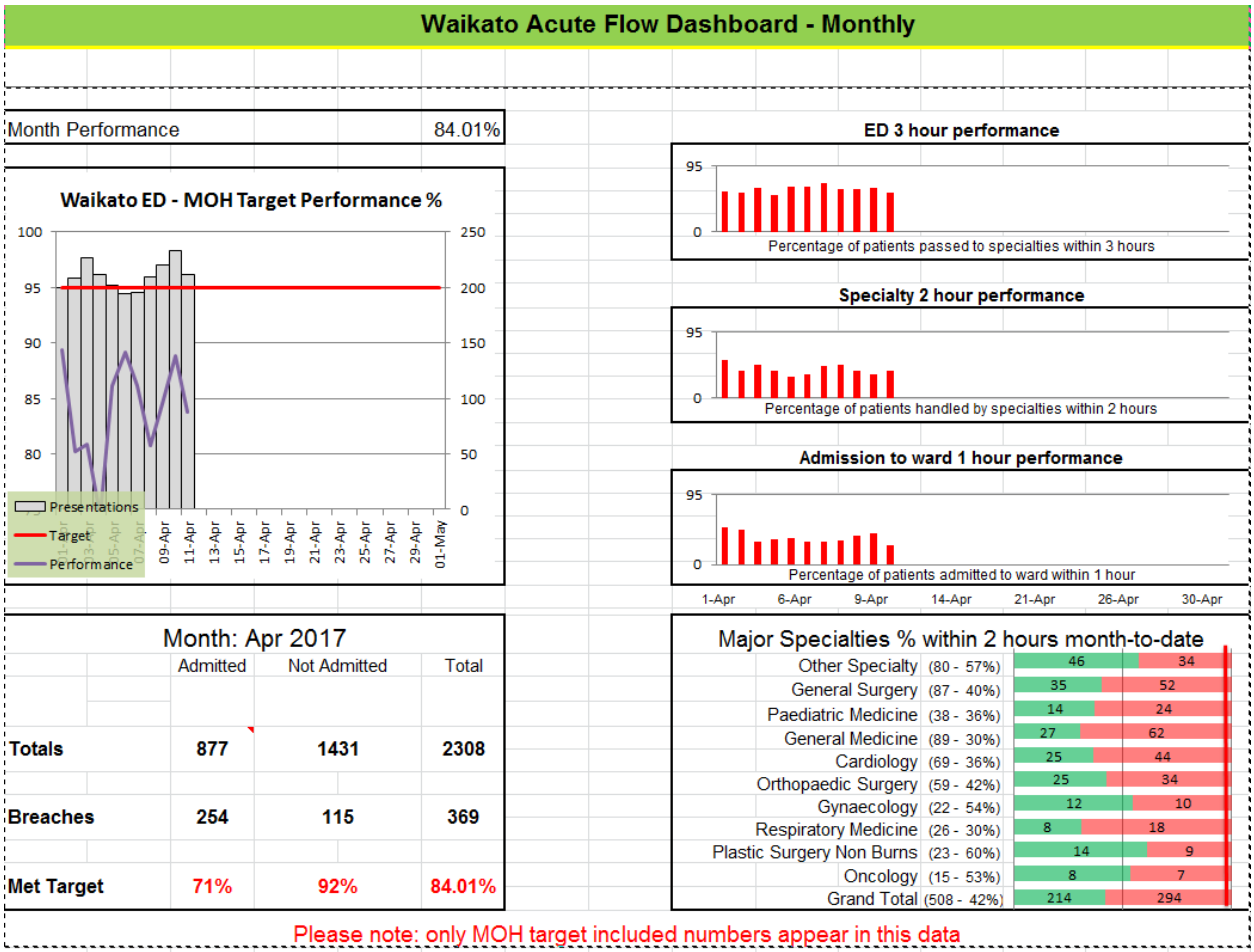
	Clinical Unit	Month: Mar-2017 Departures	%	Year To Date Departures	%
By Specialty/Division (Waikato Hospital Only)	General & Specialty Surgery	926	74.1%	7423	78.0%
	Cardiology	305	58.7%	2306	57.9%
	Cardiothoracic Surgery	10	80.0%	67	89.6%
	Critical Care	0		0	
	Paediatrics	377	90.3%	3732	89.0%
	Emergency Department	3695	91.2%	31602	92.8%
	Internal Medicine	848	75.9%	7443	72.3%
	Womens Care	133	83.1%	1039	78.9%
	Oncology	80	77.5%	658	78.7%
	Orthopaedics	319	75.5%	2435	76.0%
	Renal	54	90.6%	438	81.5%
	Vascular Surgery	29	82.8%	304	88.4%
	Allied health	0		0	
	Community Services	0		0	
	Older Persons	0		3	100.0%
	Mental Health	109	89.5%	822	88.1%
By Site	Waikato Hospital	6885	84.1%	58272	85.1%
	Thames Hospital	1516	91.3%	13036	94.2%
	Tokoroa Hospital	1036	98.9%	9039	97.4%
	Taumarunui Hospital	519	94.7%	4699	96.3%
	Total Health Waikato	**9956**	**87.3%**	**85046**	**88.4%**

Table 4 shows all Health Waikato hospitals emergency department performance up to the latest result of 88.4% for YTD March 2017 noting that Tokoroa and Taumarunui hospitals achieved >95%, but both Waikato and Thames have not achieved it for the month.

As the table above indicates the principal challenge for Waikato Hospital remains the admitted pathway. Performance for non-admitted patients, or those treated in ED alone, is at 92%. The aim is to improve this to >95% once the department is fully staffed and through closer working with Medical teams, enabled by the new hospital restructure.

The principle risks therefore remains for admitted patients, which is likely to get worse unless we achieve effective measures to address the significant anticipated shortfall in acute beds in the winter months (50 to 60 bed shortfall is currently predicted).

At the March Acute Patient Governance Group cardiology and paediatric clinical directors demonstrated their use of the dash board and how they are using the background data to improve communictions and understand the issues. Further Clinical Directors have agreed to undertake this approach and provide feedback at the April meeting.



Emergency Department medical recruitment is on-going. The department orientation programme for Senior Medical Officer's is under review to ensure we provide appropriate orientation and support. During April the department will advertise for fellow and medical officer positions.
Registered Nurse recruitment continues, though should be noted in the context of on-going nursing resignations.

The change team are working with the Emergency Department to improve flow within and out of the department. The change team have completed the following during March:

- Initial meetings with key stakeholders: Charge Nurse Managers, Associate Charge Nurse Managers(ACNM), Registered Nurses - these continue
- ACNM workshop to better understand some of the flow issues

- Initial observations in Emergency Department (ED), including understanding of flow through
- Suggestion box monitored
- Explored ED medication management documentation with pharmacy representative
- Discussed Situation Background Assement Recommendation and Response (SBARR) with Professional Development Unit
- Organised an SBARR workshop for ED staff – held Thursday 30 March
- Continued to build relationships within the department
- Attended the ED Senior Medical Officers planning day to build relationships and gain buy in for improvements in the department
- Facilitated ED nursing team presentation of a proposed enlargement of the Short Stay Unit
- Commenced business case for the above
- Held first meeting re streaming of patients with staff
- Explored options for improved access for plastic patients

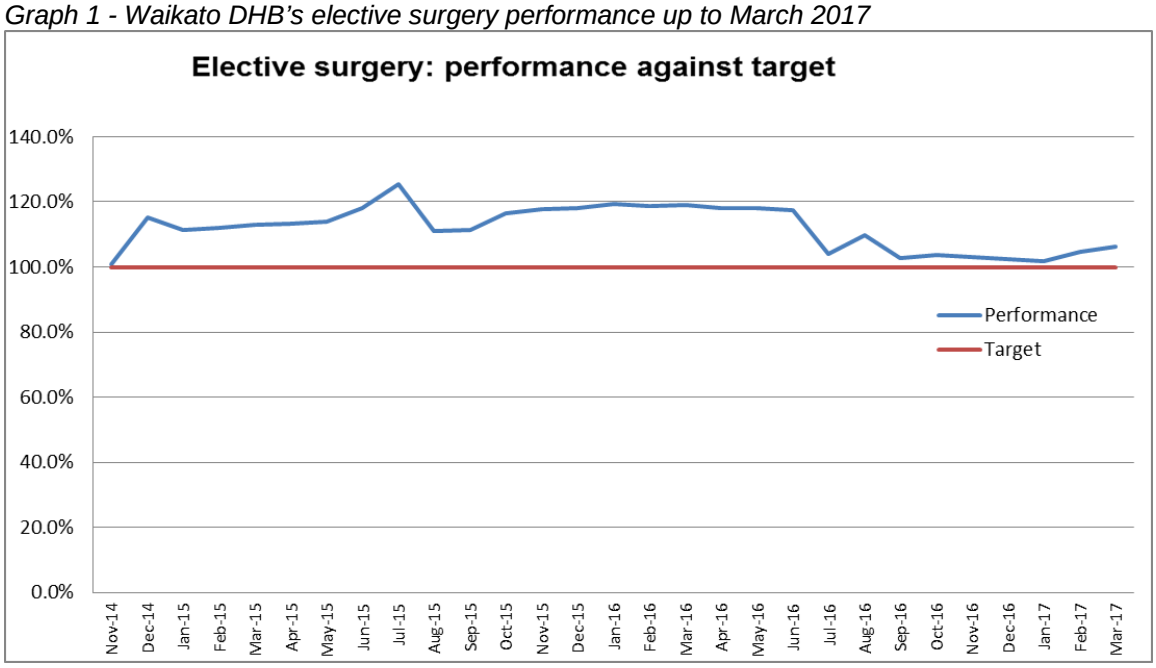
The emergency department clinical director discussed the need to work with a number of services to agree patient pathways with the focus on the admitted patient group. Medical, cardiology and oncology/haematology have agreed to support this request. During April a number of pathways will be identified.

Target: Elective Surgery

DHB Q4 result 14/15	DHB Q4 result 15/16	**DHB Target 16/17**	DHB Q2 result 15/16	DHB Q3 result 15/16	DHB Q4 result 15/16	DHB Q1 result 16/17	**DHB Q2 result 16/17**	**Most recent result**
115.5% YTD 3rd ranking (target 13,583 discharges)	119% YTD (target 15,858 discharges)	**100%** **(target 16,805 discharges)**	120% YTD 2nd ranking (target 7,858 discharges)	120% YTD 2nd ranking (target 11,546 discharges)	119% YTD (target 15,858 discharges)	108% YTD 7th ranking (target 4,651 discharges)	**106% YTD 10th ranking** **(target 8,966 discharges)**	**106.3% YTD March 17** **(target 12,850 discharges)**

The 2016/17 target is 16,805 discharges. Graph two below provides the most recent result of 106%, a total of 13,663 actual discharges for the period from 1 July 2016 to 31 March 2017. Our official ranking result for Q2 had Waikato ranked 10th.

Graph 1 - Waikato DHB's elective surgery performance up to March 2017



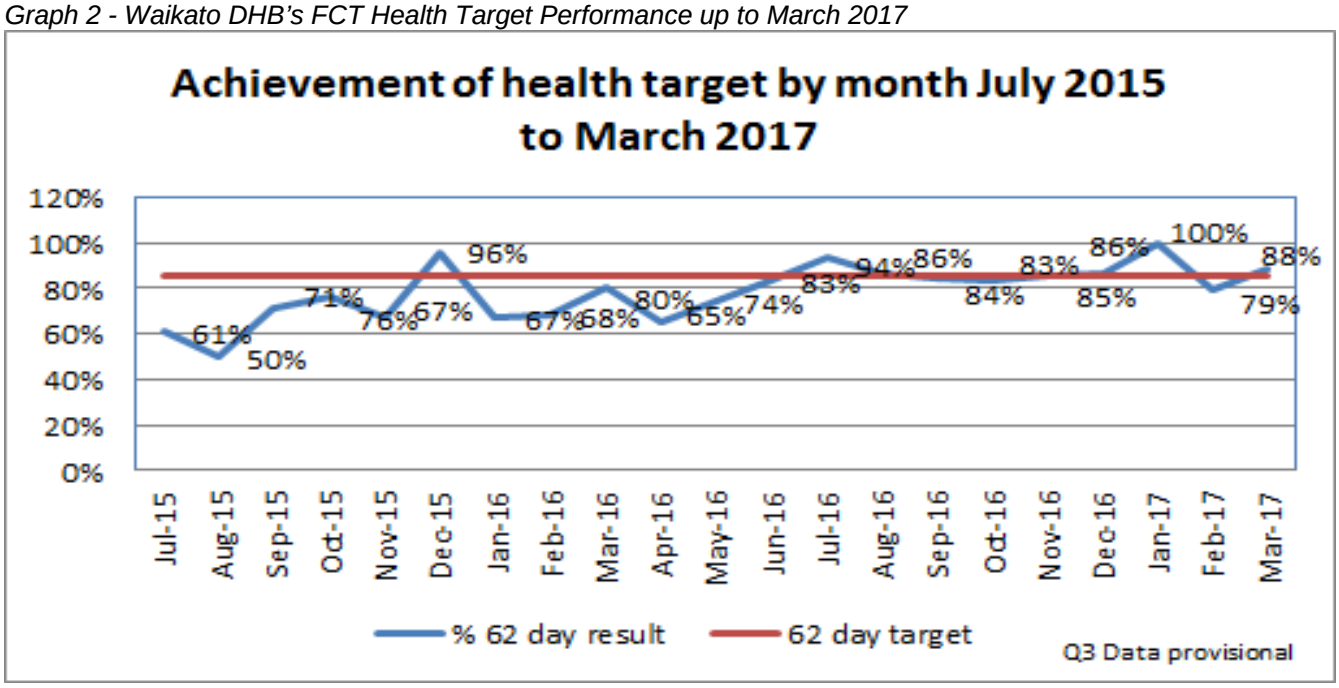
Target: Faster Cancer Treatment (FCT)

FCT 62 DAY HEALTH TARGET									
DHB Target by July 2017	**DHB Current Target**	DHB Q1 Result 15/16*	DHB Q2 Result 15/16	DHB Q3 Result 15/16	DHB Q4 Result 15/16	DHB Q1 Result 16/17	DHB Q2 Result 16/17	**DHB Q3 Result 16/17**	**Most recent six monthly result**
90.00%	**85%**	57.0% 17th ranking	68.0% 17th ranking	76.5% 10th ranking	72.6% 14th ranking	81.4% 5th ranking	86.1% 5th ranking	**88.0%**	**87%** **Q3 provisional**
FCT VOLUME TARGET									
DHB Target by July 2017	**DHB Current Target**	DHB Q1 Result 15/16*	DHB Q2 Result 15/16	DHB Q3 Result 15/16	DHB Q4 Result 15/16	DHB Q1 Result 16/17	DHB Q2 Result 16/17	**DHB Q3 Result 16/17**	**Most recent six monthly result**
25.00%	**15%**	17% 11th ranking	16% 14th ranking	14% 15th ranking	14%	17%	19%	**19%**	**19%** **Q3 provisional**

The 2016/17 quarter three result of 88% reflects a steady continued improvement in Waikato DHB's FCT performance.

Graph 2 below shows the historical monthly percentage performance against the target.

Graph 2 - Waikato DHB's FCT Health Target Performance up to March 2017



Q2 was the first financial quarter we delivered the 85% target for a full quarter, making Waikato DHB one of the first DHB's in the country to achieve >85% for a full quarter. This has been sustained in Q3.

It needs to be recognised that the numbers of patients being treated on the 62 day pathway are relatively small and one or two breaches can have a substantial impact on the DHB's overall percentage performance.

In Q3 we achieved a record high of 100% for January, but unfortunately had a decline in February with 79% and March is showing a provisional result of 88%. There are a number of reasons for these breaches:

- Patient choice, patients do not always want to come in for investigations/ treatment over the December/January period which then causes breaches in February and March. Six breaches were reported in February, three of which were related to patient choice. If these could have been excluded from the measure we would have achieved the target for the month.
- Delays are occurring discussing patients at Auckland gynaecology Multi-Disciplinary Meetings (MDMs), some weeks MDMs are at full capacity thus delaying the presentation of patients a week.

A number of operational measures are being undertaken to maintain performance:

- Business manager and nurse tracker working very closely with cancer care coordinators and CNSs monitoring the patient pathway from initial date of referral.
- Improving the timeliness of Gynaecology triaging and First Specialist Appointment (FSA).
- Midland cancer network involved Auckland Gynaecology MDMs to ensure patients are discussed at MDM in timely manner.
- Weekly coordinated meeting with Gynaecology Clinical Nurse Specialist (CNS) and cancer care coordinator to discuss individual patients and tracking pathways to ensure patients are discussed at Auckland MDM in a timely manner.
- Continue to monitor respiratory triaging and time to First Specialist Appointment.
- Weekly coordinated meeting with upper Gastro Intestinal (GI) surgeons and upper GI cancer nurse coordinator to discuss and track individual patients to ensure we proceed along pathway in a timely manner.

- Radiology-liaising with interventional radiologists to ensure patients receive their CT biopsy in a timely manner.
- Weekly urology waitlist meeting to discuss any patients triaged onto 62 day pathway. Urology service is transitioning to Waikato DHB inpatient management system and has only recently implemented the High Suspician of Cancer when triaging.

Graph 3 - Waikato DHB's FCT performance (rolling six month result)

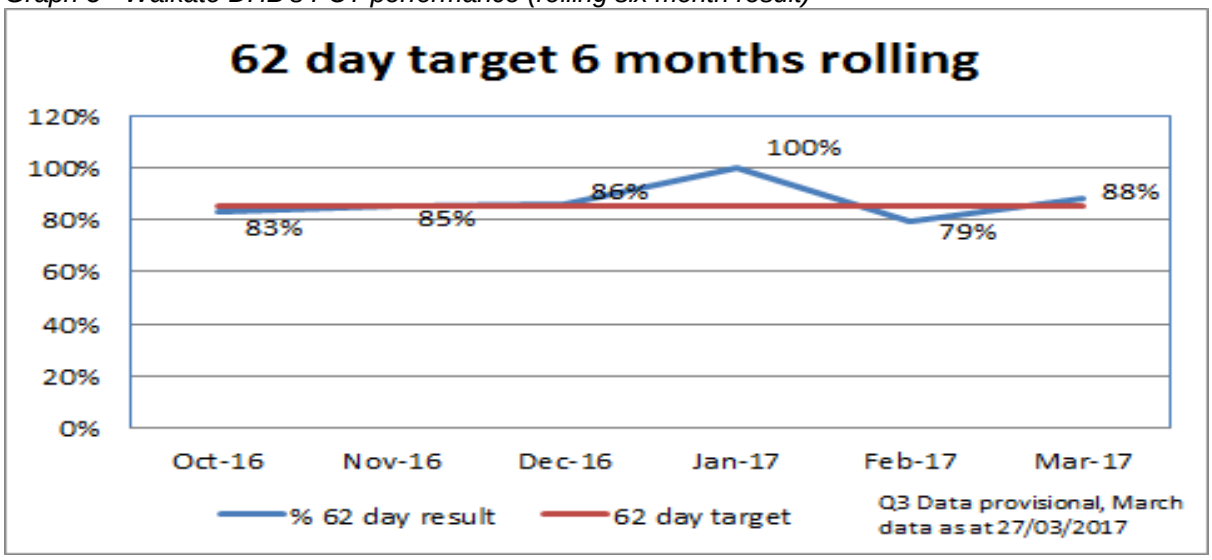


Table 5 - Latest six month data for 62-day FCT cohort, by month of first treatment

Local FCT Database	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Total
Number of records submitted	23	34	42	21	28	40	188
Number of records within 62 days	19	29	36	21	22	35	162
% 62 day Target Met (85%)	83%	85%	86%	100%	79%	88%	86%
% Volume Target Met (15%)	14%	21%	26%	13%	17%	25%	19%

Result for the volume measure of 15% of cancer registrations identified as high suspicion of cancer is also included in the table above. This is a check that the referrals that should be identified as high suspicion of cancers are being captured against this measure. Our latest provisional six month volume result is 19%.

Target: Increased immunisations for 8 months

DHB Q4 result 13/14	DHB Q4 result 14/15	DHB Q4 result 15/16	**DHB Target 16/17**	DHB Q2 result 15/16	DHB Q3 result 15/16	DHB Q4 result 15/16	DHB Q1 result 16/17	**DHB Q2 Result 16/17**	**Most recent 3 monthly result**
89% 17th ranking	91% 15th ranking	89% 17th ranking	**95%**	92% 13th ranking	91% 15th ranking	89% 17th ranking	92% 13th ranking	**92% 15th ranking**	**90% Mar 17**

Data for this target is reported on a three month rolling basis. Graph 5 shows our most recent result of 90% for the three month period from 1 January 2017 to 31 March 2017. This is a slight decrease from quarter 2, however delivery against this target over the Christmas break is often low.

Waikato have consequently failed to meet this target which is disappointing. An Immunisation Resolution Plan was developed prior to Christmas in conjuction with the Immunisation Steering

Group members capturing all current and planned activity. The Ministry has agreed the detailed actions outlined to improve immunisation performance. This resolution plan is led by the Immunisation Steering group which has delegated representative's from PHOs, Strategy and Funding, Population Health and the NIR.

High level activities being implemented under the Waikato Immunisation Resolution Plan include:

- Leadership – clear roles and leads across Waikato DHB and PHOs;
- Early enrolment of newborns primary care – newborn enrolment champions in each PHO (unenrolled babies have an imms rate of 65%);
- Service reconfiguration - NIR service team relocated back from Midlands Health Network to Waikato DHB;
- Outreach Immunisation Services - reviewing opportunities for shared efficiencies and amalgamation;
- Missing events coordination – weekly teleconferences between PHOs, NIR and Outreach Immunisation Service using a traffic light system to immunise babies at risk of missing their immunisation milestones;
- Reduced declines - annual training for health professionals with best practice embedded; and
- Waikato Child Health Co-ordination Service - a key change that has been agreed is to move the Child Co-ordination Service managed by Midlands Health Network to a formal contract with KPIs and outputs to be agreed between the DHB and all PHOs to be jointly monitored.

Graph 4 - Waikato DHB's fully immunised rates for 8 month olds (rolling three month result)

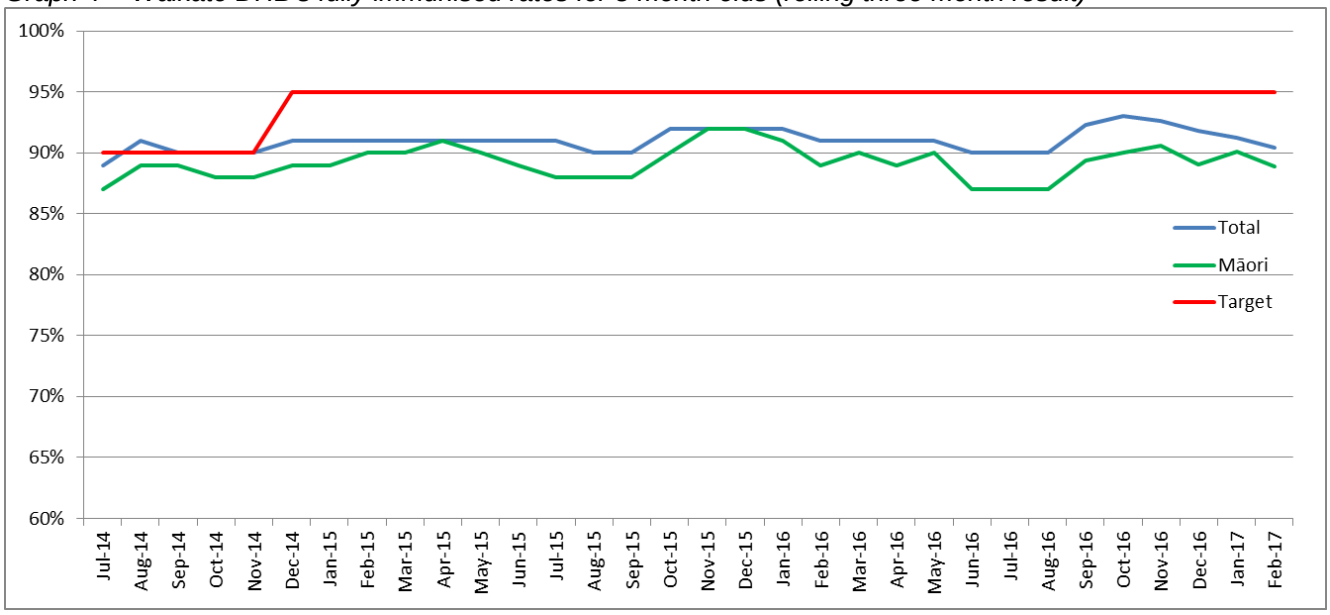


Table 6 (below) shows a breakdown of eight month immunisation by ethnicity including the number of additional children needing to be immunised to meet our 95% target across all ethnicities. Based on these results, 64 additional children needed to be immunised to meet the 95% target.

Table 6 - Waikato DHB 8 month old immunisations ethnicity breakdown from December 2016 to March 2017

Ethnicity	Number Eligible	Fully immunised	Result	Increase needed to meet the target (95%)
Asian	166	159	96%	
Māori	567	507	89%	32
NZ European	498	448	90%	26
Other	118	104	88%	9
Pacific	44	42	95%	
Total across ethnicities				67
Total	**1393**	**1260**	**90.45%**	**64**
Opt off			5	
Declined			68 (4.9%)	

Table 7 below shows the latest immunisation rates for the eight month population for Waikato DHB by PHO and the population not fully enrolled with a Waikato based PHO.

Table 7 - Waikato DHB's PHO level results for 8 month old immunisation from Jan 2017 to Mar 2017

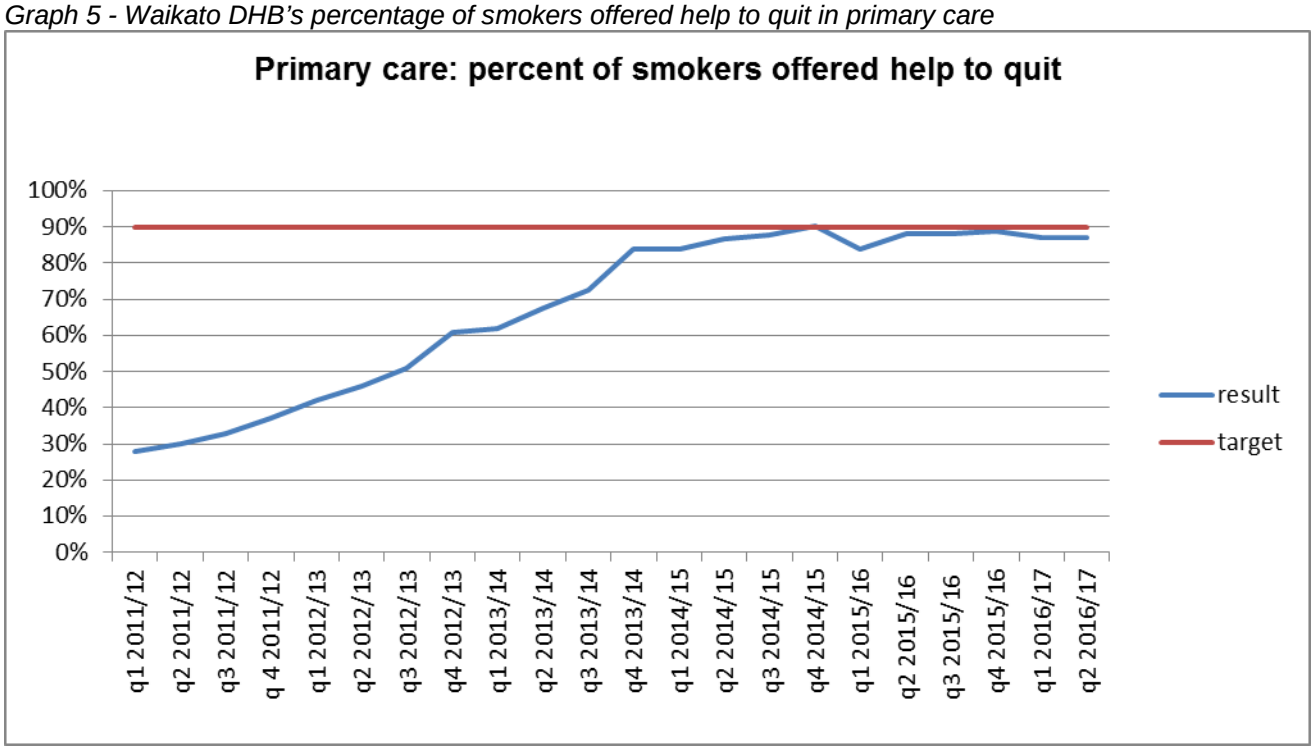
PHO	Total population			Maori population		
	No eligible population	*No fully immunised population*	*Percent immunised*	*No eligible population*	*No fully immunised population*	*Percent immunised*
Hauraki PHO	515	478	93%	250	230	92%
Midlands Health Network – Waikato	773	713	92%	259	239	92%
National Hauora Coalition	21	17	81%	12	9	75%
Enrolled with a PHO outside of Waikato	12	10	83%	46	29	63%
Not Fully Enrolled with PHO *	72	42	58%			
DHB Total	**1,393**	**1,260**	**90%**	**567**	**507**	**89%**

Target: Better help for smokers to quit - primary care
(No update from previous report – quarterly data)

DHB Q4 result 13/14	DHB Q4 result 14/15	DHB Q4 result 15/16	**DHB Target 16/17**	DHB Q2 result 15/16	DHB Q3 result 15/16	DHB Q4 result 15/16	DHB Q1 result 16/17	**Most recent result Q2 16/17**
84% 10th ranking	90.4% 10th ranking	89% 8th ranking	**90%**	88% 7th ranking	88% 6th ranking	89% 8th ranking	87% 7th ranking	**87% 12th ranking**

Graph 5 of the quarter two final result of 87.0% shows Waikato DHB has remained steady from the previous quarter.

Graph 5 - Waikato DHB's percentage of smokers offered help to quit in primary care



Communications are occurring with all PHOs in relation to this measure and actions needed to enable the target to be achieved by the end of 2016/17.

Table 8 shows a breakdown of primary care smoking results by PHOs for 2016/17 quarter two.

Table 8 – 2016/17 Q2 primary care smoking results by PHOs (target 90%)

PHOs	Tobacco Numerator	Tobacco Denominator	2016/17 Q2 result	2016/17 Q1 result	2015/16 Q4 result	2015/16 Q3 result	2015/16 Q2 result
Midlands Health Network	26,716	29,858	88%	88%	88%	87%	87%
Hauraki PHO	19,490	22,617	86%	86%	86%	90%	89%
National Hauora Coalition	1,168	1,365	86%	87%	92%	84%	84%
Total	47,050	54,283	**87%**	**87%**	**89%**	**88%**	**88%**

Target: Better help for smokers to quit - maternity

DHB Q4 result 13/14	DHB Q4 result 14/15	DHB Q4 result 15/16	DHB Q2 result 15/16	DHB Q3 result 15/16	DHB Q4 result 15/16	DHB Q1 result 16/17	**Most recent result Q2 16/17**
95.3% 10th ranking	91.2% 14th= ranking	95% 13th ranking	89% 15th ranking	97% 8th ranking	95% 13th ranking	93% 12th Ranking	**98% Q2 result 4th Ranking**

Graph 6 quarter two result of 98% shows we continue to met this target and Waikto has improved significantly up the rankings from the previous quarter. Quarter three information is not yet available.

Graph 6 - Waikato DHB's percentage of smokers offered help to quit in maternity

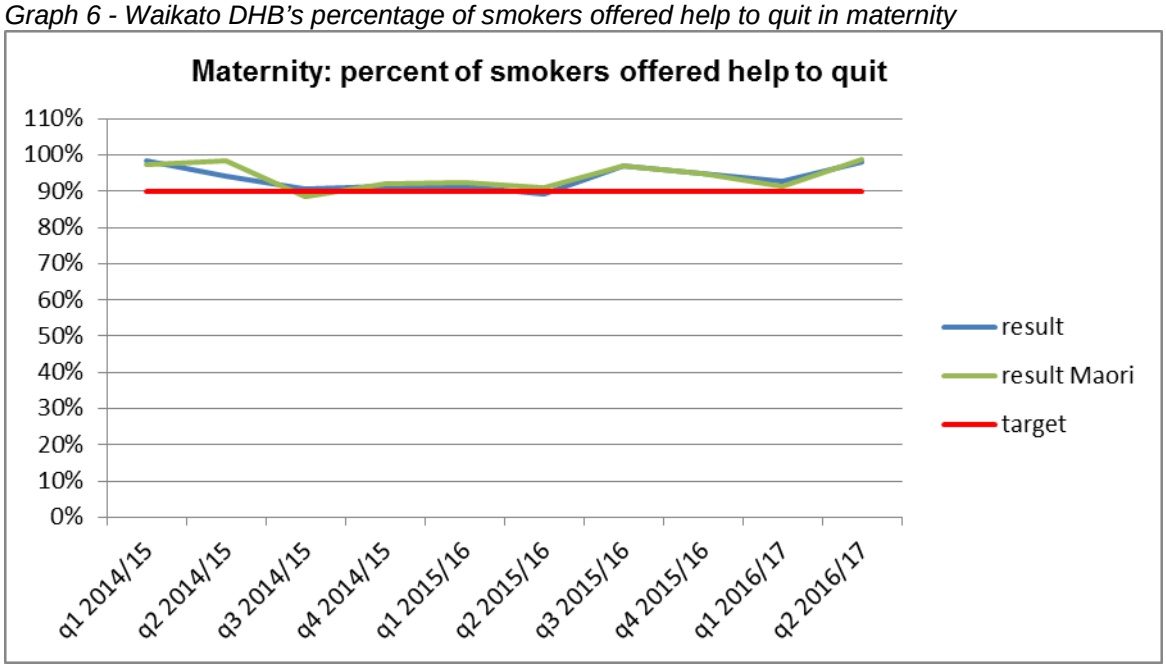


Table 9 shows our quarter two results provided by the Ministry for our total and Maori population.

Table 9 – 2016/17 Q2 maternity smoking status and advice results (target 90%)

	No. women registered *	No. of women identified as smokers	No. people given advice	Smoking prevalence	Percent of smokers offered advice
Maori	164	73	72	39.4%	98.6%
Total	607	108	106	17.8%	98.1%

**Data comes from three sources: Midwifery and Maternity Providers Organisations (MMPOs), Lead Maternity Carers Services (LMCs) and from DHB employed midwives (if available)*[2]

The information for this measure is received directly from the Ministry of Health. Concerns exist around the completeness of this information given total birth numbers for the Waikato District. Communications have occurred with the Ministry of Health in relation to increasing the completeness of this data.

Target: Raising healthy kids
(No update from previous report – quarterly data)

On 30 June 2016 the Ministry launched the new Raising Healthy Kids health target. The target reads that by December 2017, 95% of obese children identified in the B4 School Check (B4SC) programme will be offered a referral to a health professional for clinical assessment and family based nutrition, activity and lifestyle interventions. Target results only capture children aged four to five who have had a B4SC.

The health target is one of two targeted interventions in the Ministry's Childhood Obesity Plan. The Obesity Plan has three focus areas made up of 22 initiatives across three areas; (1) targeted interventions, (2) increased support and (3) broad population approaches. The two targeted

[2] Note, Waikato DHB has reported to the Ministry that the data shows significantly less first registrations with a midwife than expected in Waikato. The Ministry has informed us full activity is not reflected in the data for other DHBs also and they are working through the accuracy of information but have yet to resolve the problem.

intervention initiatives are Raising Healthy Kids target and access to nutrition and physical activity programmes for families.

Our quarter one feedback from the Ministry stated that '*Waikato DHB has demonstrated strong leadership in addressing childhood obesity and are to be congratulated on their development of tools to assist healthcare workers to help whânau adopt healthy lifestyle change'.*

The latest quarterly result is now 79% putting the DHB above the national average of 72%.

Locally the introduction of the target is led out by the Waikato Child Health Network chaired by our primary care clinical lead and GP Child health liaison doctor. The health target is just one part of both a national and district wide multifaceted approach to tackle child hood obesity including amongst others health promotion, Green Prescription, Project Energize, Under-fives Energize and Bodywise. The key aim of the target is that health professionals will manage clinical risks associated with obesity, encourage and support family and whanau to take actions around nutrition, lifestyle and physical activity and importantly regularly monitor children's growth.

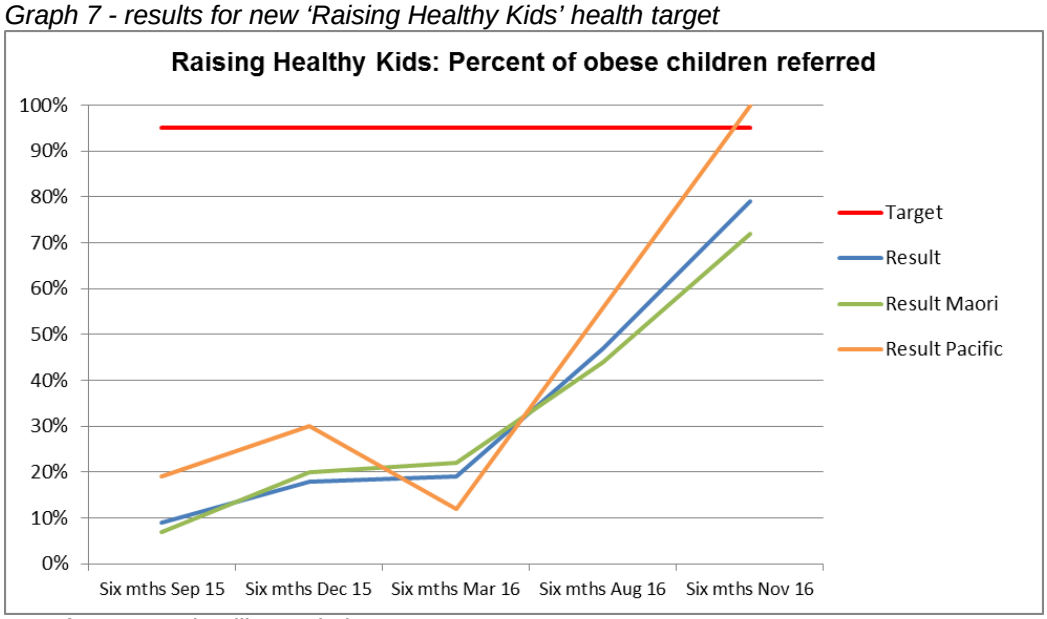
Our GP Liaison is working on the referral pathways for children identified as very overweight (BMI> 98 centile). Our scope has been broadened to include BMI >91% centile. As our B4SC checks are done in general practice by the child's usual practice nurse referrals will be made to the family general practitioner within 30 days of the check, recorded formally and reported to the national B4SC system. We are also ensuring that our referral pathways include a missing events service as we anticipate almost all children will be referred but not all will return for and appointment.

Table 10 – 2016/17 Q2 Raising Healthy Kids Results (target 95%)

		Waikato DHB					**National**
		2015/16 Q2	**2015/16 Q3**	**2015/16 Q4**	**2016/17 Q1**	**2016/17 Q2**	**2016/17 Q2**
		Six mths Sep 15	**Six mths Dec 15**	**Six mths Mar 16**	**Six mths Aug 16**	**Six mths Nov 16**	**Six mths Nov 16**
Total	Referral Sent	13%	18%	23%	50%	82% (141)	78%
	Referral Sent and Acknowledged	**9%**	**18%**	**19%**	**47%**	**79% (135)**	**72%**
Maori	Referral Sent	12%	21%	30%	49%	76% (63)	75%
	Referral Sent and Acknowledged	**7%**	**20%**	**22%**	**44%**	**72% (58)**	**70%**
Pacific	Referral Sent	26%	30%	12%	56%	100% (11)	86%
	Referral Sent and Acknowledged	**19%**	**30%**	**12%**	**56%**	**100% (11)**	**77%**

Note that the numbers in brackets in the table are the actual numbers of children in each of the categories

Graph 7 - results for new 'Raising Healthy Kids' health target



Data for a 6 month rolling period up to Nov 2016

Recommendation
THAT
The Board receives this report.

BRETT PARADINE
EXECUTIVE DIRECTOR
WAIKATO HOSPITAL SERVICES

JULIE WILSON
EXECUTIVE DIRECTOR
STRATEGY AND FUNDING

SUE HAYWARD
DIRECTOR
NURSING AND MIDWIFERY

MARK SPITTAL
EXECUTIVE DIRECTOR
COMMUNITY AND CLINICAL SUPPORT

MEMORANDUM TO THE BOARD
26 APRIL 2017

AGENDA ITEM 6.2

PROVIDER ARM KEY PERFORMANCE DASHBOARD

Purpose	For information.

The high level provider arm key performance dashboards for March 2017 are attached for the Board's information. This sees three separate dashboards, which cover:

1. Community & Clinical Support
2. Mental Health
3. Waikato Hospital.

Any indicator where performance is below plan by more than 5% is marked red in the "variance" column. For any items marked red in the year to date (YTD) variance column, notes are appended to the report regarding:

- the cause(s) of less than planned performance (where known);
- the approach being taken to address it; and
- an estimate of timeframe for performance to improve.

Recommendation
THAT
The Board notes the report.

MARK SPITTAL
EXECUTIVE DIRECTOR
COMMUNITY &
CLINICAL SUPPORT

DEREK WRIGHT
EXECUTIVE DIRECTOR
MENTAL HEALTH

BRETT PARADINE
EXECUTIVE DIRECTOR
WAIKATO HOSPITAL
SERVICES

Key Performance Dashboard

Community & Clinical Support

March 2017

Waiting Times

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Emergency Department < 6 Hours	% of patients	94.3	95.0	(0.7)	95.7	95.0	0.7		
Number of long wait patients on outpatient waiting lists	# > 4 mths	0	0	0	0	0	0		
Number of long wait patients on inpatient waiting lists	# > 4 mths	0	0	0	0	0	0		
CTs reported within 6 weeks of referral	%	94.3	90.0	4.3	94.3	90.0	4.3		
MRIs reported within 6 weeks of referral	%	88.9	85.0	3.9	89.0	85.0	4.0		

General Throughput Indicators

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Emergency Department - Number relative to Target growth of 4% p.a.	Numbers	Rolling 12 month measure			33,816	33,837	21		
Elective Surgery Volumes vs Elective Health Target	% of target	Under development - see separate Elective Health Target Report							
Elective and Arranged Day Surgery Percentage	%	Rolling 12 month measure			83.7	88.4	(4.6)		1
Elective and Arranged Day of Surgery Admissions	%	Rolling 12 month measure			93.4	99.4	(6.0)		2
Laboratory – Histology specimens reported within 7 days of receipt	% for Feb YTD	39.0	80.0	(41.0)	44.0	80.0	(36.0)		3
Pharmacy - Chart turnaround times, % within 2.5 hours	%	93.0	80.0	13.0	92.9	80.0	12.9		
Pharmacy on Meade script turnaround time in minutes	minutes	7.4	10.0	2.6	7.0	10.0	3.0		
Outpatient DNA Rate	%	10.6	10.0	(0.6)	10.7	10.0	(0.7)		4
Output Delivery Against Plan - Volumes for FSA, F/Up and Nurse Consults	%	93.1	100.0	(6.9)	95.6	100.0	(4.4)		
Output Delivery Against Plan - Inpatient Number of Episodes	%	95.2	100.0	(4.8)	93.1	100.0	(6.9)		5
Output Delivery Against Plan - Inpatient CWD Volumes	%	91.7	100.0	(8.3)	92.4	100.0	(7.6)		6
District Nurse Contacts (DHB Purchased)	Numbers	11,105	-	-	88,740				
District Nurse Contacts (ACC Purchased)	Numbers	2,273	-	-	18,788				
School Dental Service - Clients assessed and treated	Numbers	Under development							
Radiology - total imaging events	Numbers	Under development							
Lab - total tests	Numbers	Under development							
pharmacy - scripts processed	Numbers	Under development							
pharmacy - medications reconciled	Numbers	Under development							

Discharge Management

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Inpatient Length of Stay - Acute (excludes patients discharged from ED)	Days	Rolling 12 month measure			3.52	3.78	0.27		
Inpatient Length of Stay - As Arranged	Days	Rolling 12 month measure			0.99	0.96	(0.03)		
Inpatient Length of Stay - Elective	Days	Rolling 12 month measure			0.33	0.39	0.06		
DOM101 Avg Length of Stay	Days	Under development							

Quality and Patient Safety KPI measures

Indicator	Unit of Measure	Actual	Target	Variance	Actual	Target	Variance	Last 12 Mths Trend	Note
Better help for smokers to quit	% of smokers	80.9	95.0	(14.1)	91.1	95.0	(3.9)		

Quality Indicators - Patient Safety

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Breast screening Total volumes - Waikato DHB	Numbers	4,299	3,500	799	30,873	30,500	373		
Breast screening Maori volumes - Waikato DHB	Numbers	233	366	(133)	1,889	2,487	(598)		7
Hospital Acquired MRSA (Department)	Numbers	0	0.0	0	0.0	0.0	0		

Quality Indicators - Patient Experiences

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Complaints	Numbers	18	8	(10)	121	70	(51)		8
Complaints resolved within 20 wd (1 month lag)	% for Feb-17	26	70	(44)	63	70	(7)		9
Falls Resulting in Harm	Numbers	2		(2)	19		(19)		
Pressure Injuries - Total	Numbers	3	10	7	101	128	27		
Patient Feedback	*Not yet collected - in Development*								

Finance and Human Resource Measures

Indicator	Unit of Measure	Actual	Target	Variance	Actual	Target	Variance	Last 12 Mths Trend	Note
Actual Revenue vs Budget ($000s)	$000s	2,874	2,537	336	23,937	21,959	1,978		
Actual Expenditure vs Budget ($000s)	$000s	13,234	12,555	(679)	113,093	109,877	(3,216)		
Actual Contribution vs Budget ($000s)	$000s	(10,360)	(10,017)	(343)	(89,155)	(87,918)	(1,237)		
Actual FTEs vs Budget	FTEs	1,000.4	999.3	(1.1)	998.9	996.2	(2.7)		
Sick Leave	% of paid hours	3.4	3.4	0.0	3.0	2.9	(0.1)		
Overtime $'s	$000s	173	131	(42)	1,546	1,173	(374)		10
Annual Leave Taken	% of Budget	Rolling 12 month measure			90.0	100.0	(10.0)		11

Key - MTD Measures	
At or above target	
Below target by less than 5%	
Below target by more than 5%	

Key - YTD Measures	
At or above target	
Below target by less than 5%	
Below target by more than 5%; operational plan in place	

Key - Trend Measure	
Favourable Trend	
Unfavourable Trend - but YTD performance has met target	
Unfavourable Trend - but YTD performance is below target	

KPI Report: Community & Clinical Support

Commentary on the current KPI report is given in the table below.

Note	Indicator	Commentary
1	Elective and Arranged Day Surgery Admissions	Phenomenally good performance in Australasian terms. The is suggesting the mix of same day vs overnight surgery is changing. The KPI target requires resetting.
2	Elective and Arranged Day of Surgery Admissions	Phenomenally good performance in Australasian terms. The KPI target requires resetting.
3	Laboratory – Histology specimens reported within 7 days of receipt	Actual specimens are triaged on the basis of clinical risk. Significant work has been done to successfully improve histology turnaround times. No concerns of significance are noted. The KPI target requires resetting to measure time critical histology only.
4	Outpatient DNA rate	No concerns of note.
5	Output delivery against plan – inpatient episodes	Lower than planned demand in general surgery and general medicine. This reflects (i) a deliberate service change to reduce acute surgical admissions (utilising Waikato instead) and (ii) the lack of influenza in the community in winter.
6	Output delivery against plan – inpatient cwd	Refer above. The average cwd per case for both acute and elective is consistent with the plan. The difference is due to the reduced volume not altered case-mix.
7	Breast Screening – Māori volumes	Increasing overall coverage by reducing unutilised appointment slots is being intensively managed by the service. The Service Agreement with Te Puna Oranga to uplift attendance by wahine has not been delivered at planned levels to encourage opportunistic screening due to staff vacancies.
8	Complaints	Staff attitudes and clinical treatment are the main themes. Each is being investigated more fully.
9	Complaints resolved in 20 working days	The report calculation is incorrect. 44% were overdue, which is unacceptable result. A specific Datix report which can be run to track all complaints at risk of becoming overdue is being designed for the C&CS service so that this issue can be managed rather than reacted to..
10	Overtime $'s	No particular concerns are evident that have not been reported in prior periods.
11	Annual leave taken	No particular concerns are evident that have not been reported in prior periods. A rate of 90% is an exemplary result by national standards across all industries.

Key Performance Dashboard

Mental Health

March 2017

Waiting Times

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Emergency Department < 6 Hours	% of patients	86.5	95.0	(8.5)	88.7	95.0	(6.3)		1

General Throughput Indicators

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Mental health seclusion hours	Hours	911	371	(541)	8,864	3,337	(5527)		2
Mental health treatment plans	% Cases	84.8	95.0	(10.2)	91.0	95.0	(4.0)		
Mental health HoNos matched pairs	% Cases	99.1	95.0	4.1	98.5	95.0	3.5		
Mental health inpatient bed occupancy	%	95.4	87.1	(8.3)	92.9	87.1	(5.8)		3
Mental health GP methadone cases	Cases	96.0	76.0	20.0	93.6	76.0	17.6		

Discharge Management

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Mental health post discharge follow up - % seen in 7 days	%	90.4	90.0	0.4	91.7	90.0	1.7		
Mental health follow up - numbers seen in 7 days	Number of Cases	75	74.7	0.3	539	529.2	9.8		
Mental health community contract positions filled	% FTEs	99.9	95.0	4.9	97.3	95.0	2.3		
Mental health 28 day readmission rate	%	9.2	15.0	5.8	12.0	15.0	3.0		

Quality and Patient Safety KPI measures

Indicator	Unit of Measure	Actual	Target	Variance	Actual	Target	Variance	Last 12 Mths Trend	Note
Better help for smokers to quit	% of smokers	98.3	95.0	3.3	98.2	95.0	3.2		

Quality Indicators - Patient Experiences

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Complaints	Numbers	7	7	(0)	69	62	(7)		4
Complaints resolved within 20 wd (1 month lag)	% for Feb-17	33	70	(37)	37	70	(33)		5
Falls Resulting in Harm	Numbers	3		(3)	12		(12)		

Finance and Human Resource Measures

Indicator	Unit of Measure	Actual	Target	Variance	Actual	Target	Variance	Last 12 Mths Trend	Note
Actual Revenue vs Budget ($000s)	$000s	196	205	(10)	1,918	1,917	1		
Actual Expenditure vs Budget ($000s)	$000s	6,272	6,247	(26)	54,648	54,018	(630)		
Actual Contribution vs Budget ($000s)	$000s	(6,076)	(6,041)	(35)	(52,730)	(52,101)	(629)		
Actual FTEs vs Budget	FTEs	745.1	736.0	(9.0)	738.0	732.4	(5.5)		
Sick Leave	% of paid hours	3.8	3.6	(0.2)	3.3	3.0	(0.3)		6
Overtime $'s	$000s	122	76	(46)	751	681	(70)		7
Annual Leave Taken	% of Budget	Rolling 12 month measure			88.7	100.0	(11.3)		8

Key - MTD Measures	
At or above target	
Below target by less than 5%	
Below target by more than 5%	

Key - YTD Measures	
At or above target	
Below target by less than 5%	
Below target by more than 5%; operational plan in place	

Key - Trend Measure	
Favourable Trend	
Unfavourable Trend - but YTD performance has met target	
Unfavourable Trend - but YTD performance is below target	

KPI Report: Mental Health & Addictions Services March 2017

The following is a current state KPI dashboard for the directorate.

Note	Indicator	Commentary

1	Emergency Hours <6 hours	• 94 presentations
		  o 56 (60%)of the MH related presentations arrived in ED after hours
		  o 38 (40%) arrived in ED during business hours
		
		• 12 Breaches
		  o 8 of the 12 people who breached the target arrived in ED after hours
		  ▪ 5 suicidal related presentations
		  ▪ 5 overdose related presentations
		  ▪ 1 suspected psychosis presentation
		  ▪ 1 anxiety / depression presentation
		
		As part of a planned pilot with ACC, there is discussion about improved access and resourcing to the Emergency Department. If this goes ahead, this has the potential to dramatically affect the outcomes for individuals presenting at ED.
		
		The service is also undertaking a piece of work around acute care pathways, which will result in a proposal going to the funder to resource an improved response to ED at Waikato Hospital.

2	Seclusion	• 16 Individuals were secluded during March 2017, 12 of those within the Adult wards and 4 within the Forensic wards. • The Longest episode in the adult facility was 186.5 hours long and the shortest 2.75 hours long • The Longest episode in the Forensic facility was 81.6 hours long and shortest ~8 hours • Of the 16 individuals secluded during March 9 were Maori • Maori accounted for 68.4% (623.53 hours) of the hours spent in seclusion • Total hours spent in seclusion for Adult was 779.45 hours (monthly target ~233) • Total hours spent in seclusion for Forensic was 131.87 hours (monthly target ~138) • Most individuals that were place into seclusion were only secluded once (13), 2 individuals twice and 1 person 3 times • The mean amount of time spent in seclusion was 45 hours – (Adult 48.72, Forensic 32.97). Whilst work continues around seclusion reduction it is fair to say

		that the acuity within HRBC and the high occupancy will be having a negative effect of seclusion hours. There also appears to be high levels of methamphetamine use over recent months in the community and some (not all) presentations for inpatient care have this added complexity.
3	Occupancy	Actual 95.4, target 87.1 - The HRBC inpatient unit has been at or over full capacity all year due to high and complex needs clients not being able to be moved out to supported accommodation. This occupancy does not account for individual service users who go on overnight leave where a bed is not kept for them. If the occupancy figure was to include this type of leave, the actual occupancy is: 118%. The HRBC adult wards have been over occupied at this level for 5 of the last 6 months. There are regularly temporary beds placed in interview or quiet rooms to accommodate for the admissions.
4 & 5	Complaints	3 complaints were received during the month of February 2017, 1 of these was responded to within the required timeframe and the other 2 were not. These complaints were overdue as a result of difficulties in making appointments to speak with the relevant people involved. It is important that time is taken to respond to complaints thoroughly and sometimes this necessitates a delay. However all complaints are now closed.
6	Sick Leave	Sick leave is slightly behind the target for the month and year to date, but is not something the service is concerned about as is following usual seasonal patterns. Despite pressure on services, this is not flowing onto spikes in sick leave.
7	Overtime	Whilst overtime has been tracking below budget, this month has seen significant amounts of overtime to manage both the acuity and complexity of presentations to both the HRBC and to OPR1 (Mental health services older persons ward). In addition there are inpatient vacancies which are yet to be filled.
8	Annual Leave	Annual leave continues to track at the same rate as it did for February and is being actively managed by managers. It is however now proving increasingly difficult to push annual leave to be taken when the service is under such pressure.

Key Performance Dashboard

Waikato Hospital Services

March 2017

Waiting Times

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Emergency Department < 6 Hours	% of patients	83.4	95.0	(11.6)	85.0	95.0	(10.0)		1
Faster Cancer Treatment - Referral received to first treatment <= 62 days	% of patients	86.8	85.0	1.8	86.2	85.0	1.2		
Chemotherapy treatment < 4 Weeks Wait	% of patients	100.0	100.0	0.0	100.0	100.0	0.0		
Radiotherapy < 4 Weeks Wait	% of patients	100.0	100.0	0.0	100.0	100.0	0.0		
Number of long wait patients on outpatient waiting lists	# > 4 mths	122	0	(122)	2,423	0	(2423)		2
Number of long wait patients on OPRS outpatient waiting lists	Patients	0	0	0	0	0	0		
Number of long wait patients on inpatient waiting lists	# > 4 mths	37	0	(37)	749	0	(749)		3

Theatre Productivity

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Theatre Utilisation - Elective Sessions	%	94.6	85	9.6	82.4	85.0	(2.6)		
Hospital initiated elective theatre cancellations	%	5.4	2.5	(2.9)	5.9	2.5	(3.4)		4
Waiting Time for acute theatre < 24 hrs	%	69.7	80	(10.3)	73.0	80.0	(7.0)		5
Waiting Time for acute theatre < 48 hrs	%	84.6	100	(15.4)	87.3	100.0	(12.7)		6

General Throughput Indicators

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Elective Services Standardised Intervention Rates (SIRs)	Discharges per 10,000 pop	Rolling 12 month measure			163.8		163.8		
Elective Surgery Volumes vs Elective Health Target	% of target	Under development - see separate Elective Health Target Report							
Elective and Arranged Day Surgery Percentage	%	Rolling 12 month measure			50.2	50.7	(0.5)		
Elective and Arranged Day of Surgery Admissions	%	Rolling 12 month measure			75.2	81.2	(6.0)		7
Outpatient DNA Rate	%	9.8	10.0	0.2	9.9	10.0	0.1		
Output Delivery Against Plan - Volumes for FSA, F/Up and Nurse Consults	%	102.0	100.0	2.0	100.0	100.0	(0.0)		
Output Delivery Against Plan - Inpatient Number of Episodes	%	108.0	100.0	8.0	99.7	100.0	(0.3)		
Output Delivery Against Plan - Inpatient CWD Volumes	%	103.8	100.0	3.8	99.5	100.0	(0.5)		

Discharge Management

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Presentation to ED < 14 Days after discharge as an Acute InPatient	%	Under development							
Acute Readmissions to Hospital	%	Rolling 12 month measure			8.8	8.5	(0.3)		
Number of long stay patients (>20 days length of stay)	Discharges	57	61	4	544	460	(84)		8
Number of long stay patient bed days (>20 days los)	Bed Days	2,372	2,008	(364)	19,093	15,516	(3577)		9
Inpatient Length of Stay - Acute (excludes patients discharged from ED)	Days	Rolling 12 month measure			4.14	4.01	(0.13)		
Inpatient Length of Stay - As Arranged	Days	Rolling 12 month measure			2.09	2.00	(0.09)		
Inpatient Length of Stay - Elective	Days	Rolling 12 month measure			1.08	1.14	0.06		

Quality and Patient Safety KPI measures

Indicator	Unit of Measure	Actual	Target	Variance	Actual	Target	Variance	Last 12 Mths Trend	Note
Better help for smokers to quit	% of smokers	93.1	95.0	(1.9)	95.3	95.0	0.3		

Organisational Quality Safety Markers

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Patients assessed as being at risk have an individualised care plan which addresses their falls risk.	% for Feb-17	100.0	90.0	10.0	95.6	90.0	5.6		
Compliance with good hand hygiene practice (WDHB Rate)	%	83.8	80.0	3.8	85.7	80	5.7		

Quality Indicators - Patient Experiences

Indicator	Unit of Measure	Month Actual	Month Target	Month Variance	YTD Actual	YTD Target	YTD Variance	Last 12 Mths Trend	Note
Complaints	Numbers	92	69	(23)	669	623	(46)		10
Complaints resolved within 20 wd (1 month lag)	% for Feb-17	53	70	(17)	59	70	(11)		11
Falls Resulting in Harm	Numbers	29		(29)	149		(149)		

Finance and Human Resource Measures

Indicator	Unit of Measure	Actual	Target	Variance	Actual	Target	Variance	Last 12 Mths Trend	Note
Actual Revenue vs Budget ($000s)	$000s	10,669	9,612	1,057	88,655	85,544	3,111		
Actual Expenditure vs Budget ($000s)	$000s	42,138	37,739	(4,399)	334,982	319,394	(15,588)		
Actual FTEs vs Budget	FTEs	3,150.5	3,089.6	(60.9)	3,100.2	3,094.8	(5.4)		
Sick Leave	% of paid hours	3.3	3.1	(0.2)	3.0	3.0	(0.0)		
Overtime $'s	$000s	484	272	(212)	4,043	2,391	(1,652)		12
Annual Leave Taken	% of Budget	Rolling 12 month measure			86.3	100.0	(13.7)		13

Key - MTD Measures	
At or above target	
Below target by less than 5%	
Below target by more than 5%	

Key - YTD Measures	
At or above target	
Below target by less than 5%	
Below target by more than 5%; operational plan in place	

Key - Trend Measure	
Favourable Trend	
Unfavourable Trend - but YTD performance has met target	
Unfavourable Trend - but YTD performance is below target	

Waikato Hospital Services KPI Dashboard

Notes re Operational Plan Items – March 2017

Note	Indicator	Commentary
1	Emergency Department < 6 hours	This target has deteriorated, with Waikato Hospital delivering only 83%. Performance for the non-admitted, or ED only patients, is currently performing at 92%. Although recent medical recruitment panels have not proved as successful as the department had hoped, it is envisaged that this will improve to >95% once fully staffed. Difficulties in admitting patients into the hospital continue on a daily basis, with performance for the admitted pathway at 71%. To achieve a sustained improvement in the 6 hour target, this is where the organisation would achieve the most gain. Now that the full capacity protocol has become fully operational, it has been used far more frequently in March. It is an effective tool when applied to reduce overload, but will not be sufficient to cope with the significant bed shortfall forecast for the coming winter months. The patient flow programme that has been underway to reduce delayed discharge and long waiting patients is also on a timeframe that will not assist greatly over winter. Options to better match bed numbers with demand over the period are currently being reviewed to maintain safe and effective patient flow during winter.
2	Long wait patients on outpatient waiting lists	Of the 122 reported 104 are Orthopaedic therefore with the support of our dispensation for ESPI 2 in orthopaedic surgery we are ESPI 2 compliant for March projecting full compliance in April. The implementation of our recruitment plan for theatre nursing and orthopaedic surgeons will be completed with the last surgeon due to arrive mid-year supporting the move towards more sustainable elective service delivery in orthopaedics.
3	Number of long wait patients on inpatient waiting lists	We achieved ESPI 5 compliance in March and are projecting compliance for April noting the risk around this with continued reduced elective operating theatre due to anaesthetic RMO vacancies and demand increase putting pressure on anaesthetic SMO numbers. This is made worse by the number of public holidays that occur in April.
4	Hospital Initiated elective theatre cancellations	This KPI requires further analysis as part of the pre hospital preparedness project but is being hampered by the small amount of data and the delay in proposed change to the collection of data via IPM. The paper based audit of reasons for cancellations is still being analysed.
5	Waiting time for acute theatre less than 24 hours	Slight plateauing of this result this month; in order to meet acute surgical demand we have been running two regular additional acute theatre sessions at weekends; we will also be running escalation lists over the Easter/Anzac Day holiday period. This KPI is monitored via our Theatre and Interventional Governance Group. A piece of work to develop a business case with some options to address this is within the work plan of this group.
6	Waiting time for acute theatre less than 48 hours	As per item 5.
7	Elective and arranged day of surgery admissions	Allocation of a group to investigate this downward trend will be done at the next Surgical and Critical Care Governance Group.
8	Number of long stay patients (> 20 days length of stay)	A DHB wide discharge initiative is being planned, led by the Executive Director Operations and Performance with involvement from the Director of Medicine, Oncology, ED and Ambulatory Care and the Director of OPR and Allied Health. This programme includes emphasis on long stay patients, which has been enhanced with weekly reporting to the capacity and demand management

Note	Indicator	Commentary
		forum and higher scrutiny of long stay reasons. There has been some improvement in recent months, however, YTD still higher than target. Resourcing and staffing of regular audits of long stay patients are being considered as part of the patient flow programme, to supplement weekly nursing audit of reasons for long stay. OP&R senior staff review all long stayers involving the multi-disciplinary team, as standard practise each week.
9	Number of long stay patient bed days	As per item 8.
10	Complaints	While the trend over the last 12 months has shown a reduction in complaint volumes, the lower target for this financial year has not yet been met. A theme within this area is patients being either unclear about communications regarding reasons for not being able to access elective surgery, or unhappy at not being put onto the orthopaedic surgical waitlist because they do not meet the required threshold. Standard communication letters have been revised to address the communication issue and as previously described measures are in place to address our orthopaedic capacity as soon as possible. Women's - Difficulty in accessing clinical input from our Clinical Director of Obstetrics given the medical staffing constraint's causing delays. New CD Obstetrics in place as of 11 April 2017 should assist in more timely responses.
11	Complaints resolved within 20 working days	Performance on resolving complaints over the Christmas/New Year period was poor. Improving on this will be a focus of planning for the next December/January period. Subsequently there has been significant effort to resolve outstanding complaints by the surgery and CCTVS team (one of the areas with the largest volume of complaints). As at 12 April 15% of their complaints are >20 days. OP&R have a 100% record this month for complaints resolved within the 20 working days .
12	Overtime $'s	Overtime for the month was significantly lower than the year to date trend. Within that however overtime was slightly higher than usual for the Ambulatory, Medical and Emergency Services cluster due to the operational pressures within the Emergency Department and Internal Medicine. Surgical and Critical Care also continues to experience pressure on overtime the large majority of the costs are associated with theatre where escalation lists are used to clear acute load. Women's - Ongoing Midwifery and Medical vacancies require overtime and additional duties.
13	Annual leave taken	The upcoming public holiday period will see an increase in annual leave taken as we maximise the opportunity for staff to plan their break from work. While the ambitious target of 100% of annual leave being taken within year was not met, there was as planned a high level of leave taken over the December/January period. That helped to produce the year to date result of 88.3%, which is very high by historical standards.

MEMORANDUM TO THE BOARD
26 APRIL 2017

AGENDA ITEM 6.3

STRATEGY & FUNDING KPI DASHBOARD

Purpose	For information.

The Strategy & Funding KPI dashboard is attached as Appendix A. Items updated are noted on the dashboard and items noted as having negative variances have a commentary provided excluding items already reported on within the health target report.

A revised indicator set will be prepared for discussion at the May Committee meetings along with recommendations around frequency of updates. This is expected to include additional reporting on key areas of:

- System level measures
- Smoking cessation (referrals, enrolments and successful quits)
- B4 school
- Oral health
- Measures around the enrolment in primary care

Existing measures will also be reviewed as part of the update to ensure that the listed indicators from Strategy and Funding do not duplicate items in the dashboards from other divisions

Recommendation
THAT
The report be received.

JULIE WILSON
EXECUTIVE DIRECTOR STRATEGY & FUNDING

Strategy and Funding KPI Dashboard

<table>
<tr><th>Note</th><th>Indicator</th><th>Commentary</th></tr>
<tr><td>1</td><td>Proportion of older people waiting greater than 20 days for assessments or reassessment</td><td>This quarterly indicator that has not yet been updated with data for the Jan-Mar quarter (due 20th April) however results for the three month period through to the end of February indicate the expected efficiency gain is beginning to be achieved following a period of catch up.
<table>
<tr><th>Measure</th><th>Dec-16</th><th>Jan-17</th><th>Feb-17</th></tr>
<tr><td>Proportion of initial assessments waiting >20 days from referral this month</td><td>29%</td><td>18%</td><td>6%</td></tr>
<tr><td>Proportion of initial assessments Waiting greater than 20 days - Qtr</td><td>41%</td><td>35%</td><td>19%</td></tr>
<tr><td>Proportion of initial assessments Waiting greater than 20 days - YTD</td><td>30%</td><td>29%</td><td>26%</td></tr>
<tr><td>Proportion of re-assessments waiting >20 days from referral this month</td><td>5%</td><td>9%</td><td>7%</td></tr>
<tr><td>Proportion of re-assessments Waiting greater than 20 days - Qtr</td><td>10%</td><td>10%</td><td>7%</td></tr>
<tr><td>Proportion of re-assessments Waiting greater than 20 days - YTD</td><td>9%</td><td>9%</td><td>9%</td></tr>
</table></td></tr>
<tr><td>2</td><td>AOD and mental health waiting times (% of new clients seen within 3 and 8weeks of referral</td><td>The MOH wait time definition is designed to describe the experience a new client has when interacting with any MH/AOD services for the first time. This can be either via a provider arm service or an NGO service.

Wait Times measures the duration in days between the date a referral is accepted and the date of first face to face contact with the client. The wait times measure focuses only on clients NEW to ANY MH or AOD service in the country. i.e. brand new to any service OR has not been seen by any service anywhere in NZ for the past 12 months.

Targets are set at 80% of new clients seen in three weeks (wait time of 21 days or less for first face to face activity; and 95% at 8 weeks (56 days or less waited for first face to face activity).

An activity can be an appointment of any kind (i.e. assessment or treatment), but must be face to face with a clinician.”

Wait times at 3 weeks for adults in AOD services continues to lag behind the target and equally of concern there have been minor deterioration in the other three measures.

There are significant areas where the performance targets are not being met including DHB provider arm services and a number of NGO adult services, half of which are not meeting the waiting times targets.

In addition to working with providers around data to ensure the</td></tr>
</table>

<table>
<tr><td></td><td></td><td>information is correct, work will also occur around specific pathways to ensure that this these are not inappropriately contributing to waiting times and the reasons for patients delaying access and ways this might be mitigated.</td></tr>
<tr><td>3</td><td>2 year old immunisations</td><td>Latest 24 month coverage result is 93% (target 95%) which is higher by 1% than the prior period. The 2% point gap represents 32 children not immunised on time. For children aged 24 months, this quarter the highest coverage was for Asian children (97%) and lowest for Other (not Maori, Pacific, NZ European, Asian) (86%). Our latest results also show little disparity between NZ European and Maori for this cohort by 24 months (Maori at 93%). This measure is a contributory measure in the recently signed off Service Level Measure for ASH rates for 0-4 year olds.</td></tr>
<tr><td>4</td><td>Ambulatory sensitive hospitalisations</td><td>The targets for ambulatory sensitive hospitalisations were set based on MOH requirements which included specific targeted reductions for Maori
<table>
<tr><th>Baseline Equity Gap</th><th>Expected Improvement</th></tr>
<tr><td>DHB Māori ASH > 10% Above National Total Population Rate</td><td>Halve the equity gap</td></tr>
<tr><td>DHB Māori ASH 5-10% above National Total Population Rate</td><td>Eliminate the equity gap</td></tr>
<tr><td>DHB Māori ASH <5% Above National Total Population Rate (or less than National Total Population Rate)</td><td>Reduce DHB Māori and Pacific ASH rates to within 5% of DHB Total Population Rate (equity within the DHB)</td></tr>
</table>
This created targets that require significant reductions for Maori as can be seen within the table below.
<table>
<tr><td></td><td>Y/E June</td><td>2017/18 Target</td><td>Y/E Sept</td><td>Y/E Dec</td><td>Mid point (baseline to target)</td></tr>
<tr><td>0-4 total</td><td>7668</td><td>7298</td><td>7477</td><td>7473</td><td>7483</td></tr>
<tr><td>0-4 Maori</td><td>8898</td><td>7936</td><td>8538</td><td>8224</td><td>8417</td></tr>
<tr><td>45-64 total</td><td>4177</td><td>3936</td><td>4089</td><td>4167</td><td>4057</td></tr>
<tr><td>45-64 Maori</td><td>8104</td><td>5838</td><td>7758</td><td>7826</td><td>6971</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
For the 0-4 population the results for both target and total population have shown positive reductions and after 6 months are below the midpoint between the baseline and new target.

For the 45-64 population the December results indicate little or no change for total population and a 3.4% reduction for Maori. Whilst any reduction is positive with the target requiring a 28% reduction and the length of lead in time to reduce hospitalisations in some specialties it is unlikely that this target will be achieved.

A breakdown including the detail at service level will be included in the May 2017 report.</td></tr>
</table>

Appendix A **Strategy and Funding KPI RESULTS**

Strategy and Funding - Key Performance Dashboard

March 2017

Health Targets

Indicator	Unit	⇵	Data period	Updated from prior report	Recent period Actual	Target	Variance		Previous Quarter Actual	Target	Variance		Trend
CVD risk assessments	%	↑	Jul-Sep16	No	93%	90%	3%	✓	92%	90%	2%	✓	
8 month old immunisations	%	↑	Rolling 3 months	Yes	90%	95%	-5%	✗	90%	95%	-5%	✗	
Better help for smokers to quit (primary care)	%	↑	Dec-16	No	87%	90%	-3%	!	87%	90%	-3%	!	

Finance Measures

Indicator	Unit	⇵	Data period	Updated from prior report	Month Actual	Target	Variance		YTD Actual	Target	Variance		Trend
IDF inflow estimate	$		Mar YTD	Yes	11,165	10,993	172	✓	96,668	98,937	-2,269	!	
IDF outflow estimate	$		Mar YTD	Yes	5,122	4,559	563	✗	42,906	41,031	1,875	!	

Other Performance Measures

Indicator	Unit	⇵	Data period	Updated from prior report	Recent period Actual	Target	Variance		Previous Period Actual	Target	Variance		Trend
AOD waiting times - % new clients seen within 3 wks of referral (12 mth period)	%	↑	12 months to Dec 16	Yes	75%	80%	-5%	✗	75%	80%	-5%	✗	
MH waiting times - % new clients seen within 3 wks of referral (12 mth period)	%	↑	12 months to Dec 16	Yes	78%	80%	-2%	!	79%	80%	-1%	!	
AOD waiting times - % new clients seen within 8 wks of referral (12 mth period)	%	↑	12 months to Dec 16	Yes	93%	95%	-2%	!	94%	95%	-1%	!	
MH waiting times - % new clients seen within 8 wks of referral (12 mth period)	%	↑	12 months to Dec 16	Yes	92%	95%	-3%	!	93%	95%	-2%	!	
Proportion of Health of Older people initial needs assessments Waiting greater than 20 days	%	↓	Oct-Dec 16	No	38%	0%	-38%	✗	29%	0%	-29%	✗	
Proportion of health of older people need re-assessments Waiting greater than 20 days	%	↓	Oct-Dec 16	No	8%	0%	-8%	✗	8%	0%	-8%	✗	
Proportion of older person funding in community based services	%	↑	Dec YTD	No	28%	25%	3%	✓	27%	25%	2%	✓	
Pharmacy Items claimed	Items		Feb-17	Yes	492,904	N/A			490,152	N/A			
Laboratory turnaround tmes	%	↑	Jul-Sep16	No	100%	97%	3%	✓	100%	97%	3%	✓	
Primary options referrals	Referrals				These areas will be reported in the future once expected volumes are seasonalised/targets set								
	%												
Breast Screening (total eligible population)	%	↑	Dec-16	No	67%	70%	-3%	!	66%	70%	-4%	✗	
Cervical screening (total eligible population)	%	↑	Oct - Dec 16	No	77%	75%	2%	✓	76%	75%	1%	✓	
Cervical screening (High Need)	%	↑	Oct - Dec 16	No	68%	75%	-7%	✗	69%	75%	-6%	✗	
2 year old immunisations (total population)	%	↑	Rolling 3 months	Yes	93%	95%	-2%	!	92%	95%	-3%	!	
2 year old immunisations (Maori)	%	↑	Rolling 3 months	Yes	93%	95%	-2%	!	92%	95%	-3%	!	
Green Prescriptions	%	↑	Jan - Mar 17	Yes	1,656	1,675	-19	!	1,404	1,675	-271	✗	

Ambulatory Sensitive Admissions - Rates per 100,000 Population

Indicator	Unit	⇵	Data period	Updated from prior report	YT Dec 2016				YT Sep 2016				
Ambulatory sensitive admissions 0-4	rate	↓	YT Dec 2016	Y	7473	7298	-175	!	7477	7298	-179	!	New ASH Definitions
Ambulatory sensitive admissions 0-4 (Maori)	rate	↓	YT Dec 2016	Y	8224	7936	-288	!	8538	7936	-602	✗	New ASH Definitions
Ambulatory sensitive admissions 45-64	rate	↓	YT Dec 2016	Y	4167	3936	-231	✗	4089	3936	-153	!	New ASH Definitions
Ambulatory sensitive admissions 45-64 (Maori)	rate	↓	YT Dec 2016	Y	7926	5838	-2088	✗	7758	5838	-1920	✗	New ASH Definitions

Key	
At or above target	✓
Below target by less than 5%	!
Below target by more than 5%	✗

Waikato District Health Board

Planning

MEMORANDUM TO THE BOARD
26 APRIL 2017

AGENDA ITEM 7.1

HEALTH CARE HOME

Purpose	For information.

Background
The Health Care Homes framework has been a key focus for service development within Midland Health Network for some time with the first Health Care Home being developed in the Waikato (Northcare/Grandview).

The concepts underlying the health care home are detailed in a number of publications that can be accessed in line but are generally consistent with the extract below:

> *Midlands Health Network's model of care has been designed to address many of the issues and pressures facing New Zealand's health care system today. It sets out five key strategies:*
> 1. *Expanding the current general practice team*
> 2. *Improving access to services through a Patient Access Centre*
> 3. *Developing system-initiated contacts to provide proactive health care*
> 4. *Increasing the number and nature of virtual consultations*
> 5. *Implementing strategies to streamline the patient experience*
>
> *These strategies improve the patient's experience of the health system and shift primary health care onto a more sustainable footing. The model of care puts the patient and their needs are at the centre of the care, and the general practice team maintains a common focus on simplifying and enhancing the patient's journey through the health system.*
>
> *The result is a more comprehensive and cohesive system of health care that makes best use of available resources, funding and time. Health care will be more proactive, responsive and effective, with members of the general practice team having the time and information they need to provide the best possible care. Patient compliance, engagement and trust in their health care team will increase, and it is expected so will clinical outcomes for the population as a whole. Acute demand for secondary care services is also expected to reduce, as people's health needs are dealt with more effectively at the primary care level.*
>
> *https://www.pinnacle.co.nz/programmes/model-of-care*

Nationally a business case that been developed by Network 4, a collaboration of New Zealand's four largest primary care networks (Pegasus, ProCare, Compass Health

and Midlands Health Network), seeking national investment to support establishment and partial ongoing operating costs of Health Care Homes nationally over a three year period from 1 April 2016. This proposal did not progress at this time however nationally there remains a high level of support for the concept with a number of DHBs investing locally in developments aligned with this.

Waikato DHB have been supportive of the concepts of Health Care Homes but as for any significant investment of this type were keen to ensure there was appropriate evaluation of the investment and the related outcomes. In line with this Waikato DHB and other DHBs contracting with Midlands Health Network agreed to contribute to an evaluation of the Health Care Home contracted through Ernst and Young. There were some delays in this evaluation being completed however this evaluation was received on the 27 February 2017. This evaluation is attached as Appendix A.

A copy of the evaluation is attached along with comments on the evaluation prepared by Professor Ross Lawrenson that have been shared with the Ministry of Health, our alliance partners and Midlands Health Network. This feedback is attached as Appendix B.

As you will note from the commentary on the evaluation, Waikato DHB was disappointed that this did not address some of the key items the DHB would have expected to have included within an evaluation. In view of this, communications have been sent to Midlands Health Network with the DHB indicating that whilst it will continue to support the existing practices (through flexible funding for those practices being applied to Health Care Homes) for 2017/18, it would not be investing further flexible funding into health care home development until there was robust evidence of the benefits and outcomes from this investment.

We are keen to work with Midlands Health Network in relation to designing an evaluation and also to ensure that there is a strong partnership to enable the better integration of health care.

It should be noted that the DHB remains hopeful that further evaluation will demonstrate that there have been significant gains however see this is an essential requirement before further investment occurs.

Recommendation
THAT
The Board notes the content of the report.

PROF ROSS LAWRENSON
CLINICAL DIRECTOR
STRATEGY AND FUNDING

JULIE WILSON
EXECUTIVE DIRECTOR
STRATEGY AND FUNDING

DR DAMIAN TOMIC
CLINICAL DIRECTOR
PRIMARY AND INTEGRATED CARE

Pinnacle®
Midlands Health Network

Health
Care
Home

Ernst & Young Health Care Home Review, 2016/2017

healthcarehome.co.nz

Foreword

We are delighted to publish this report by Ernst and Young which provides an independent evaluation of the Health Care Home model of care. This report incorporates findings of past evaluation work and identifies future performance measures and potential future impacts of the model.

It focuses on changes made within Pinnacle Midlands Health Network general practices and Pegasus Health's Travis Medical Centre practice in Canterbury.

Subsequent evaluations will include the integration programmes we have begun with district health boards to create the wider Health Care Home integrated care environment

We're very pleased that the evaluation reflects the better outcomes achieved in several areas such as:

- the time the model saves patients by offering them alternatives to face to face care such as email and telephone consults,
- the added capacity created and
- the positive changes reported by patients and practices.

The report also recognises the long term and ambitious goals of the transformation model to embed sustainable, systematic change. A key recommendation is that "any future planning for wider rollout of the HCH in New Zealand should recognise and factor into the planning the necessary time and effort required to build a sustainable model and effectively embed changes"

Most importantly, the report recognises the Health Care Home model as a strong and coherent strategic vision, with a proven change management process for building, developing and sustaining the future of primary care. It also recognises the model is responding to the opportunities presented by global technology innovations which are changing the way individuals manage most aspects of their lives.

Pinnacle MHN believes that without having a vision and plan to implement Health Care Home in New Zealand, we put under threat high quality care for future generations.

As we often say, "it's a real challenge to rebuild a plane whilst still flying it," and so lastly, we acknowledge and thank all the teams in the practices profiled in the report who every day do just that.

John Macaskill-Smith
CEO

Evaluation of the New Zealand Health Care Home, 2010-2016

25 January 2017

Building a better working world

Our thanks to the PHO and practice staff who offered their time so willingly in providing data for this evaluation.

For further information please contact:

Dr Gary Jackson gary.jackson@nz.ey.com

Ernst & Young

2 Takutai Square, Britomart, Auckland 1010, New Zealand

Citation: *Evaluation of the New Zealand Health Care Home, 2010-2016*. Auckland: Ernst & Young, 2017.

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Navigating this report

Chapter 1 provides an executive summary of the report

Chapter 2 provides a list of findings from the body of the report

Chapter 3 provides some important information on the HCH model, how it was developed in New Zealand, and how it is being implemented

Chapter 4 describes the approach taken to the evaluation and to the development of the HCH performance framework

Chapter 5 describes the HCH logic model and performance framework, and the rationale underpinning them

Chapter 6 describes the development of a tool to measure implementation progress and describes the results from four practices who used the tool

Chapter 7 describes the outcomes of a meta-analysis of previous evaluations undertaken of the New Zealand HCH

Chapter 8 describes the results of a quantitative analysis of hospital activity data

Chapter 9 draws some conclusions from the entire evaluation

1. Executive summary

This report describes the outcomes of a 2016 evaluation of the Pinnacle Midlands Health Network (PMHN) Health Care Home (HCH) model, which has been adopted by 15 PMHN practices. Some Pegasus, Compass and ProCare practices have also adopted (or are in the process of adopting) aspects of the model. The outcomes of this evaluation are of interest to all these organisations and more broadly to New Zealand primary and secondary care stakeholders.

1.1 Project purpose

The purpose of this project was to undertake an independent evaluation of the HCH model of care that incorporated findings of past evaluation work and identified future performance measures and potential future impacts of the model. Specific objectives were:

1. To provide an independent evaluation of the HCH model of care, that included consideration of the previous evaluation objectives used by PMHN

2. To develop an enduring performance framework for the HCH model of care including measures, and associated data definitions (and subsequently collection and analysis).

1.2 Evaluation approach

Initially a logic model was developed for the HCH, which formed the basis for a performance framework, with indicative measures. This was tested in its early stages with practices and PHOs at a meeting in June 2016. An assessment tool, the New Zealand Health Care Home Implementation Tool was developed to support self-assessment of progress towards achieving the elements of the HCH. The evaluation itself consisted of four main components:

- A meta-analysis of previous evaluations

- A two-day workshop in June 2016

- Analysis of the results provided by four practices who applied the New Zealand Health Care Home Implementation Tool to measure their progress to becoming a HCH

- A quantitative analysis of secondary care activity data that could reasonably be expected to show impact from the change to the HCH model in local practices, based on the six practices that had been running the model from 2013 or before. Control practices were selected based on being relatively close in size and geography to the HCH practices, but they had fewer Māori and Pacific enrollees on average, and were less deprived than their HCH counterparts. A wide range of practice styles and types were represented - in 2015 practice sizes ranged from 4,000 to 10,000, average deprivation levels 4 to 8, and proportion of Māori or Pacific enrolees from 10 to 50%. Geographically two practices were in Hamilton, three in rural Waikato, and one in Christchurch.

1.3 Key findings and discussion

The HCH model was developed in response to the imperative to change the way general practice is provided. Drivers included the ageing workforce and predicted shortages of GPs, increasing rates of preventable chronic conditions, and increasing demand on an already stressed hospital system. The HCH model has been evolving since its initial conception in 2010 and now, in 2016, there are clear and enduring changes to the way participating practices do business.

The systematic development seen in the HCH practices is not necessarily seen in non-HCH practices. Examples include the active register of high needs patients, nurses trained to plan and co-ordinate care, and having electronic care plans in place and visible on the PMS. These and other foundational elements of the HCH have been well established in those practices who were early adopters,

although not across all elements in all practices (refer self-assessments). HCH improvements such as visual displays and huddles were reported to lead to better achievement of health targets. Importantly, the work required to move a practice to the HCH model was multidimensional, entailed significant change management and took time.

An advantage for this evaluation was the ability to access progressive evaluation data from the commencement of the model. After five years, there had been a fundamental shift across all areas of the business but this was incremental and some changes took longer than others to achieve. For example proactive care management required the initial changes in acute demand management to be bedded in to allow clinician time to be re-deployed.

While future practices will benefit from the lessons learnt by 'early adopter' practices, it is likely that the level of investment in time and effort experienced by the early adopters will still be necessary for sustainable implementation.

1.3.1 Patient experience

Iterative evaluations have demonstrated a progression in actions, attitudes and experience for patients and providers in response to the new model. Feedback from patients and providers was positive, despite initial misgivings from some practice staff. By 2015 in most domains responses were higher in HCH practices. In some domains, such as feeling part of the care team and increased self-care/self-management, patients of HCH practices rated their practices slightly lower than those from other (non-control) practices. Workshop participants noted that it takes time for some patients to become used to the new way of working, and clear communications were important.

Improvements to the patient experience focused on: saving patient time through improved triaging and reduced face to face visits; improving telephone access (through the Patient Access Centre or PAC in the case of PMHN practices) as illustrated by lower levels of call abandonment; and improving and standardising co-ordinated proactive care. Telephone call abandonment rate at peaks times dropped from 18-25% to 1-7% for the HCHs. One practice estimated an overall saving of 44 weeks of patient time over a 12 month period.

Adoption of the patient portal in HCH practices has been significantly higher than the control practices, further aiding patient engagement and saving patient time. By quarter 2 2016, 41% of the patients in the included HCH practices were registered for the patient portal (range 17 – 77%). By comparison, the selected control practices were at 19% (range 2%-24%).

1.3.2 The practice

Once past the initial implementation period staff were positive about the new model, generally rating it higher than the traditional model of general practice. New workforce roles were created, including medical centre assistants, clinical pharmacists, and social and community workers, which increased team-based care and reduced reliance on general practitioners (GPs). This allowed clinicians to work at the top of their scopes of practice, with participating practices reporting increases in efficiency and release of clinician capacity through processes initiated as part of the HCH model.

For example, one practice reported that allocating telephone slots between GP / nurse and patient in the early morning enabled a reduction of up to 40% in unplanned same day appointments for acute issues. At a workshop held in June 2016 HCH practices noted a 30% reduction in same day unplanned appointments 'as a minimum', with one practice suggesting a 50-60% reduction with their mature model comparing 2016 to 2011.

Increased patient 'touches' were achieved with a reduction in GP and nursing FTEs. The fact that the model appeared to increase capacity in general practice was an important positive finding, and this should continue to be monitored as part of the overall HCH performance framework. Doctors had similar face to face time with patients compared to before the model implementation, but this time was more planned and considered to be more productive. Anecdotally, the model has supported GPs to stay in practice and reinvigorated their approach to their work. Two practices had specifically reported increases in patient activity (15% and 7%) in 2012 following implementation, but also of note was the reported increase in capacity to allocate more care time to those patients requiring it.

Overall enrolled patient numbers remained steady across HCH implementation, with a low turnover of 3-4% per quarter. If anything, retention improved during the implementation period. Some practices had closed books for a time as a change management controlling response, so increases in enrolments were not expected.

Internal stakeholders reported that all HCH sites within PMHN had maintained or slightly improved their financial performance under the new model. Individual sites experienced staff changes, movement in patient numbers or other locally driven issues that had an impact on financial performance, but this was not related to the HCH. Reported lower income (through lower co-payments through lower face-to-face doctor contacts) and higher costs associated with the model were largely offset through increased flexible funding, and some increase in co-payments from virtual care and increased nursing co-payment income.

1.3.3 System effects

Analysis of secondary care activity data did not reveal significant differences in activity between HCH practices and control practices from 2011 through to 2015. It was noted that the higher Māori/Pacific and deprived populations in HCH practices did not translate into higher outpatient clinic 'did not attend' (DNA) rates compared with matched control practices, as might have been expected. Also, there was a trend for HCH non-admitted ED attendances to have a small increase while controls had a significant rise, but the inter-group difference overall was not statistically significant.

Proactive care management for long term conditions is one of the key components of the logic model that drives the expectation of improvements in emergency department (ED), hospitalisation and ambulatory sensitive hospitalisation (ASH) rates, but this:

- Takes time to take effect
- Was a relatively late addition to the HCH implementation path for the practices in this analysis
- Is being addressed through other initiatives nationally, and by DHBs and PHOs working in an alliancing environment, which may obscure any specific HCH effect.

Note that no risk adjustment was undertaken for this analysis. As an 'open cohort' study, with the practice populations changing each quarter at ~3-4%, patients moving practices may skew the utilisation data – for example if more complex patients differentially enrolled/switched to HCH practices.

1.4 Summary of recommendations

It is recommended that:

- The efforts to describe the key elements of the HCH and develop standards that enable assessment of an organisation's fidelity to the model, should continue. The self-assessment tool developed for this evaluation should continue to be adjusted in line with adaptations to HCH elements and standards
- The performance framework developed for this evaluation should be reviewed by N4, with a view to finalising and describing performance indicators, based on the process and outcome measures described in the framework. Some initial work has been done on this, which can form the basis for further refinement and development of a data dictionary
- Any future planning for wider rollout of the HCH in New Zealand should recognise the inter-linked multiple changes needed, and factor into model planning the necessary time and effort required to build a sustainable model and effectively embed changes.
- Areas that were not specifically examined in this review could be usefully evaluated in future work. This would include financial aspects, and improvements in staff retention, at both practice

and network levels. The quantitative analysis would benefit from having more practices included, and more time to have shown an effect, so could be usefully repeated in a year's time. Some form of risk adjustment is recommended. Further sub-categories that might be added include the elderly, frail elderly, and patients with chronic disease.

- Patient experience, especially that of Māori and Pacific, should continue to be monitored and reported. An improved patient experience is essential to the success of the HCH model. Quantification of the saved patient time might usefully illustrate the gains made there.

- Any elements of the model that have not yet been successfully implemented in most early adopters (after 4-5 years) should be reviewed for relevance and adapted or removed.

1.5 Conclusion

The implementation of the HCH model was ambitious and based on a driving need to change the way general practice was provided. There has been a sustained investment over five years to achieve the changes to the HCH model. It appears, from the perspectives of both patients and providers, that the model has achieved positive changes. In addition, there is reported evidence of increased clinical capacity within existing operational funding in practices as a result of implementing the HCH model.

Future HCH model rollouts should consider the lessons learned from these early implementations, but also recognise the need for substantial investment in time and effort to achieve sustainable change.

2. Detailed findings

This chapter lists all findings from the body of the report.

2.1 Implementation

The three methods of assessing implementation were:

- Meta-analysis of previous evaluations
- A two-day workshop in June 2016
- Review of the results from four completed self-assessments using the New Zealand Health Care Home Implementation Tool

The following findings were developed regarding implementation:

2.1.1 Changes in primary care service utilisation

- Quantitative data from the previous evaluations showed increasing uptake of key elements of the model over time, including use of the patient portal and use of alternative means for patient consultations. The HCH model of care appeared, based on qualitative data, to be achieving many of its expressed aims, however assumptions about the applicability of some elements of the model (e.g. “fishing”) may need to be revisited.
- While practices that have been implementing the HCH model for longer appear to be close to achieving the ‘threshold’ score on self-assessment, examination of elements within each domain identify specific areas of activity where more focus might be required. Based on the results of four completed self-assessments, it appears that the local context and patient profile may shape which domains of the HCH are implemented more easily than others. For example, a practice which is already firmly embedded in the local service system may find it easier to achieve some of the elements of co-ordinated and integrated care.
- It took time to make changes of the magnitude of the transition to a HCH model of practice. Based on self-assessment of practices in early stage implementation, changes to business models, efficiency and infrastructure appear to require more time and investment than some of the other domains. Allowing adequate time and maintaining realistic expectations while expecting measurable change required balancing and rebalancing organisational effort and commitment.
- At least one practice[1] reported no negative effect on the bottom line after implementing the HCH (not including implementation investments), even though there was a re-alignment of time/effort from different care team members. Other practices, both PMHN-owned and privately owned, noted operational funding remained similar before and after (again excluding implementation costs).
- Two practices reported in 2012 an increase in patient consultations. There was a 12% increase in patient touches between 2010 and 2015, notably in virtual consultations. This occurred at the same time as a decrease in GP and nursing FTE, demonstrating increased capacity.
- In Q2 2016 41% of the patients in the included HCH practices were registered for the patient portal (range 17-77%). By comparison, the selected control practices were at 19% (range 2%-24%).

[1] Travis Medical Centre

2.1.2 Patient experience

- Improvements to the patient experience focused on: saving patient time through improved triaging and reduced face to face visits; improving telephone access (PAC for PMHN practices) as illustrated by lower levels of call abandonment; and improving and standardising co-ordinated proactive care. Over 12 months, one practice estimated a saving of 44.45 weeks of patient time, through effective GP triaging and offering alternatives to face to face care in the surgery.

- When compared to baseline practices in 2015, the average differences in patient experience between evaluation practices and other practices were minimal on a number of elements for patient self-care/self-management and patient as part of the team.

- Patient views and experiences were invaluable in assessing the impact and value of changes.

- Patients needed to be informed about the changes and why they were happening and were likely to require sustained education and support as the HCH model bedded down. Patient perceptions and experience, particularly for Māori and Pacific, need to continue to be monitored.

2.1.3 Impact for providers

- The changes required to implement the model were significant and impacted on practice staff. It took time for staff to adjust to the new way of working and to see benefits in this. Once comfortable with the HCH system staff generally rated it higher than the traditional model of general practice.

- There were anecdotal reports that the HCH model had increased sustainability for stressed GPs, with one example provided of a GP who had been intending to retire choosing to remain in the business because of the perceived advantages of the HCH model.

- The model allowed care team members to work at the top of their scopes of practice, and this was generally viewed positively. Key elements of this were the strengthening of team care and the introduction of new roles in the team – medical centre assistant, clinical pharmacist, and social and community workers.

- Staff were likely to require sustained education and support to maximise use of the key enablers for the HCH model of care.

2.1.4 New Zealand Health Care Home Implementation Tool

- Self-assessment is subjective and dependent on interpretation of the meaning of elements within domains. For baselining and comparability, the Tool can be applied with an external facilitator, to achieve higher inter-rater reliability. For practices applying the Tool, it provides an ongoing assessment against the domains of the HCH and a means of tracking and refocusing effort.

- Based on the results of the four completed self-assessments, it appears that local context and patient profile may shape the relative ease with which domains of the HCH are implemented. For example, a practice which is already firmly embedded in the local service system may find it easier to achieve some of the elements of co-ordinated and integrated care. For practices in the early stages of implementation, changes to business models, efficiency and infrastructure appear to require more time and investment than some of the other domains. Practices also commented that while an element might be present in the practice, and could be 'ticked', often that function continued improving as practice staff became more familiar with the changed approach.

2.2 Performance

Key findings from the quantitative analysis include:

2.2.1 Changes in primary care service utilisation

- A wide range of practice styles and types were represented in the HCH practices included in this quantitative analysis. In 2015 practice sizes ranged from 4,000 to 10,000, average deprivation levels 4 to 8, and proportion of Māori or Pacific enrolees from 10 to 50%. Geographically two practices were in Hamilton, three in rural Waikato, and one in Christchurch.

- While control practices were relatively close in size and geography to the HCH practices they had fewer Māori and Pacific enrolees on average, and were less deprived than their HCH counterparts. HCH practices had more children aged 0-14 and fewer enrolees aged 75+ than controls, but moved closer over the course of the study period.

- Overall enrolled patient numbers remained steady across HCH implementation, with a low turnover of 3-4% per quarter. If anything, retention improved during the implementation period. Some practices had closed books for a time as a change management controlling response, so increases in enrolments were not expected.

2.2.2 Changes in secondary care utilisation

- An important caveat for the secondary data analysis is the nature of the 'open cohort' analysis being undertaken. The analysis takes the population registered at the practice each quarter and checks the utilisation. To the extent that the changes in the population from quarter to quarter are random this will be robust. Any tendency for this not to be random, for example if more complex patients differentially enrolled/switched to HCH practices, then the utilisation data might be skewed.

- Little difference in secondary care utilisation was evident in comparing HCH and control practices:

    - For non-admitted ED attendances, after removing an outlier practice, HCHs had a small non-significant rise, while the relevant controls showed a significant rise.

    - For all acute admissions, and ambulatory sensitive hospitalisations (ASH) in 15-74 year olds specifically there was a rise across both groups. For ASH in children control practices had a marginally significant increase compared to a non-significant increase in HCH practices, but the time trends do not appear very different.

    - Outpatient non-attendance (DNA) rates fell in both HCH and control practices, while remaining largely steady in other N4 practices overall. The higher Māori/Pacific and deprived populations in HCH practices did not translate into higher DNA rates compared with the control practices as might be expected.

- Overall for secondary care utilisation impacts there may have been a lower increase in non-admitted ED attendances compared with controls, and a lower increase in 0-14 ASH. Increases in bed days, 15-74 year-old ASH or indeed all medical-surgical admissions were similar to control practices – despite the significant change processes entered into by the HCH practices.

- Proactive care management for chronic conditions is one of the key components of the logic model that drives the expectation of improvements in ED, hospitalisation and ASH rates, but this:

    - Takes time to take effect

    - Was a relatively late addition to the HCH implementation path for the practices in this analysis

- Is being addressed through other initiatives nationally, and by DHBs and PHOs working in an alliancing environment, which may obscure any specific HCH effect

2.3 Efficiency

Although a full efficiency review was not in the scope of the evaluation, the following information was provided to the evaluators based on internal review.

- All HCH sites within PMHN have maintained or slightly improved their financial performance under the new model. Individual sites have experienced staff changes, movement in patient numbers or other locally driven issues that have had an impact on financial performance but this has not been related to the HCH.

- The HCH funding flows require practices to change their management of cash flows. Lower overall income from GP co-payments are generated under the HCH as virtual care and extended consults are introduced. Additional costs are introduced in the practice including PAC (the telephony service) and new staff roles and staff ratios. These costs are, however, largely offset through increased flexible funding, and some increase in co-payments from virtual care and increased nursing co-payment income.

- Within PMHN, the HCH as a phase 1 reengineered general practice operates within the existing funding – that is, capitation/first level funding plus use of flexible funding to top up monthly capitation payments. It has, however, required some disinvestment in some services that have been funded through flexible funding in the past, often where DHBs have underfunded services (e.g. high needs podiatry care).

- Establishment costs beyond the first few HCH sites has been funded by PMHN from reserves and income produced through other activity. In some areas DHBs are now contributing towards the establishment costs which will allow a broader and more effective model to develop.

3. The Health Care Home

This chapter provides some important information on the HCH model, how it was developed in New Zealand and how it is being implemented.

3.1 The genesis of the HCH

The HCH model is based on a model developed by Group Health. Group Health is a co-operative of 450 doctors who provide care to approximately 580,000 residents of Washington State and Northern Idaho. In 2010 members of the PMHN team travelled to Seattle to investigate the Medical Home model being implemented by Group Health. The Group Health model, based on the patient centred medical home, completely reengineered the way general practice was provided. This major reform was in response to resource and demand challenges like those also being experienced in New Zealand and other developed nations.

These challenges included:

- An increasing shortage of GPs
- An ageing population and an ageing workforce
- Increasing hospital demand

Within PMHN there was an appetite for new evidence-based models of practice and for widening scope to include other clinical disciplines in primary care, and an interest in increasing efficiency within a quality framework.

Modelled on the Group Health experience[2], but customised to New Zealand conditions, the PMHN HCH model of care began operation in three practices (NorthCare Grandview, NorthCare Pukete and NorthCare Thomas Road) in 2010. At that time, it was called the Integrated Family Health Centre (IFHC) model.

It has since been refined and further adapted, based on implementation learnings.

3.2 HCH core elements

The core elements of the New Zealand HCH are clearly described and consistent across individual practices and are:

- Timely unplanned care
- Proactive care
- Routine and preventative care
- Business efficiency

Figure 1: Health Care Home (provided by PMHN)

[2] Midlands Health Network, Seattle Findings Report, October 2010 (provided by PMHN)

For each of these elements there is then a set of implementation activities that determine the achievement of the model. These are:

- A centralised access point as first point of contact for patients, which receives all patient calls, makes appointments, manages recalls, processes paperwork and manages billing.

- A practice of telephone triage at the start of each day to proactively manage acute demand. Every patient speaks to a senior, experienced clinician at first contact and some are managed over the telephone without a face-to-face appointment. The capacity this creates is redirected to those patients with complex needs who may need longer face-to-face time with clinicians.

- Clinical ''pre-work'' for booked patients to ensure they need to be seen, that any preliminary tests have been done and that clinicians are aware of any opportunistic actions that are desirable when they are seen. This comprises "fishing" (ideally done two or three days prior to an appointment) and the "huddle" (first thing every morning and focused on smoothing-out the day's work).

- Dedicated clinician time set aside for provision of GP (and in some cases, clinical pharmacist) consultations over the telephone and by email for acute and low-risk patients.

- Provision of a web-based portal which allows patients to review selected medical information including medication and test results, and to securely communicate with their GP for e-consults.

- Facility changes to support new ways of working with more effective use of physical space. This includes standardisation of consulting rooms with clinicians using whichever room is available and creation of an 'off-stage' space, separate from patient areas where clinicians can take telephone calls, work on the computer, process paperwork and consult with each other.

- Development of new professional roles (e.g. clinical pharmacist, medical centre assistant) to expand the capacity and capability of general practice, enabling GPs and practice nurses to work at the top of their scopes.

These elements are critical components of the HCH and are still being adapted in response to the lessons from ongoing implementation.

3.3 HCH practice funding model

Different funding models operate across the N4 PHOs. The PMHN HCH funding model is the most detailed. It has several elements, including some incentive funding.

Recurrent funding has the following characteristics:

- 90% pass-through of all practice generated flexible funding
- Bundling of other service funding
- Linked to practice specific modelling on population stratification
- Managed via an enhanced back to back HCH agreement
- Funds new roles, PAC contribution and virtual care
- Average of $16-18 per enrolled patient – replacing fee-for-service income of a similar amount

Enhanced HCH services include:

- Multidisciplinary team services
- Clinical pharmacy
- Mental health
- District nursing

Practices also receive payment in line with achievement of annual quality plan targets. This is the same for HCH and non-HCH practices.

Non-recurrent funding is provided for HCH practices only. A practice embarking on the HCH change receive up to $16 per patient to support change and infrastructure set-up costs, broken down as per the table below.

Table 1: Non-recurrent funding for HCH practices

	>10,000 enrolees	<10,000 enrolees
Practice team workshops to create implementation plan	$4.29	$2.64
Infrastructure (federated telephony, kiosk, etc.)	$5.45	$6.21
Patient communications and engagement	$1.16	$1.32
Leadership time	$5.10	$5.82
TOTAL	**$16.00**	**$16.00**

3.4 Broadening interest in HCH

Interest in the HCH model continued to grow as MPHN established its initial practices, and then began to roll out the model to other practices in the network. Many GPs, and personnel from PHOs, DHB and from further afield – Australia, the UK, Canada – visited and took note of the innovations being tested. Some practices in other PHOs began making changes along the HCH model lines. The N4 PHOs (ProCare, PMHN, Compass and Pegasus), covering over 40% of the New Zealand population, joined forces to create the New Zealand Health Care Home Collaborative. They were aiming to define an HCH in the New Zealand context, and to promote their support by DHBs and the Ministry of Health. They have since been joined by the Northland PHOs.

3.5 HCH standards

A two-day workshop in June was a major stepping stone in creating this national standardisation. An agreed set of standards differentiate the HCH from what might be described as 'good general practice' and are a means to distinguish between those practices that are still delivering traditional general practice (albeit at a high level) and those that have successfully transitioned to the HCH.

The standards (as at August 2016) are described below.

Table 2: HCH Standards as at August 2016

Area		Description
1	Call management (first point of access with the provider) [unplanned & routine & proactive]	The HCH utilises an enhanced call management approach to respond to and proactively contact patients. Reception space is predominantly call-free. The practice understands and monitors telephonic demand and allocates resources to answer 90% of calls within 60 secs [average dropped call rate is less than 5%].
2	Triage to ensure patients receive appropriate & timely care. [Unplanned.]	The HCH utilises triage to proactively manage acute demand. Patients requesting on the day services speak to a senior, experienced clinician who can assess, diagnose, and treat over the phone without the need for a face-to-face appointment where clinically appropriate. The triage work flow facilitates continuity of clinical care. Measures: % calls resolved without face to face appointment. % of patients that speak to their own GP/senior clinician.
3	Proactive care planning for those with high needs or at risk.	1. Population stratification is used to identify levels of clinical risk and those with complex health or social care needs.
		2. Proactive assessment, care planning, and care coordination processes are in place to support individuals/whanau with complex needs, facilitating integrated health and social care.
		3. People identified as having high and complex needs have a named care coordinator.
		4. Workflow for complex patients supports extended consults, support for self-management, broader multidisciplinary team inputs, and shared electronic health plans.
		5. The practice proactively works to involve whanau support practitioners (where available) in care planning/coordination for Māori patients.
		[Everyone has a health plan. Those with high needs have a care plan.] Measures: % patients with complex needs who have a care plan.

Area		Description
4	GP, Nurse and Pharmacist consultations are planned	The team identifies the purpose of a consultation and: 1. Utilises clinical pre-work so that required preliminary tests have been done
		2. The appropriate appointment length is booked based on patient needs
		3. Provision of GP, Nurse, Pharmacist, (and other team member) consults over the phone and via email, video, IM and home visits for appropriate patients. Dedicated clinician time is set aside for these activities as part of a virtual consultation as required.
		4. Other supports needed are identified and addressed to make the best use of patient and clinician time.
5	Web and smart phone based portals	Provision of a patient portal to allow patients to manage and own their medical information including medication and test results. It provides a secure place for patients to communicate with their Health Care Home team.
6	Patient-centred	The practice frequently measures patient experience, uses the information to improve services and encourages patient self-care.
7	Enhanced layout and composition of GP facilities support	The HCH standardises consulting rooms and communal spaces.
	Efficient working (e.g. thru standard kit and layout)	Clinicians can use any available room for consultation, which improves the utilisation of space.
	Collegial / team working	Clinicians and other staff have access to separate private spaces to take phone calls, work on their computers, process paperwork and consult with each other and other staff in the practice – helping make the HCH a team effort.
8	Enhanced professional roles to expand the capacity and capability of General Practice.	The practice allocates tasks to broader team roles to enable GPs, Nurses and other clinicians to consistently work at the top of their scopes throughout the day. Administrative staff and Medical Centre Assistants handle non-clinical aspects of consultations and complementary specialist roles (e.g. clinical pharmacist, nurse practitioner) improve the quality and effectiveness of consultations.
		The practice has a practice development & workforce plan that meets the need of the practice team and population.
		The practice provides training to support administrative and clinical staff to lead change, deliver new models of care, and to continuously improve services.
9	A community health and social care team to support vulnerable/complex patients whanau	The practice facilitates coordinated health and social care for patients with complex needs through:
		1. Structured, scheduled multidisciplinary team meetings with community and social care teams.
		2. E-Shared care plans that are developed with patients and the wider integrated health and social care.
		3. Māori patients and their whanau are linked with Kaupapa Māori support where available.
		4. Integration of specialist services including paediatrics, diabetes, respiratory and older persons into the HCH settings in the community, to manage patients more effectively closer-to-home.
10	Promoting access	1. The practice proactively identifies patients/whanau with affordability issues and puts in place a planned approach to facilitate access to the service.
		2. The practice provides some extended (out of business hours) availability to promote access in accordance with the needs of the practice population.
11	Business efficiency and continuous improvement	The practice uses a structured methodology to continuously improve quality and reduce waste. Practice leaders are trained in the structured methodology. The practice benchmarks quality indicators with others nationally

3.5.1 Example: planned proactive care

There are set standards that have to be met in order to record a completed health plan for HCH practices, with named co-ordinator recorded, next patient review recorded, and that the patient and other providers have a copy of the plan. There is dedicated time on the nursing templates to schedule this activity with patients. The table below provides an example of reporting of the progress of practices in achieving these standards.

Table 3: Progress reporting on achievement of planned proactive care

	Active Register of High Needs Patients in place and patient tagged on PMS	Nurse teams trained in comprehensive care planning	Practice process established for planning and monitoring care plans	% care plans completed and named co-ordinator for each patient
Practice 1	N	N	N	0
Practice 2	N	N	N	0
Practice 3	Y	Y	Y	33
Practice 4	Y	Y	Y	Pending due to IMS change
Practice 5	N	N	N	0
Practice 6	N	N	N	0
Practice 7	Y	Y	Y	19
Practice 8	Y	Y		24
Practice 9	N	N	N	0

3.6 Improving patient and staff experience

The HCH is a patient-centred model that aims to improve the experience as well as clinical outcomes for patients. Key elements of the model, such as the patient portal, use of MCAs, PAC and GP triage are all designed to increase efficiency and save patient time.

The HCH aims to improve the working life of the professionals working in the practice, addressing some of the dissatisfiers in general practice as it currently operates. An example of a small practice response to the HCH model was provided to the evaluators and can be accessed at: http://www.healthcarehome.co.nz/case-studies/hauraki-plains-health-centre-path/. In this example a GP in a small practice describes how he believes the HCH model will make the difference between his staying in the practice and leaving it.

3.7 New workforce roles

There have been three key new roles introduced as a result of the HCH. These are the medical centre assistant (MCA), the clinical pharmacist and social worker.

3.7.1 MCA

Every HCH has a MCA as standard. This releases GP and nurse time and reduces patient waiting time for appointments. Both NorthCare and Taupo Health Centre have reportedly reduced the size of their waiting rooms and added more consulting rooms as a result of reduced waiting room pressure. MCA roles are flexible and may include:

- Greeting and rooming patients
- Urine testing, and taking blood pressure, height and weight and reporting results to clinical staff for interpretation and action
- Collecting necessary records and equipment for the next day's procedures
- Preparing packs for, and cleaning up after, minor surgeries
- Maintaining stock control

3.7.2 Clinical pharmacists

Clinical pharmacists are being added to HCH teams as DHB funding becomes available. All Lakes HCH practices have a dedicated pharmacist as do NorthCare and Tokoroa. Clinical pharmacist roles may include:

- Providing the clinical team with updates and responding to questions regarding medication safety and dosage

- Working as part of the clinical team to review and optimise patient medications for patients
- Holding phone or face-to-face consultations with patients to review medications
- Reviewing hospital discharge notes to check for errors and that medications are appropriate
- Following up discharged patients
- Ordering blood tests and referring patients for a GP consultation if necessary

3.7.3 Social and community workers

PMHN is piloting a practice based social worker in the Coromandel HCH practice and community health workers in Te Awamutu and Taupo. The evaluators were provided with a written article on the community health worker in Te Awamutu. The role is part of the HCH team and works closely with doctors and nurses in the practice. The role provides a link between patients and their families and the health care team, as well as supporting patients in managing their diabetes.

3.8 Quality

Putting in place live visual displays and morning huddles focused on quality improves the practice achievement of targets. Actions on areas for concern are recorded on the HCH action plan.

3.9 Difference from traditional general practice

The HCH differs from traditional general practice (even 'good general practice') in that it fundamentally shifts the focus of the practice from the GP to the patient. This is not a small thing and requires a significant degree of reengineering. It means the activities of the practice become aimed at improving access, experience and outcomes for patients and their families, rather than the professional demands of the clinical staff. It recognises that general practice is part of a wider system of primary health care that interacts with patients and shapes their overall health and wellbeing.

The HCH builds a model of care that is centred around the patient's needs and aspirations and therefore uses the skills and capacity of the entire practice team (clinical and non-clinical) rather than viewing the extended health team as accessories to GP care. It builds business efficiency and standardisation of facilities and processes into the model practice, rather than relying on the preferences of individual clinicians.

Fundamentally the model aims to achieve a shift from:

- A system/provider driven care model to a patient driven care model
- Face to face to virtual care where appropriate
- Reactive care to as much planned care as possible
- A universal model to care that is personalised to patient need and context, using a team approach across sectors
- A siloed, fragmented provider environment to one that is a well co-ordinated, shared care environment
- Providers surviving the working day to providers enjoying the day
- Vulnerable practices to practices that are viable in the longer term

3.10 Adoption to date

In addition to the initial three practices, other PMHN practices have subsequently adopted the model (to a current total of 15). Some Pegasus, Compass and ProCare practices have also adopted (or are in the process of adopting) aspects of the model. Each practice is likely to have variants of the model, have variable implementation of each component of the model, and be at different stages of the implementation sequence.

4. Evaluation approach

This chapter describes the approach to the evaluation and to the development of a HCH performance framework.

4.1 Evaluation summary

4.1.1 Scope

A formal evaluation approach for PMHN practices was agreed with the Ministry of Health and carried out by the University of Waikato initially, and then by Marinal Services, using qualitative and quantitative methods. Additional quantitative work was carried out by the Health Intelligence team at PMHN through to 2014.

The N4 group recently identified the need for further evaluation with the following components:

- Identifying an enduring performance framework for the HCH model of care, including measures, and associated data definitions (and subsequently collection and analysis)
- Identifying the historic/current information available to develop a report on the performance of the HCH model to date
- Preparation of an independent evaluation report using the available data and incorporating the findings of past evaluation work, and pointing to future measures and potential future impacts of the model

4.1.2 Approach

The evaluation methodology included:

- A literature scan of performance frameworks for similar models of patient centred primary care
- Development of a programme logic model for the NZ HCH
- A meta-analysis of previous evaluations (2012-2015)
- Summation of discussions from a meeting with participating organisations in June 2016
- Analysis of four completed self-assessment tools
- Quantitative analysis of:
    - Patient enrolments
    - ED usage
    - Hospitalisation rates
    - Bed day rates
    - Outpatient attendances
    - Outpatient DNA rates

Qualitative and quantitative data was triangulated to draw conclusions.

4.1.3 Participants

The following practices participated this evaluation.

Table 4: Participating practices

Practice	Start date	Network	Group 1 – Full evaluation incl. quant. analysis of hospital and ED data	Group 2 – Process evaluation
NorthCare Pukete/Thomas	Apr-11	PMHN	✓	✓
NorthCare Grandview	Apr-11	PMHN	✓	✓
Tokoroa Primary Care	Mar-13	PMHN	✓	✓
Mercury Bay Medical Centre	Jul-13	PMHN	✓	✓
Health Te Aroha	Jul-13	PMHN	✓	✓
Travis	Apr-11	Pegasus	✓	✓
Ora Toa Practices		Compass		✓
Clendon Medical Centre		ProCare		✓
Turuki Health Care		ProCare		✓
Otara Family and Christian Health Centre		ProCare		✓
Pukekohe Family Health Care		ProCare		✓

4.1.4 Development of the performance framework

The evaluation required development of an evaluation/performance framework that could be utilised as an ongoing means of assessing the performance of HCHs. This involved the following stages:

- Literature scan of performance frameworks for similar models of patient centred primary care
- Literature scan of current system level indicators
- Application of the logic model for the HCH to the development of the performance framework
- Development of the performance framework and a set of possible indicators for further consideration

5. Performance framework and programme logic

This chapter describes the HCH logic model and performance framework, and the rationale underpinning them.

5.1 Performance measures in use in New Zealand and elsewhere

5.1.1 Measuring implementation and process

A literature scan was undertaken of performance measures and evaluation approaches to assessing the effectiveness of patient centred medical homes, the model on which the HCH is based. The scan also considered the existing system-wide performance measures in place in New Zealand, Australia, and the UK.

Many reviews of performance indicators for patient centred medical homes emphasised the importance of including process measures as well as measuring outcomes for patients and practitioners[3,4,5]. These enabled understanding of process and context and might allow for local variations to address local environments. There were multiple process indicators that might be applicable.

Crossland et al identified 10 elements as integral to high quality organisational performance in general practice, with an emphasis on taking a quality improvement approach to engendering practice change. These were patient-centred approaches, leadership and leading, focus on staff, clinical governance, multi-professional teams, communication, education and training, process improvement, performance results, information and information technology, incentives and rewards, organisational governance, and change and change management.

This resulted in the development of the PC-PIT (Primary Care Practice Improvement Tool), which addresses the elements of patient-centred and community-focused care; leadership; governance; communication; change management; a culture of performance; and information and information technology.

Of possibly greater relevance to the New Zealand HCH model, Bodenheimer et al defined and described the 10 building blocks of what they defined as 'high performing primary care', based on the patient centred medical home model[6]. Bodenheimer et al, in describing the 10 building blocks of high performing primary care, also provided a self-assessment tool for practices to consider their progress towards each of the building blocks[7]. This tool was based on the PCMH-A tool specifically developed to assess progress towards the patient centred medical home model for practices in the US[8]. The PCMH-A was developed by the MacColl Center for Health Care Innovation at the Group Health Research Institute and Qualis Health for the Safety Net Medical Home Initiative (SNMHI).

The tool has been tested in 65 services including federally qualified health centres, residency practices, and other settings. The PCMH-A tool was also adapted for the Australian context in collaboration with WentWest Primary Health Network (PHN).

[3] Rosenthal et al; Recommended Core Measures for Evaluating the Patient-Centered Medical Home: Cost, Utilization and Clinical Quality; Commonwealth Fund pub.1601, 2012 Vol 12

[4] Bardsley et al. Evaluating integrated and community-based care - How do we know what works? Nuffield Trust, 2013

[5] Hoff, T., Medical Home Implementation: A Sensemaking Taxonomy of Hard and Soft Best Practices; The Milbank Quarterly, Vol. 91, No. 4, 2013 (pp. 771–810)

[6] Bodenheimer et al, The 10 Building Blocks of High-Performing Primary Care, Ann Fam Med 2014;166-171. doi: 10.1370/afm.1616

[7] Supplementary Materials for Bodenheimer T, Ghorob A, Willard-Grace R, Grumbach K. The 10 building blocks of high-performing primary care. Ann Fam Med. 2014;12(2):166-171

[8] http://www.improvingchroniccare.org/downloads/pcmha.pdf

The building blocks as defined by Bodenheimer are described below:

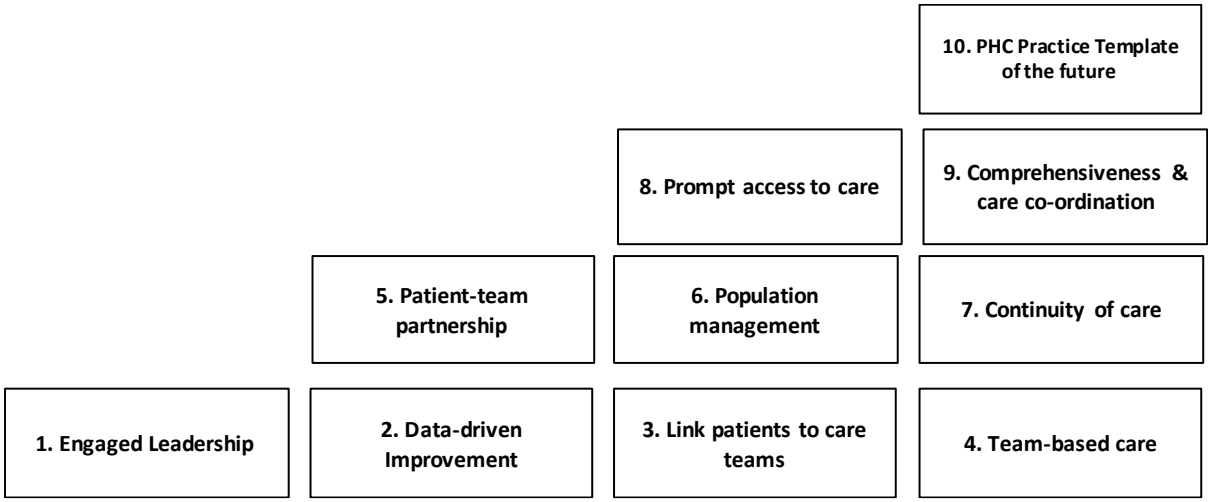


Figure 2: 10 elements of high performing practices (Bodenheimer et al)

As these are based on the patient centred medical home model, they strongly align with the aims of the New Zealand HCH, and might be adapted to build progressive indicators to support implementation. In the context of the New Zealand HCH, these adapted measures could be related directly to progress over time in implementing the key elements of the HCH.

5.1.2 Outcome measures

A scan of current national and international performance measurement frameworks for integrated care, patient centred-care and/or the patient-centred medical home revealed the most commonly used outcome measures related to:

- Population and preventive health
- Patient experience
- ED use
- Costs and efficiency (including costs to patients)
- Safety and quality

There was also an increasing emphasis on clinician/worker satisfaction, in line with the expanded view of the Triple Aim. Appendix A summarises indicators used in different international contexts.

5.1.3 Underpinning principles

An increasing focus on taking a quality improvement approach to measuring performance was also noted. In the New Zealand context, principles of equity and cultural respect were considered very important, in the context of health outcomes gaps for Māori and Pacific and the known impacts of the social determinants of health.

5.2 Development of a logic model

A programme logic or model of change translates the aspirations and long term goals of a policy into an articulated model that defines the desired short and long term outcomes, the outputs required to achieve those outcomes, the activities required to enable the outputs and the resources (or inputs) required to support the activities.

Programme logic models can be as simple or as complex as required. The most important consideration is that they are meaningful to those who will use them, that they capture the range of elements of the programme, and that there is a clear line of sight from inputs, through activities and outputs to specified and measurable outcomes.

Programme logics support good programme design and evaluation as they help develop an understanding of what is expected and what must happen to achieve that.

A key element of programme logic is defining and understanding the context in which a programme is being implemented and the effect that context has on programme design, on resources, on activities and on outcomes. The answer to “What constitutes success?” is highly influenced by context.

Once the logic is defined then process and outcome measures can be developed. These may include interim or marker outcome measures that are indicative of longer term success.

One of the important tasks in developing a HCH specific model, is teasing out the elements that differentiate the model from what should just be considered good primary care. In other words, what defines the HCH as an entity and as a model of practice. The logic model enables us to do this by describing not just the individually elements but also how they work together to deliver a health care home in the New Zealand context. Key activities described in the logic model for the HCH are collected under the following categories:

- Practice models
- Managing unplanned care
- Planned and proactive care
- Access and preventive care
- Standardisation and efficiency
- Infrastructure
- Quality and team care
- Building workforce capacity

The logic model describes a line of sight for these activities through to outputs and ultimately outcomes. Outcomes are grouped under the categories of:

- Patient experience and outcomes
- Population outcomes
- Clinician experience
- Efficiency
- Quality
- Sustainability

5.3 Development of the performance framework

Based on the literature scan and consideration of the New Zealand context, the logic model and the defining features of the New Zealand HCH, a high-level performance framework was developed.

The logic model and performance framework informed the adaptation of a self-assessment tool developed to assess the implementation of patent centred medical homes in the US.

5.4 Logic model and performance framework

The logic model for the HCH, the HCH Performance Framework and Performance Measures are described on the following pages.

5.4.1 HCH logic model

Figure 3: HCH Logic Model

5.4.2 HCH performance framework

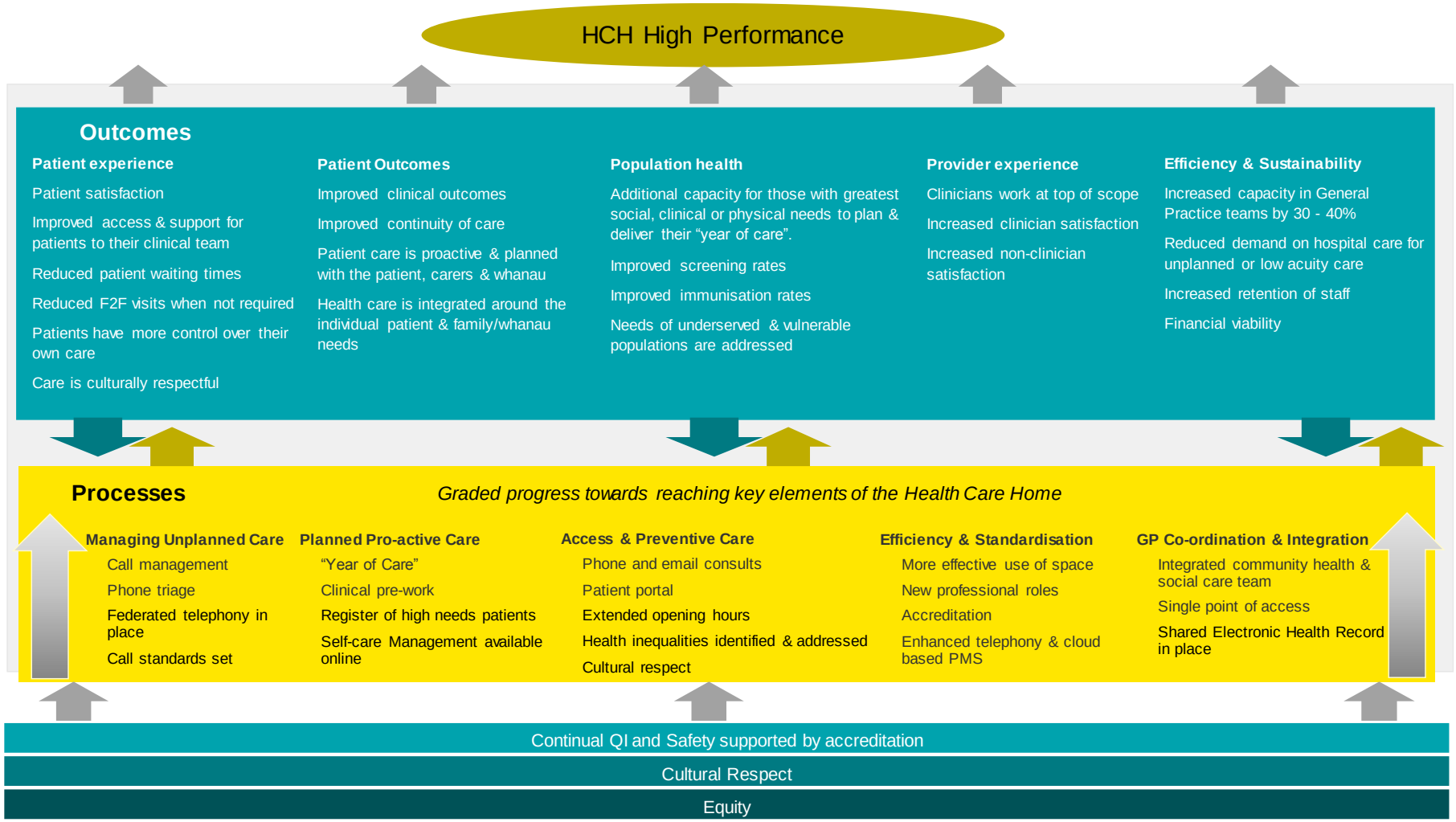


Figure 4: HCH Performance Framework

5.4.3 HCH performance measures

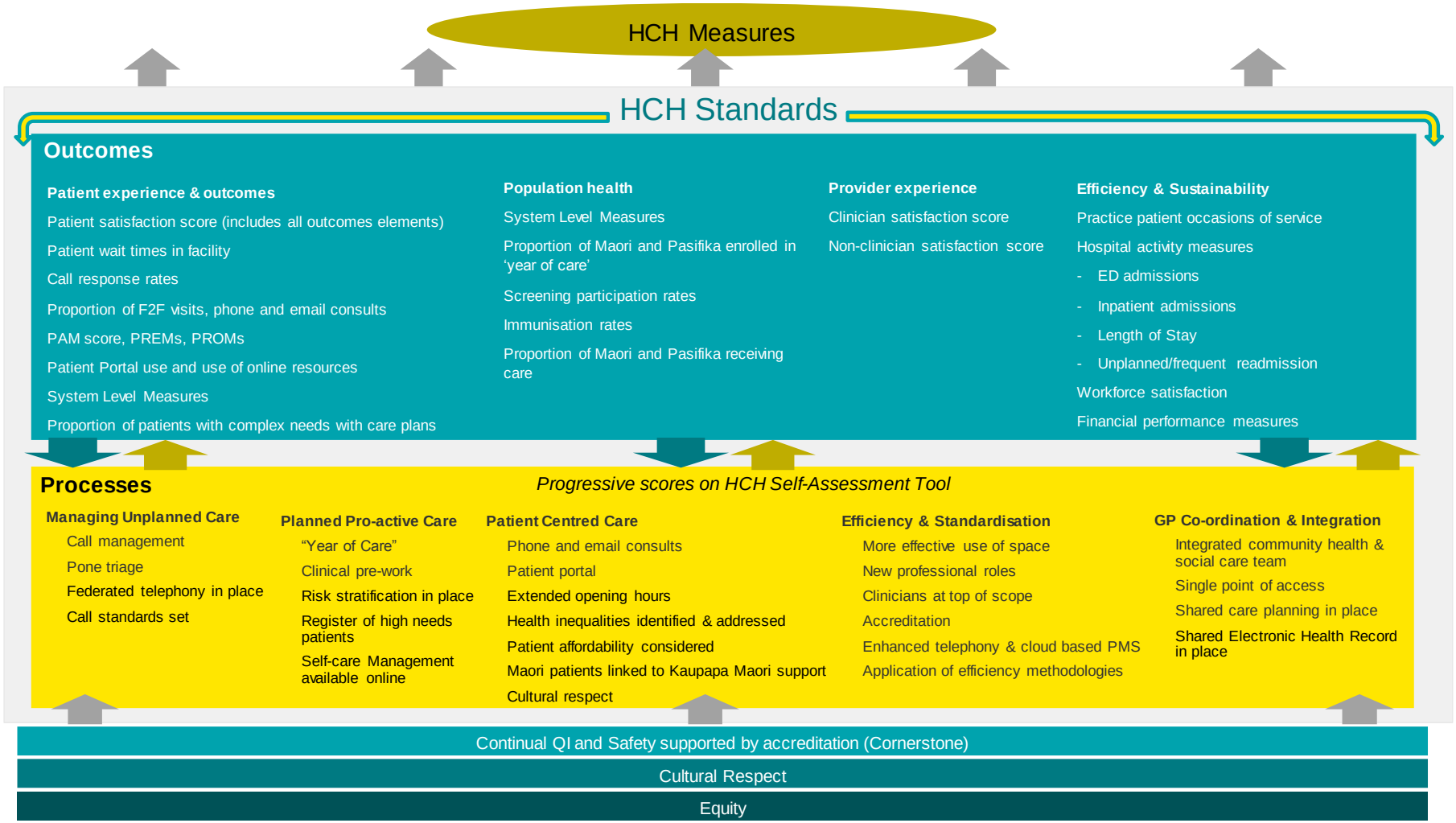


Figure 5: HCH performance measures

The table below describes the outcomes for the HCH and associated measures. Contributory measures to system level measures will provide data for some of these outcomes if collected and reported (see Note 3).

Table 5: HCH outcomes, measures and sources

Outcome	Measure	Source
Patient experience		
Patient satisfaction	► Patient satisfaction score	► Patient survey / PREMs See Note 1)
Improved access and support for patients to their clinical team	► F2F visits, phone and email consults	► PAC data ► Practice PMS
	► Proportion of patients with complex needs with care plans	► Practice PMS
	► Patient satisfaction score	► Patient survey / PREMs
Reduced patient waiting times	► Patient wait times in facility	► Patient survey / PREMs ► Practice record
	► Call response rates	► Patient survey / PREMs ► PAC data
	► Patient satisfaction score	► Patient survey / PREMs
Reduced face to face (F2F) visits when not required	► Proportions of F2F visits, phone and email consults	► PAC data ► Practice PMS
	► Patient satisfaction score	► Patient survey / PREMs
Patients have more control over their own care	► Proportion of patients with complex needs with care plans	► Practice PMS
	► Proportion of patients with increased activation	► Patient Activation Measure (See Note 3)
	► Number of patient hits on self-management online tools	► Patient portal
	► Patient portal use	► Patient portal
	► Patient satisfaction score	► Patient survey / PREMs
Care is culturally respectful	► Patient satisfaction score	► Patient survey / PREMs
Patient Outcomes		
Improved clinical outcomes	Improvements on condition specific indicators: e.g. ► HbA1c ► Blood Pressure ► Cholesterol ► BMI	► Practice PMS ► Patient survey / PROMs
Improved continuity of care	► Proportion of patients with complex needs with care plans (see Note 2) ► Proportion of Māori and Pacific with care plan'	► Practice PMS
Patient care is proactive & planned with the patient, carers & whanau	► Proportion of Māori and Pacific with care plan	► Practice PMS
Health care is integrated around the individual patient & family/whanau needs	► Patient satisfaction score	► Patient survey / PREMs

Outcome	Measure	Source
Population health		
Additional capacity for those with greatest social, clinical or physical needs to plan & deliver their care plan.	► Proportion of Māori and Pacific with care plan'	► Practice PMS
Improved screening rates	► Screening participation rates	► Practice PMS
Improved immunisation rates	► Immunisation rates	► Practice PMS
Needs of underserved & vulnerable populations are addressed	► Proportion of Māori and Pacific receiving care	► Practice PMS
Provider experience		
Clinicians work at top of scope	► Practice PMS reflects top of scope activities for GPs, PNs, other clinical team members	► Practice PMS
Increased clinician satisfaction	► Clinician satisfaction score	► Provider survey
Increased non-clinician satisfaction	► Non-clinician satisfaction score	► Provider survey
Efficiency & Sustainability		
Increased capacity in general practice teams by 30 - 40%	► Practice patient occasions of service by GPs/Nurses/Other team members	► Practice PMS
	► Clinician satisfaction	► Provider survey
Reduced demand on hospital care for unplanned or low acuity care	► Hospital activity measures ► Decreased ED admissions for non-urgent presentations ► Reduced unplanned inpatient admissions ► Reduced length of stay for specific conditions ► Unplanned readmissions	► Hospital data sets
Increased retention of staff	► Workforce satisfaction	► Provider survey
Financial viability	► Financial systems report no net loss of practice income/profit	► Practice financial systems ► PHO financial systems
Achievement of HCH elements		
Managing unplanned care	► Call management in place ► Phone triage in place ► Federated telephony in place ► Call standards set ► Appointment times able to reflect level of need	► NZ Health Care Home Implementation Tool
Planned proactive care	► Care plans'" established for relevant patients ► Clinical pre-work processes in place and operational ► Risk stratification in use ► Register of high needs patients established ► Care co-coordinators in place to support high needs patients ► Self-care Management available online	► NZ Health Care Home Implementation Tool

Outcome	Measure	Source
Patient centred care	► Phone and email consults being provided ► Patient portal accessible and being used by patients ► Extended opening hours in place ► Health inequalities identified & addressed ► Patient affordability issues are considered ► Cultural respect in evidence and Māori patients are linked to Kaupapa Māori support where available ► Patient experience is routinely measured	► NZ Health Care Home Implementation Tool
Efficiency and standardisation	► More effective use of space ► New professional roles in place and clinicians work to top of scope of practice ► Cornerstone accreditation achieved ► Enhanced telephony and cloud based PMS infrastructure in place ► Efficiency methodologies being used regularly to improve efficiency	► NZ Health Care Home Implementation Tool ► Accreditation Reports
GP co-ordination and integration	► Integrated community health & social care team in place ► Single point of access established and in use ► Shared care planning established with social services, including Kaupapa Māori supports ► Shared electronic health record in place and in use ► Integration with specialist services in place	► NZ HealthCare Home Implementation Tool

5.4.4 Notes to indicators

1. Patient experience measures (PREMs) will depend on the elements chosen to be assessed. These may form part or all of the patient satisfaction survey or may be a separate collection, focusing on particular elements of the patient experience. Validated tools are available, and selection should be on the basis of suitability to context and service.

2. Care plans may also be known as health plans, or year of care plans

3. The four new system level measures to be implemented from 1 July 2016 are:

    a. Ambulatory sensitive hospitalisation (ASH) rates per 100,000 for 0-4 year olds

    b. Acute hospital bed days per capita

    c. Patient experience of care

    d. Amenable mortality rates

System level measures have nationally consistent definitions and will be reported nationally. Contributory measures will have nationally consistent definitions and data sets but will be selected locally and will not need to be reported nationally.

Ambulatory sensitive hospitalisation (ASH) rates per 100,000 for 0-4 year olds

Contributory measures include:

a. Lead Maternity Carer registration rate

b. New-born enrolment rate

c. Referral rate to Lead Maternity Carer

d. Referral rate from Lead Maternity Carer to Well Child Tamariki Ora

e. Breastfeeding rates

f. Core Well Child Tamariki Ora visits achieved

g. Respiratory initiatives

h. Housing sensitive hospitalisations

i. Immunisations

j. Enrolment with oral health services

k. Caries free at 5 years

Acute hospital bed days per capita

Contributory measures include:

a. Length of stay

b. Acute readmissions

c. Frequent representations

d. Polypharmacy

e. Flu vaccinations in the elderly

f. Cardiovascular disease risk assessment

g. Smoking rates

h. Admission rates – ASH

i. Emergency department health target

Patient experience of care

Contributory measures include:

a. Portal uptake and use

b. DHB inpatient care survey

c. Uptake of primary care patient experience survey

d. Sentinel events in hospital and primary care

e. Access to diagnostics

f. Admissions for drug reactions

g. Quality and safety markers

Amenable mortality

Contributory measures include:

a. Cancer screening and treatment timeliness

b. Cardiovascular risk management

c. Other chronic disorder management (chronic obstructive pulmonary disorder, diabetes)

d. Injuries (unintentional, self-harm) prevention

e. Smoking rates

4. The patient activation measure (PAM) is a reliable patient-reported measure that describes the knowledge, skills and confidence a person has in managing their own health and health care. A low level of activation is correlated with patients taking a less active role in staying healthy (including following the GP's advice).

6. Implementation path

This chapter describes the development of a tool to measure implementation progress, and describes the results from four practices who used the tool.

6.1 The journey

Implementation of the HCH model is a journey rather than a point in time transition. It is important to understand and measure how this journey progresses, both for the information of those implementing now and to inform replicability at a wider level.

There is a significant investment of time and resources required to reach the point where noticeable change occurs in a practice. This investment should not be under-rated. It is a prerequisite for a sustainable change strategy.

Below is a sample of how planning was undertaken for HCH implementation in a practice[9].

Figure 6: Example planning for HCH

Understanding how planning and implementation is occurring, and estimating practice progress along a continuum from base level to full achievement of HCH elements is an important part of the evaluation. Therefore, EY has developed a self-assessment tool for use by participating practices.

6.2 New Zealand Health Care Home Implementation Tool[10]

The New Zealand Health Care Home Implementation Tool was adapted from an assessment tool developed by Bodenheimer et all for the 10 building blocks of high performing general practice[11] and a public version of The Patient Centered Medical Home Assessment created for use in the Safety Net Medical Home Initiative by the MacColl Center for Health Care Innovation at Group Health

[9] Provided by PMHN

[10] The New Zealand Health Care Home Implementation Tool v1.1. [Spreadsheet], NZ HCH Collaborative, 2016

[11] Supplementary Materials for Bodenheimer T, Ghorob A, Willard-Grace R, Grumbach K. The 10 building blocks of high-performing primary care. Ann Fam Med. 2014;12(2):166-171.

Cooperative of Puget Sound (www.safetynetmedicalhome.org). It was customised for the New Zealand HCH Collaborative, based on the joint workshop of 23/24 June 2016, and subsequent work.

The implementation tool acknowledges that it takes time to achieve all the elements of an HCH and enables an ongoing process of measuring how far practices are on the road to achieving the model.

Although based on the 10 building blocks, the tool has been adapted to the New Zealand context, to specifically enable assessment against the key elements of the HCH. The tool is designed for self-assessment by an individual practice to track the practice progress in implementing the HCH. Domains of the tool are described in Appendix C. The tool was tested with a participating practice and, following this, adaptations were made to criteria and language to increase applicability to the New Zealand HCH.

6.3 Alignment to the HCH model

An agreed set of standards for the HCH were developed at the 24 June 2016 workshop. The self-assessment tool has been mapped to these standards to check for alignment and to assist practices seeking to meet all standards. The table below illustrates the mapping.

Table 6: HCH Standards (August 2016) mapped to the New Zealand HCH Implementation Tool

Area		Description	Map to Indicators
1	Call management (first point of access with the provider) [unplanned & routine & proactive]	The Health Care Home utilises an enhanced call management approach to respond to and proactively contact patients. Reception space is predominantly call-free. The practice understands and monitors telephonic demand and allocates resources to answer 90% of calls within 60 secs [average dropped call rate is less than 5%].	1.3, 1.4, 1.7, 2.2, 2.4, 3.2, 7.1, 7.6, 7.7
2	Triage to ensure patients receive appropriate & timely care. [Unplanned.]	The Health Care Home utilises triage to proactively manage acute demand. Patients requesting on the day services speak to a senior, experienced clinician who can assess, diagnose, and treat over the phone without the need for a face-to-face appointment where clinically appropriate. The triage work flow facilitates continuity of clinical care. Measures: % calls resolved without face to face appointment. % of patients that speak to their own GP/senior clinician.	1.1, 1.2. 1.5, 1.6, 1.7, 2.4
3	Proactive care planning for those with high needs or at risk.	1. Population stratification is used to identify levels of clinical risk and those with complex health or social care needs.	2.7
		2. Proactive assessment, care planning, and care coordination processes are in place to support individuals/whanau with complex needs, facilitating integrated health and social care.	2.5, 2.6, 3.3, 3.4
		3. People identified as having high and complex needs have a named care coordinator.	2.6
		4. Workflow for complex patients supports extended consults, support for self-management, broader multidisciplinary team inputs, and shared electronic health plans.	3.1, 3.3, 3.4
		5. The practice proactively works to involve whanau support practitioners (where available) in care planning/coordination for Māori patients.	5.2
		[Everyone has a health plan. Those with high needs have a care plan.] Measures: % patients with complex needs with a care plan.	
4	GP, Nurse and Pharmacist consultations are planned	The team identifies the purpose of a consultation and: 1. Utilises clinical pre-work so that required preliminary tests have been done	2.1, 2.2, 2.3
		2. The appropriate appointment length is booked based on patient needs	3.1
		3. Provision of GP, Nurse, Pharmacist, (and other team member) consults over the phone and via email, video, IM and home visits for appropriate patients. Dedicated clinician time is set aside for these activities as part of a virtual consultation as required.	1.7, 3.1
		4. Other supports needed are identified and addressed to make the best use of patient and clinician time.	2.3
5	Web and smart phone based portals	Provision of a patient portal to allow patients to manage and own their medical information including medication and test results. Provides a secure place for patients to communicate with their Health Care Home team.	2.9, 3.3, 3.4, **7.5**
6	Patient-centred	The practice frequently measures patient experience, uses the information to improve services and encourages patient self-care.	1.4, 2.5, 3.5, 3.6, 3.7, 3.8

Area		Description	Map to Indicators
7	Enhanced layout and composition of GP facilities support	The Health Care Home standardises consulting rooms and communal spaces.	**4.4**, 4.5, 7.1
	1. Efficient working (e.g. thru standard kit and layout)	Clinicians are able to use any available room for consultation, which improves the utilisation of space.	**4.4**, 7.1
	2. Collegial / team working	Clinicians and other staff have access to separate private spaces to take phone calls, work on their computers, process paperwork and consult with each other and other staff in the practice – helping make the Health Care Home a team effort.	4.2**, 7.2**
8	Enhanced professional roles to expand the capacity and capability of General Practice.	The practice allocates tasks to broader team roles to enable GPs, Nurses and other clinicians to consistently work at the top of their scopes throughout the day. Administrative staff and Medical Centre Assistants handle non-clinical aspects of consultations and complementary specialist roles (e.g. clinical pharmacist, nurse practitioner) improve the quality and effectiveness of consultations.	5.3, 6.3, **6.5**, 6.6
		The practice has a practice development & workforce plan that meets the need of the practice team and population.	6.3, 6.4
		The practice provides training to support administrative and clinical staff to lead change, deliver new models of care, and to continuously improve services.	6.1, 4.6, 4.7
9	A community health and social care team to support vulnerable/complex patients whanau	The practice facilitates coordinated health and social care for patients with complex needs through:	
		1. Structured, scheduled multidisciplinary team meetings with community and social care teams.	5.2
		2. E-Shared care plans that are developed with patients and the wider integrated health and social care.	2.9, 3.4, 7.4, 7.5
		3. Māori patients and their whanau are linked with Kaupapa Māori support where available.	5.1
		4. Integration of specialist services including paediatrics, diabetes, respiratory and older persons into the Health Care Home settings in the community, to manage patients more effectively closer-to-home.	2.8, **5.1,** 6.2
10	Promoting access	1. The practice proactively identifies patients/whanau with affordability issues and puts in place a planned approach to facilitate access to the service.	3.2, 3.7
		2. The practice provides some extended (out of business hours) availability to promote access in accordance with the needs of the practice population.	1.8
11	Business efficiency and continuous improvement	The practice uses a structured methodology to continuously improve quality and reduce waste. Practice leaders are trained in the structured methodology. The practice benchmarks quality indicators with others nationally	3.8, 4.3, 4.6, 4.7, 6.1, 7.6

6.4 How the tool works

The tool aims to assess progress towards a HCH practice over time. Seven domains are represented, each on a separate worksheet. Each has between six and nine characteristics that are described in four boxes, progressing from left to right in describing the development journey towards a HCH.

A numerical scale sits atop the boxes in each worksheet, guiding the scoring further along that row. Users are asked to assess which score relates to their practice from which date. For this evaluation the time period shown started from the first quarter of 2010, and went forward in quarters from then.

Where more than one value is given for a box (e.g. 7 to 10) users are asked to consider where they feel they fit - have they just met the criteria (7), are well or very well established (8 or 9) or are fully implemented/ as good as is possible in the current health system settings (10). Many boxes are multi-faceted - the number of criteria being met could also be a factor in raising the score within a box.

Summary scores and graphs are calculated automatically and are shown in a score worksheet, which provides an overall summary of progress. Radar graphs with a nominated 'threshold' score make it easy to identify where a practice may have more work to do in achieving a particular element.

The tool is probably of most value with a cross-discipline discussion, ideally at least three staff members should complete the Tool individually - senior doctor, senior nurse, and practice manager.

They can then meet and compare scores to arrive at a consensus for current state, then a consensus 'from when did it change'.

It may be possible to define a threshold above which one might consider a practice to be HCH and use the tool to assess achievement of this goal. For example, if it were decided that there had to be an average score across every characteristic then the resulting overall score would set the threshold. One could also nominate minimums for specific characteristics, without which a practice cannot be a HCH.

6.5 When to use the tool

The tool is designed to be used quarterly, however self-assessment can be undertaken at key points in the implementation process. If used from initial decision to implement the HCH the tool provides a map of how implementation is progressing, where the practice is achieving expected changes and where there may be challenges that require increased focus. Over time it can provide a reliable indication to following practices as to the likely stages of implementation. This supports replicability and scalability of the model in the New Zealand context.

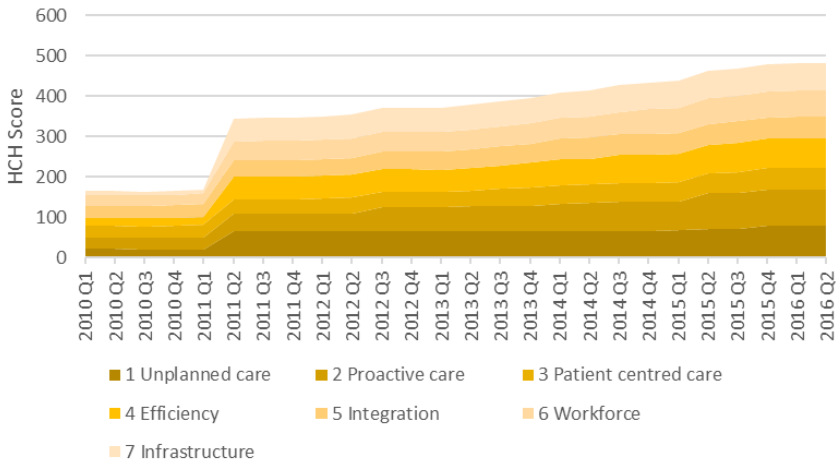
6.6 Measuring the implementation journey

Four practices tested the self-assessment tool and the results are summarised on the following pages.

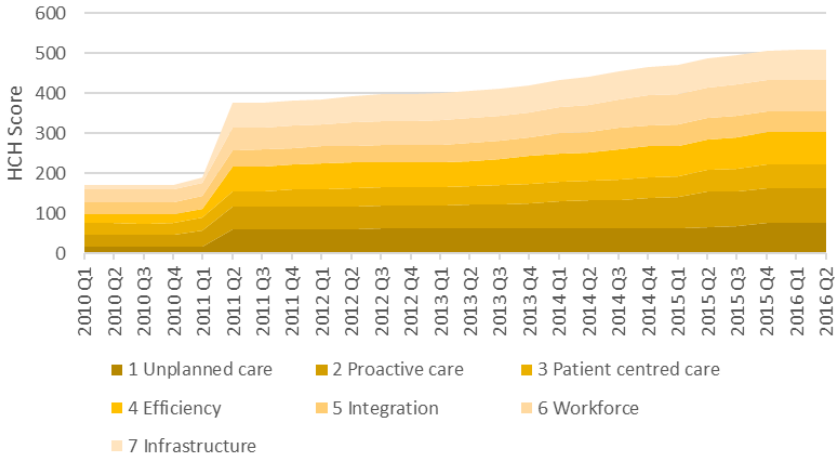
Note Practice 3 was using an earlier version of the tool so categories are slightly different in some domains.

6.6.1 Overall scores and progress over time

Practice 1 (Hamilton-based)

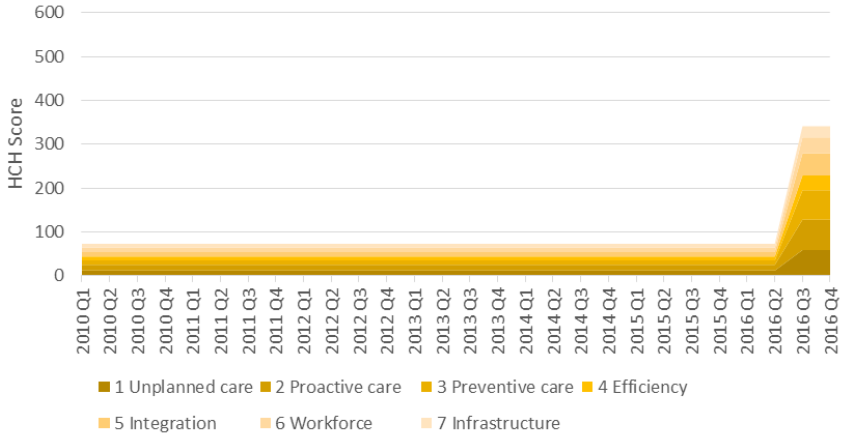


Practice 2 (Hamilton-based)

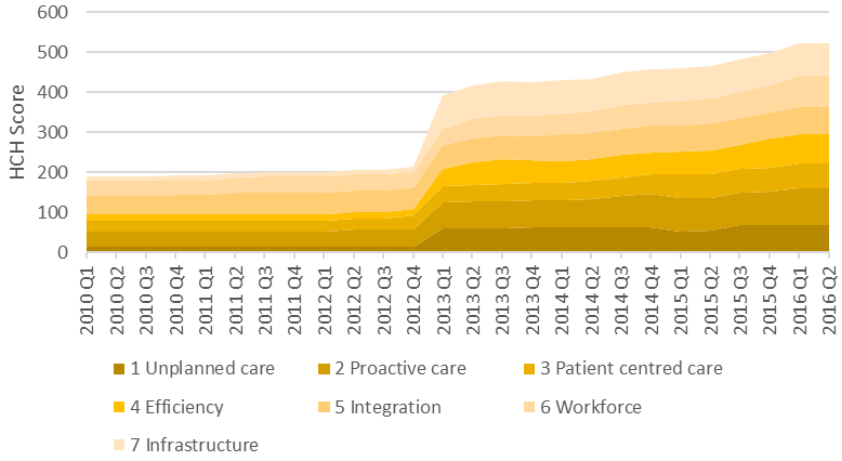


Practice 3 (Wellington urban)

Did not do historical mapping, scoring starts at Q3 2016.

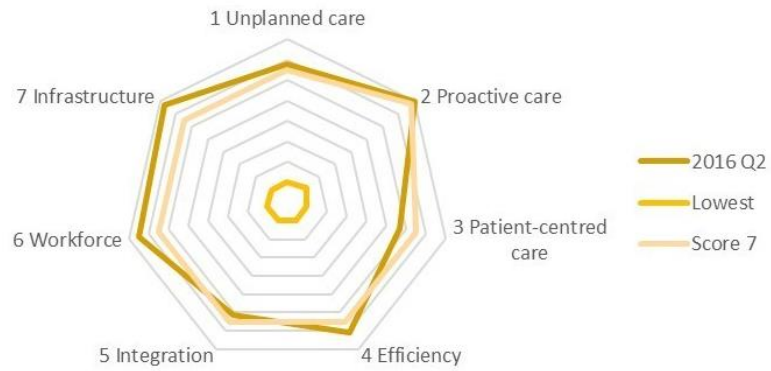


Practice 4 (rural Waikato)

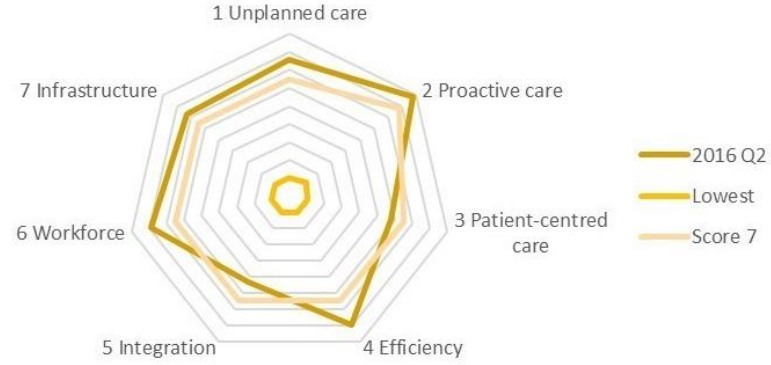


6.6.2 Q2/Q3 2016 Score over all domains

Practice 1 (Hamilton-based)



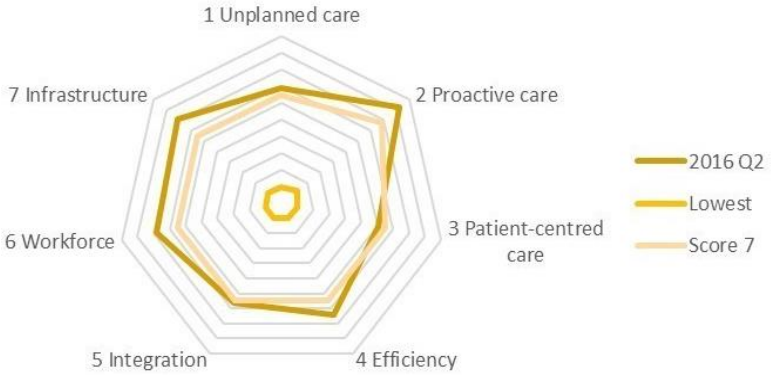
Practice 2 (Hamilton-based)



Based on the pattern of scoring, one could assume that Practice 3 is earlier on the journey to a HCH than Practices 1, 2 and 4. Practices 1, 2 and 4 are assessing themselves highly on domains such as proactive care, infrastructure, efficiency and workforce, but consider there is still work to be done in patient centred care.

Practice 3 (Wellington urban)*

Practice 4 (rural Waikato)

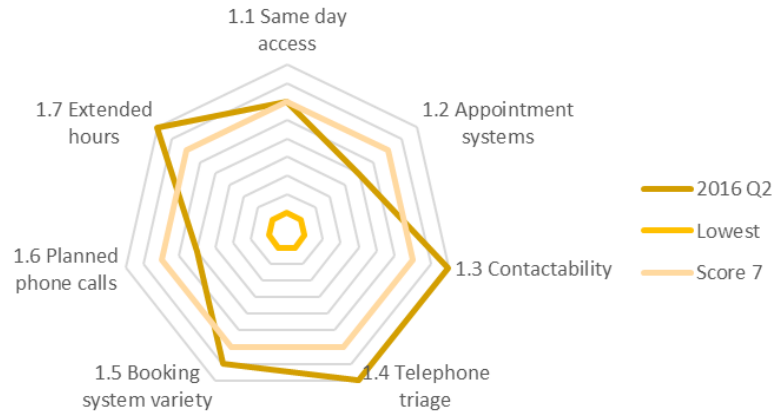


Point in time scoring allows comparisons within a practice over time and a means of tracking movement that is easy to understand and engage with.

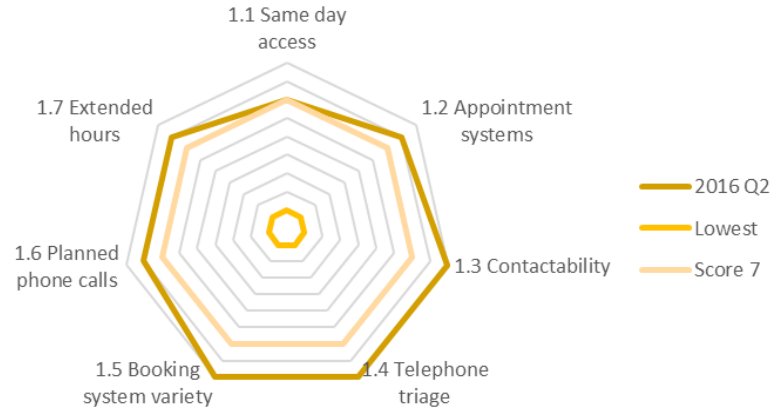
*Note slightly different categories for Practice 3

6.6.3 Q2/3 2016 Scores for unplanned care

Practice 1 (Hamilton-based)

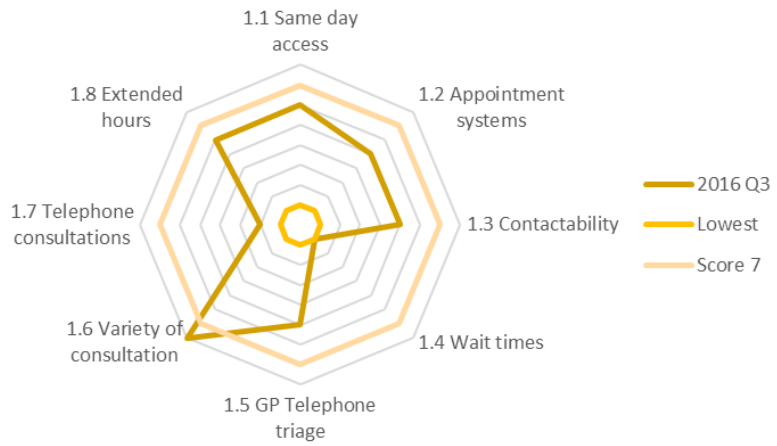


Practice 2 (Hamilton-based)

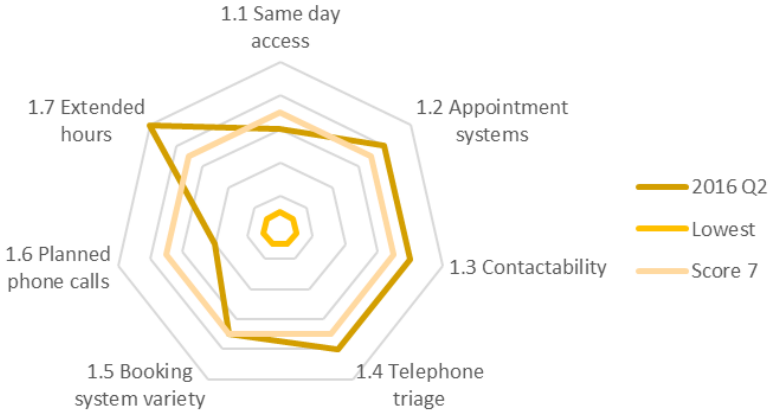


Practice 1 and 2 are assessing themselves highly on most elements, although Practice 1 is still working towards implementation of planned phone calls and appointment systems.

Practice 3 (Wellington urban)



Practice 4 (rural Waikato)

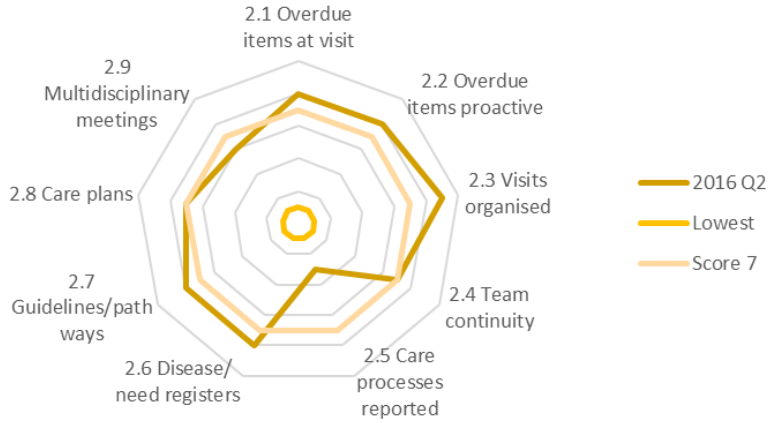


Practice 3 can see for themselves where implementation is still in early stages. Practice 4 can identify where more work will be required on planned calls to patients and same day access.

6.6.4 Q2/3 Scores for planned proactive care

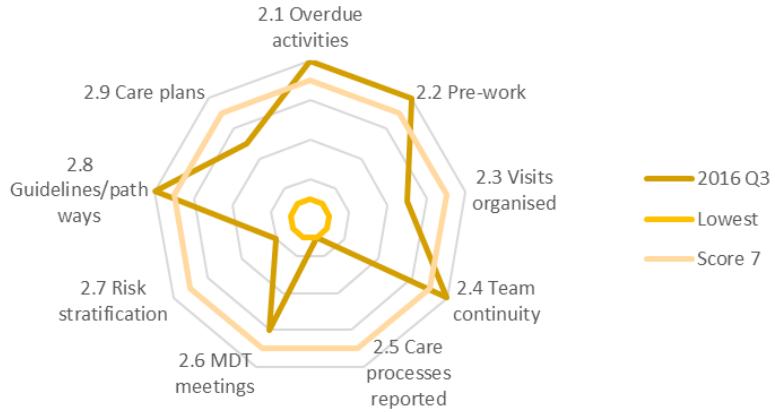
Practice 1 (Hamilton-based)

Practice 2 (Hamilton-based)



Here Practice 1 can see where additional implementation is needed for guidelines/pathways and Practice 2 can see where additional effort may be required around reporting care processes.

Practice 3 (Wellington urban)

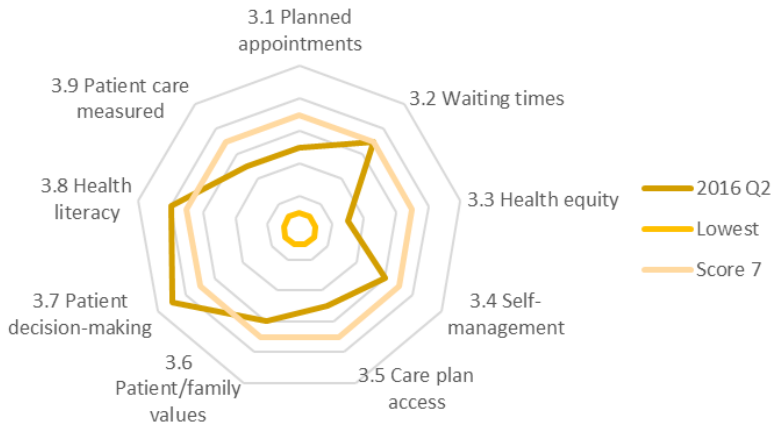


Practice 4 (rural Waikato)

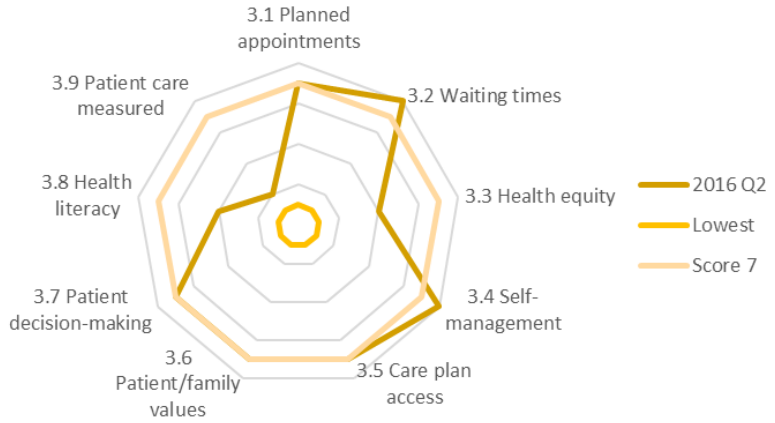
Practice 3 can see those areas around care processes and planning, and risk stratification where they need to focus attention. Practice 4 can see where more work may be required in care planning.

6.6.5 Q2/3 scores for patient centred care

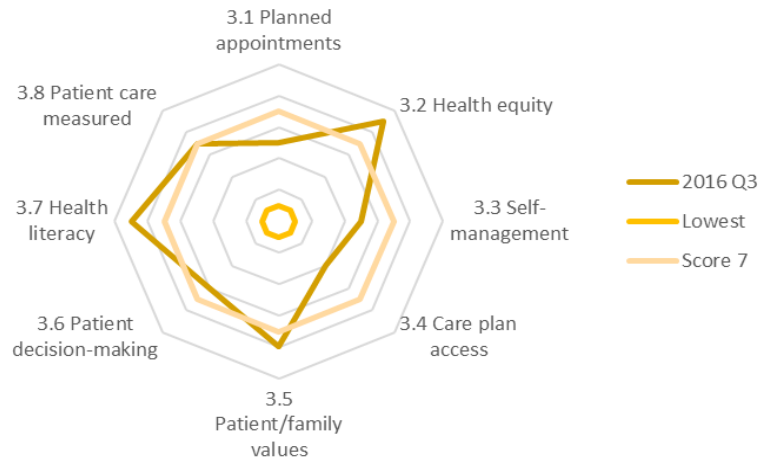
Practice 1 (Hamilton-based)



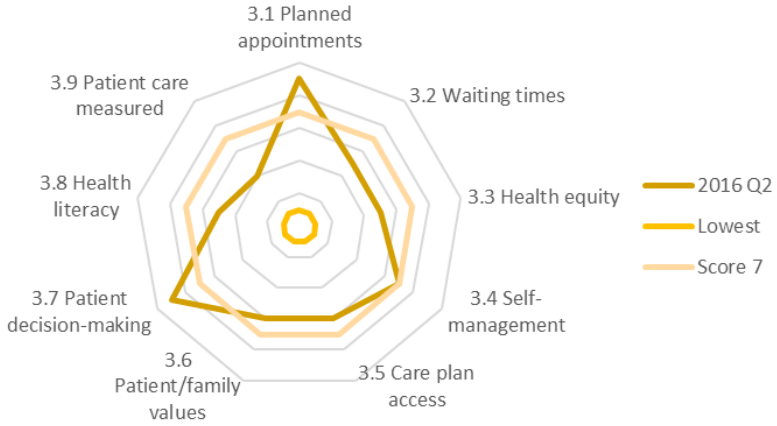
Practice 2 (Hamilton-based)



Practice 3 (Wellington urban)



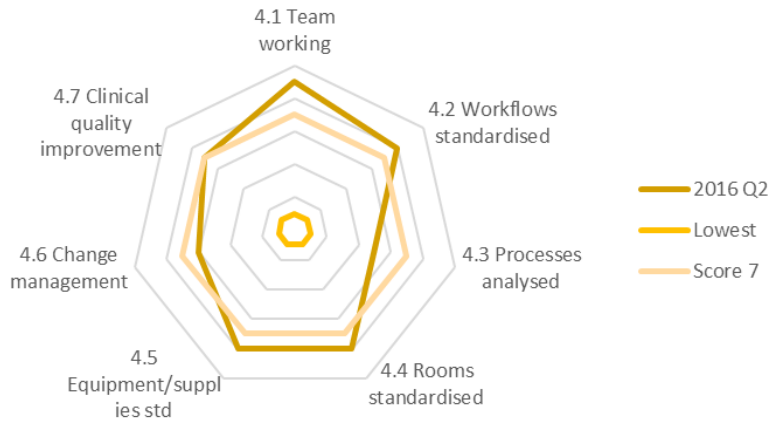
Practice 4 (rural Waikato)



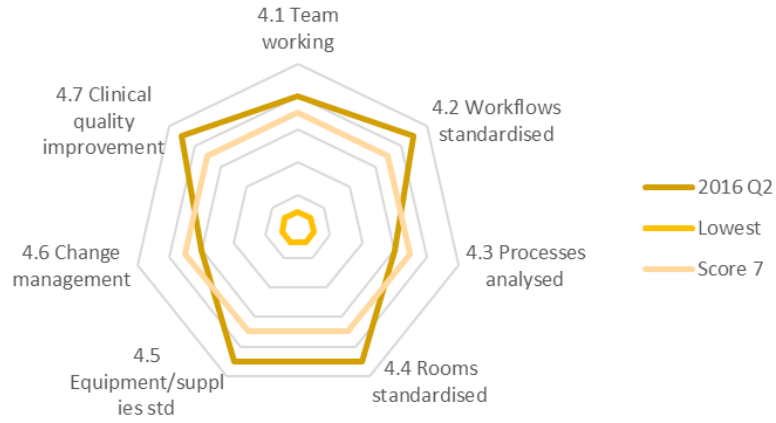
Practice 3 has self- assessed highly on health equity, health literacy and patient/family values, whereas these are areas where practices 2 and 4 have self-assessed lower in those areas.

6.6.6 Q2/3 Scores for standardisation and efficiency

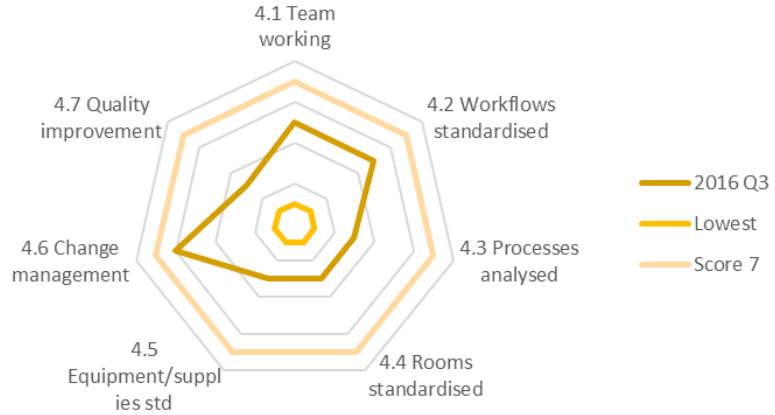
Practice 1 (Hamilton-based)



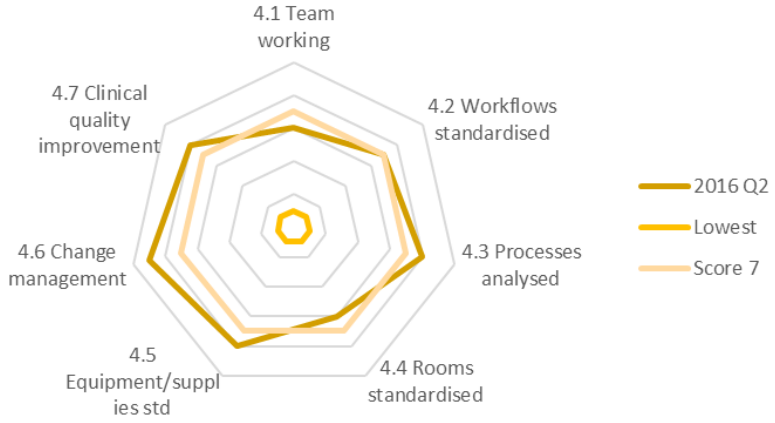
Practice 2 (Hamilton-based)



Practice 3 (Wellington urban)



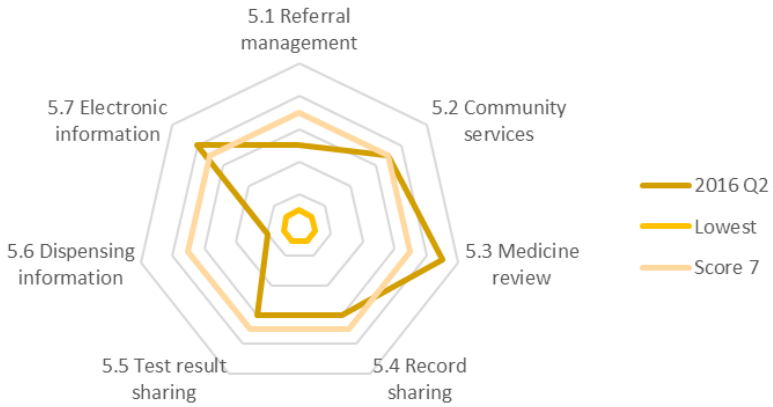
Practice 4 (rural Waikato)



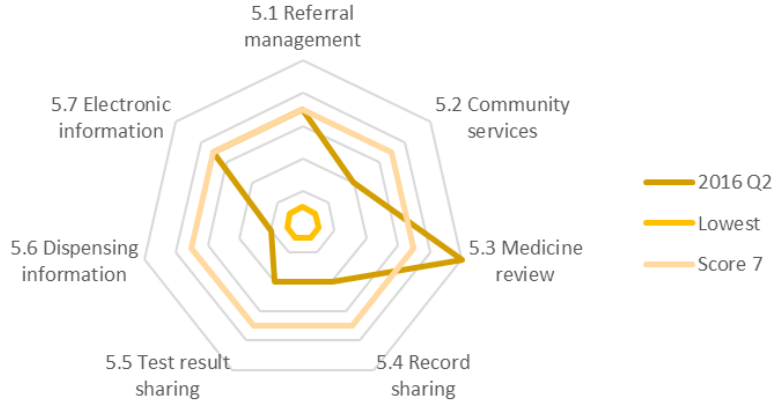
These different self-assessments reflect the challenges faced and investment in people and infrastructure needed to achieve the changes in processes and infrastructure required for the HCH. Practice 3, less far on the journey has still some way to go in terms of standardisation and efficiency.

6.6.7 Q2/3 Scores for co-ordination and integration

Practice 1 (Hamilton-based)

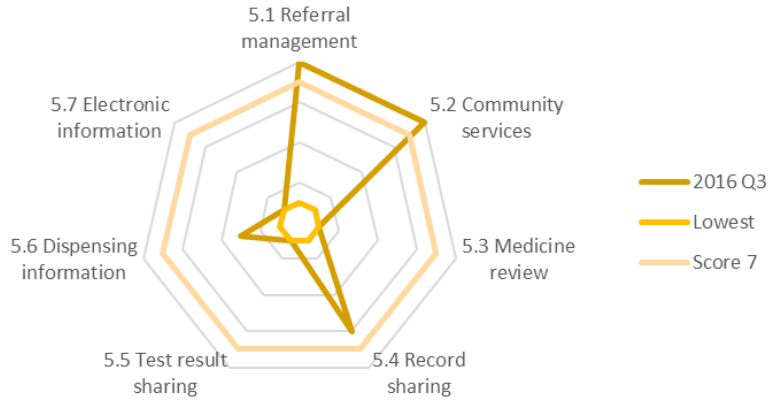


Practice 2 (Hamilton-based)

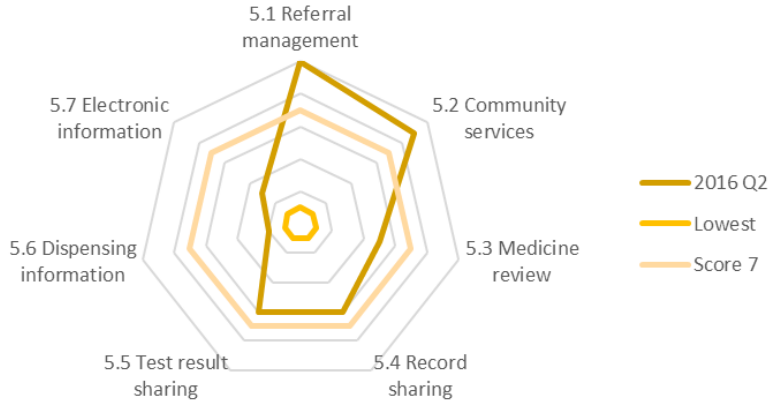


Once again, all practices could identify elements within this domain where implementation is still progressing.

Practice 3 (Wellington urban)



Practice 4 (rural Waikato)

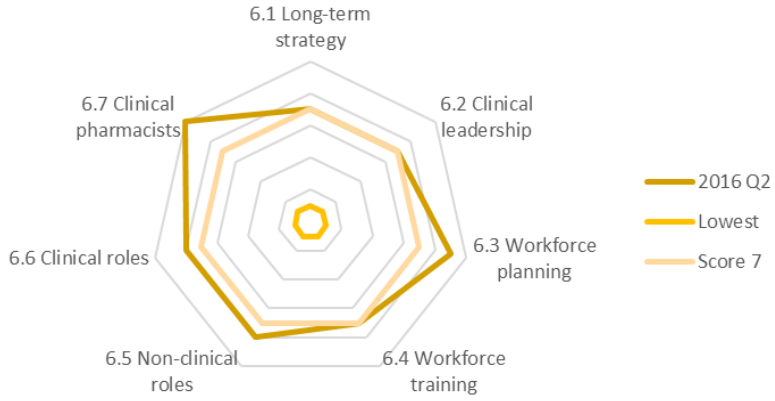


This is a challenging domain, requiring external links with the wider health and community service system and dependent on the readiness of the broader service system to engage. The nature of the practices, and the availability of clinical pharmacists may shape where they assess themselves as achieving higher in specific elements, such as community services or medicine reviews.

6.6.8 Q2/3 Scores for workforce development

Practice 1 (Hamilton-based)

Practice 2 (Hamilton-based)



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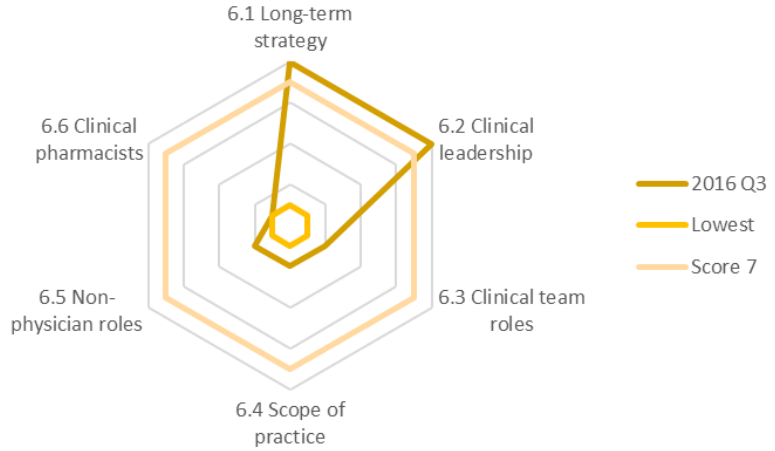
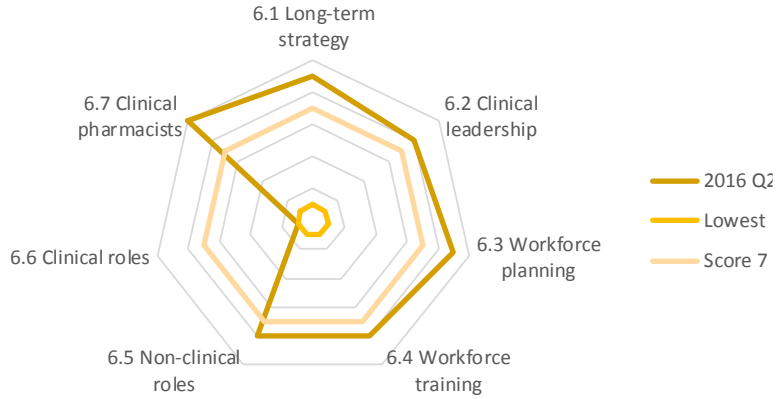


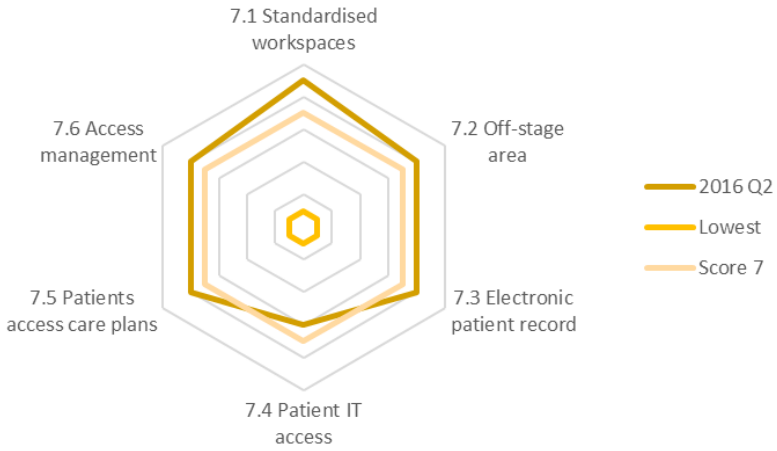
Practice 4 (rural Waikato)



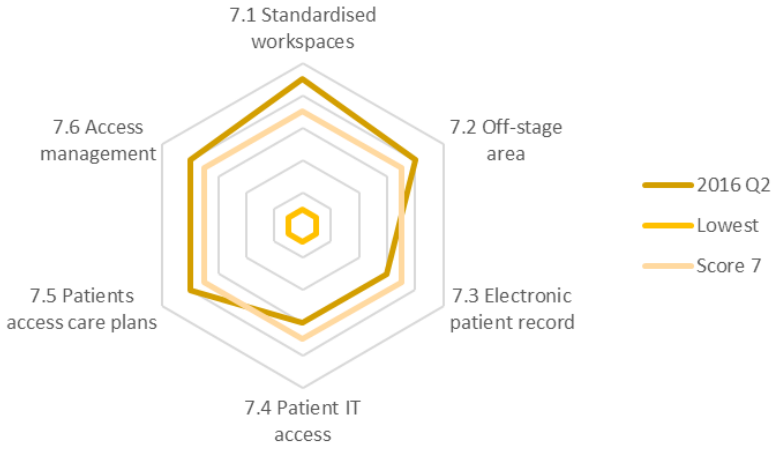
Practices 1, 2 and 4 have assessed themselves highly on elements relating to the engagement of clinical pharmacists and for workforce planning. For Practice 3, these are still areas where implementation needs to progress. Practice 4 is still working on clinical roles.

6.6.9 Q2/3 Scores for infrastructure

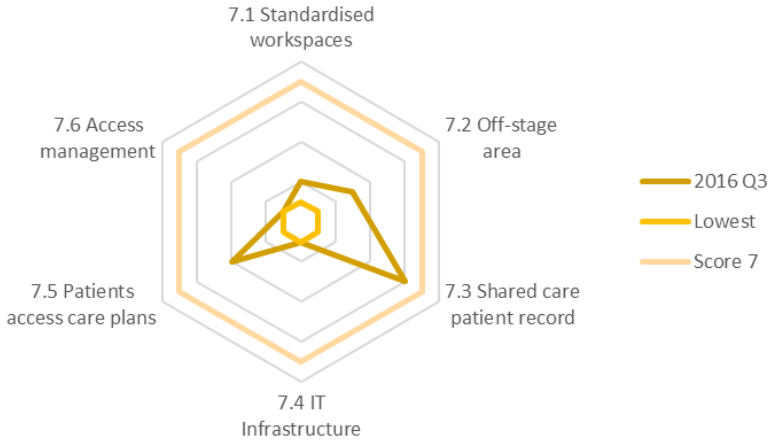
Practice 1 (Hamilton-based)



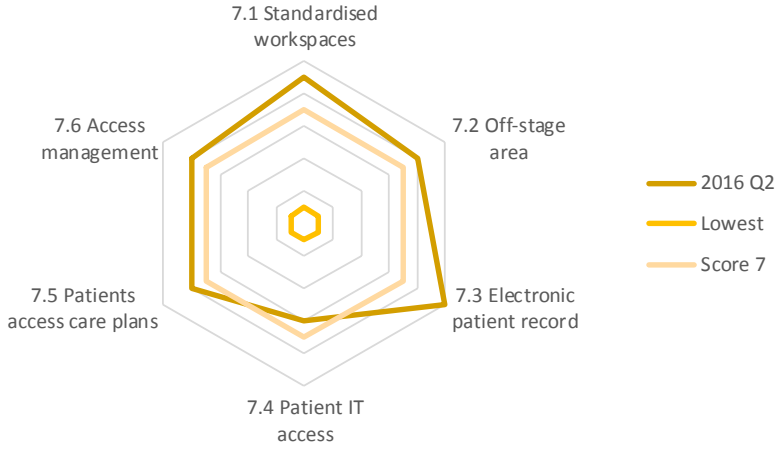
Practice 2 (Hamilton-based)



Practice 3 (Wellington urban)



Practice 4 (rural Waikato)



Again, the relative maturity of implementation for practices 1, 2 and 4, and the time it takes to establish necessary infrastructure, is evident in these self-assessment scores.

6.7 Conclusion from self-assessments

Based on the results of four completed self-assessments, it appears that the local context and patient profile may shape which domains of the HCH are implemented more easily than others. For example, a practice which is already firmly embedded in the local service system may find it easier to achieve some of the elements of co-ordinated and integrated care.

While practices that have been implementing the HCH model for longer appear to be close to achieving the 'threshold' score in each domain, examination of elements within each domain identify specific areas of activity where more focus might be required.

For practices in the early stages of implementation, changes to business models, efficiency and infrastructure appear to require more time and investment than some of the other domains. Practices also commented that while an element might be present in the practice, and could be 'ticked', often that function continued improving as practice staff became more familiar with the changed approach. An example given here was telephone triage by GPs, where initially 20-30% of calls were able to be managed without a same day appointment, but after a few years this had risen to 50-60% (workshop participant GP).

Self-assessment is subjective and dependent on interpretation of the meaning of elements within domains. For baselining and comparability, the tool can be applied with an external facilitator, to achieve higher inter-rater reliability.

For practices applying the tool, it provides an ongoing assessment against the domains of the HCH and a means of tracking and refocusing effort.

7. Process evaluation

This chapter describes the outcomes of a meta-analysis of previous evaluations undertaken of the HCH.

7.1 Summary of findings

The following findings were extracted from the review of previous evaluations:

- The HCH model of care appears, based on qualitative data, to be achieving many of its expressed aims, however assumptions about the applicability of some elements of the model (e.g. “fishing”) may need to be revisited.
- Quantitative data from previous evaluations shows increasing uptake of key elements of the model over time, including use of the patient portal and use of alternative means for patient consultations.
- At least one practice[12] has reported no negative effect on the bottom line after implementing the HCH (not including implementation investments), even though there is a re-alignment of time/effort from different care team members.
- The model allows care team members to work at the top of their scope, and this is generally viewed positively.
- When compared to baseline practices in 2015, the average differences in patient experience between evaluation practices and other practices were minimal on a number of elements for patient self-care/self-management and patient as part of the team.
- It takes time to make changes of the magnitude of the transition to a HCH model. Allowing this time and maintaining realistic expectations while expecting measurable change requires balancing and rebalancing of organisational effort and commitment.
- The changes required to implement the model were significant and impacted on practice staff. It took time for staff to adjust to the new way of working and to see benefits in this. Once comfortable with the HCH system staff generally rated it higher than the traditional model of general practice.
- Patient views and experiences are invaluable in assessing the impact and value of changes. Patients need to be informed about the changes and why they are happening. Patient perceptions and experience, particularly Māori and Pacific, need to continue to be monitored. The patient-centred nature of the changes was noted and appreciated.
- Staff and patients will require sustained education and support to maximise use of the key enablers for the HCH model.
- Facility and other infrastructure changes take time and this should be factored into expectations of outcomes that are dependent on them.

[12] Travis Medical Centre

7.2 Approach

Several evaluations have been undertaken previously for the HCH. For this evaluation, a meta-analysis was undertaken of the qualitative and quantitative data reported in previous evaluations as provided. The available reports focused mainly on:

- Patient experiences
- The views of staff
- Reported changes in implementation activities over time
- Practice activity data

Additional input from participating organisations was collected at a two-day meeting held in June 2016.

7.3 Analysis framework

The performance framework developed as part of this evaluation was used to analyse the qualitative data available through previous evaluation activities. The performance framework is based on a programme logic model that considers the implementation stages of the defining elements of the HCH, under the headings listed below:

- Managing unplanned care
- Planned and proactive care
- Access and preventive care
- Standardisation and efficiency
- GP co-ordinated and integrated system
- Establishment of infrastructure
- Establishment of quality and team care support
- Building workforce capacity

Available data was analysed by year to map progress over time, to the extent that qualitative data enabled this approach. Any quantitative data contained in evaluation reports was also analysed against this framework. Further quantitative data based on ED and hospitalisation data was analysed separately.

Following the main section additional views were summarised for:

- Access and equity
- Changes over time

7.4 Participating practices

The table below describes the date of commencements and enrolments for the practices considered in this analysis for the evaluation.

Table 7: Participating practices

Practice	Commence date	Patient enrolments in 2015
NorthCare Pukete Rd / Thomas Rd	Apr 2011	10,300
NorthCare Grandview	Apr 2011	4,800
Travis	Apr 2011	5,800
Mercury Bay Medical Centre	Jul 2013	4,100
Health Te Aroha	Apr 2013	5,300
Tokoroa Medical Centre	Mar 2013	9,900

7.5 Source documents

Data was accessed from source documents provided by N4 for the evaluation. Source documents are listed below by the year to which they relate (not the publication year).

7.5.1 2011

Source Document: *Raymont, A., Jackson, N. et al. A pilot evaluation of the Midlands Health Network model of care for Integrated Family Health Centres: (IFHC): patient survey results, consultant's report for Midlands Health Network* (2012)

The National Institute of Demographic and Economic Analysis (NIDEA) conducted a pilot evaluation of what was then known as the Integrated Family Health Centre (IFHC) Model of Care. The evaluation reported on patient and staff experience of the programme changes and was intended as a baseline for further evaluation. The referenced report contains the findings from a survey of 600 patients enrolled with the NorthCare practices, who were over the age of 18 and had four or more visits per year. Participants took part in computer-assisted telephone interviews (CATI) and answered a mix of 25 set-response (Likert scale) and open-ended questions about their experience with the IFHC model of care and their satisfaction with the model. The response rate overall was 60%, with lower responses from Māori (51%) and those aged 18-24 (43%). There was a small number of Pacific responses, and Māori and Pacific were combined.

7.5.2 2012

Source Document: Raymont, A., *Evaluation of the Midlands Health Network Integrated Family Health Centre (IFHC) model of care: Phase II report, (2013)* Marinal Services Ltd & Midlands Health Network & Primary Health Care Limited. In 2012 respondents from the 2011 survey who agreed to be followed up were re-interviewed, with a top-up sample from the participating NorthCare practices. A total of 442 (54%) people responded from a sample of 933. Interviews were conducted with staff at NorthCare and staff at PMHN with direct responsibility for implementing the new model of care. Notes were recorded and a thematic analysis undertaken. A short questionnaire was completed by 31 of 48 staff (65%). Information was gathered from PMHN practice management/reception, Manager PAC, general practitioners, clinical pharmacist, practice nurses and medical centre assistants.

7.5.3 2014

Source Document: Outcome data model of care changes 2011-2014: NorthCare Pukete Road/Thomas Road compared to 5 control practices in Hamilton. (2015) Marinal Consulting and the University of Waikato. This fourth evaluation report was undertaken by Marinal Consulting and the University of Waikato covering changes over the 2011 to 2014. This report focused on reporting selected quantitative data trends but included some observations from qualitative data.

7.5.4 2015

Source Document 1: *Keerthana Suresh, K and Yong, X., Summary of the patient surveys for model of care sites for Midland Health Networks:* (2015), University of Waikato

A patient survey was conducted with existing patients registered under various sites of MHN. The results were intended as a baseline for implementation of the HCH in 14 sites. There was a total of 2085 responses and around 1202 patients surveyed had chronic disease or an ongoing condition. The 14 sites in which the survey was conducted were:

Table 8: Practices involved in 2015 patient survey

Northcare Pukete	Coromandel Family Health
Northcare Thomas Road	Tokoroa Medical Centre
Northcare Grandview	Taupo Medical Centre
Victoria Clinic	Taupo Health Centre
Health Te Aroha	Lake Surgery
Waihi Beach Medical Centre	Pihanga Health
Mercury Bay Medical Centre	Avon Medical Centre

There were major variations in the numbers responding (see below):

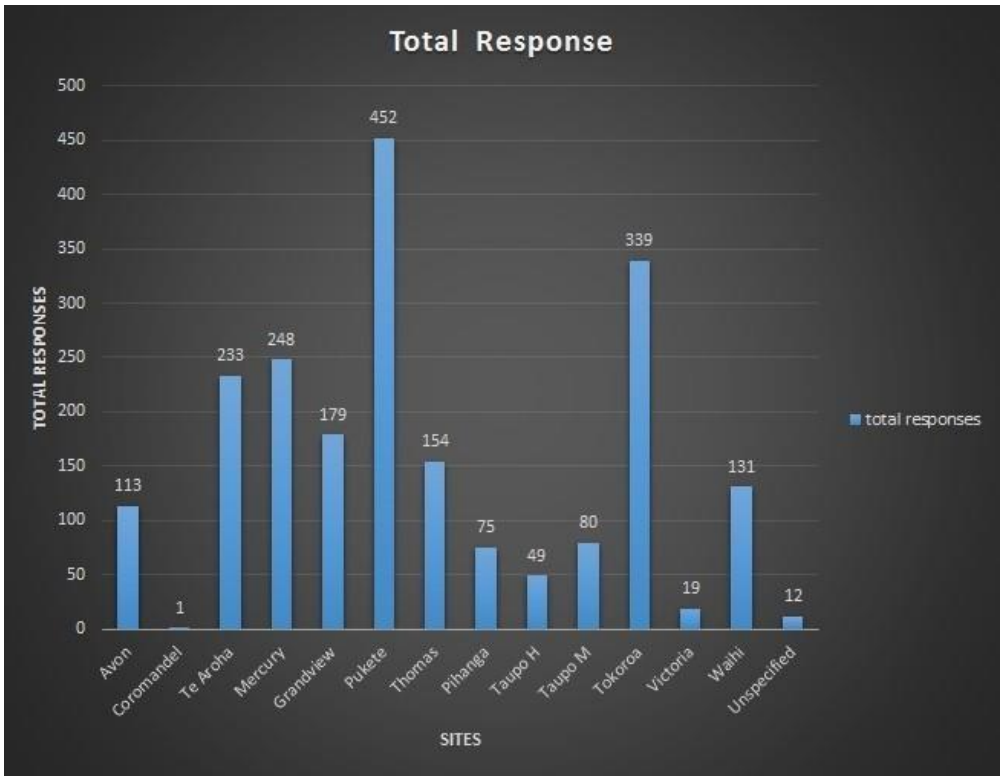


Figure 7: respondents to 2015 patient survey by practice

In light of the low numbers of responses from Coromandel Family Health and Victoria Clinic, these were removed for the purposes of this analysis. Note that the total of responses from practices in the evaluation was N=1605, compared to N=448 for non-evaluation practices.

Source Document 2: *Integrated Family Health Services Programme, Changing the Patient Experience: A Case Study for Integrating Health Services (2015)*, Pegasus Health (Charitable) Limited, Christchurch.

A report was provided on the changes and process of change to an HCH at Travis Medical Centre to 2015. The report cited qualitative data, including focus groups and individual interviews, and quantitative data.

7.6 Additional data

In addition to the above documents the authors were observers at a workshop in Hamilton over 23/24 June 2016 - *N4 health care home design and standard setting workshop*. This workshop had all HCH organisations participating, and many representatives from the practices themselves. Discussions were wide-ranging, with presentations ranging from strategic to analytical, with free and frank discussions resulting. Where applicable findings from the workshop have been noted in the analysis, which is summarised in the following table.

Practice level data reporting on progress towards the HCH standards and a case study of financial outcomes over the implementation period was provided by PMHN.

7.7 Elements of the Health Care Home – model of care changes over time

Table 9: HCH model of care changes over time

Elements	2011	2012	2014	2015
Managing unplanned care Establish structured call telephony and phone triage processes Establish operational processes for email and phone consults for low risk patients Establish diary management to enable allocated time for phone and email consults	**Structured telephony (e.g. PAC)** A higher proportion of Māori and Pacific respondents received an outbound call (39% vs 31%). Overall the percentage was 32%. Surveyed patients had a mixed (mainly positive) response to the PAC, with some concerns expressed about privacy and impersonal approach. More than 80% of respondents found it at least fairly easy to get in contact with the PAC or the practice and to get their needs fulfilled. Only half said that it was really easy. Some patients did not want to talk to a "stranger". Demands for urgent appointments required complex and time consuming calls between patient, PAC, PN and GP.	Twenty-five percent of respondents reported receiving an outbound call from the PAC/practice over the previous six months (7% less than 2011). Seventy-eight percent of responding patients reported getting what they needed from the call centre. The centre called people to remind them that things needed to be done and to find out what the patient needed at an upcoming visit. Specific PAC staff members were assigned to a practice so that they became more familiar and were able to develop a relationship with patients. PAC was fielding calls for NorthCare (Grandview Road, Thomas Road and Pukete Road Clinics), SouthCare (non-HCH) and Mercury Bay. This equated to approximately 30,000 ESU. PAC received on average 680 calls per day. Over 30% were received in the first 2 hours of the business day. About 52% of the calls were for an appointment.	The PAC is delivering a wide range of useful services, over time becoming more responsive with good transfer of information and anticipation of problems. PAC reduces the work-load at the practice front desk and means that there are fewer missed calls and patients rarely have to wait on the phone. Some nurses have noticed an increased workload dealing with unclear situations (mainly around interaction with PAC) as systems and processes are developed and refined.	Allocating phone slots between GP/ nurse and patient first thing in the morning enabled a reduction of up to 40% in unplanned same day appointments for acute issues in one practice. At the 2016 workshop HCH practices noted a 30% reduction in same day unplanned appointments 'as a minimum' with one practice suggesting a 50-60% reduction with their mature model comparing 2016 to 2011.
	Email and telephone consults Fifteen percent of respondents had had an email contact with a doctor or nurse in the last six months, with a high level of satisfaction. Thirty-two percent of responding patients had a phone contact with a doctor in the last six months. It was valued by patients The percentage of respondents answering yes was higher among Māori and Pacific (43 vs 31).	Twenty-seven percent of respondents reported an email consultation over the previous six months with high positive responses. Thirty-three percent of responding patients had a phone contact with a doctor or nurse over the previous six months. Patient-reported increases in phone and mail consults were supported by practice data.	GP phone consult volumes at Pukete and Thomas Rd sat at around 100 per month at mid-2014 with Grandview on around 40 per month. There are now more options for patients to receive the care they need, utilising telephone and email as well as face-to-face consults. Phone and email consultations are being used by an increasing number of patients and practitioners.	

Elements	2011	2012	2014	2015
Planned and proactive care Establish risk stratification Establish register of high needs patients Establish processes for providing care directed to need Establish clinical pre-work processes for booked patients Establish elements of care plans or "year of care"	**Care planning** Eighteen percent of responding patients had developed a care plan.	Nineteen percent of respondents had developed a health care plan The model of care is still in development and not implemented – but some patients see that they have a health care plan. Prescriptions were ready when the patient came to collect them.		On average 53% of surveyed patients at 6 practices participating in the EY evaluation received a copy of their treatment plan. This was below the average of the total 11 practices included in this analysis.
	Providing care directed to need			In at least one practice complex patients saw the practice nurse more, had a co-ordinated care plan amongst a wider care team. The frequency of patient visits to GPs reduced between 2011 and 2014. Visits to practice nurses increased overall.
	Clinical pre-work – "fishing"	"Fishing" is now undertaken by a nurse with allocated time. It is seen as valuable although there was some variation in opinion about this. Responding patients said clinicians knew what was needed before the people walked in. Sixty-four percent of respondents considered that the medical centre staff knew what they needed to when they interacted with patients.	"Fishing" can be an issue operationally. PNs may not be aware of each patients needs and patients may be hard to contact. At present fishing is inconsistent across the sites. This has been recognised and further work is planned to evaluate it as a process.	
	Clinical pre-work – "huddle"	"Huddle" is now overseen by the Medical Centre Assistant (MCA). It is seen as valuable although there was some variation in opinion about this.	The morning staff "huddle" is established in all practices and attended by most clinical staff. It is managed by the MCA. The huddle has the effect of smoothing out the day's work and anticipating patient need. The huddle is valued highly by the majority of staff.	"Huddles" enable better co-ordinated care and ultimately are saving patent time and streamlining care.

Elements	2011	2012	2014	2015
Access and preventive care Establish patient engagement processes Establish processes for patient access to patient portal Establish processes for preventive care scheduling Establish systems for patient feedback Implement models of self-care and self-management	**Patient engagement** Patients saw themselves as working with the doctor as part of a team but many did not fully understand the concept or the wider team. Forty percent of 447 patient respondents rated the feeling of working as a team as great and 38% as good.	Eighty-six percent of respondents saw themselves working with the medical centre staff as a team.		On average 74% of surveyed patients at 6 practices participating in the EY evaluation said they were asked for their views about treatment and care. This was below the average for the total of 11 practices included in this analysis. On average 77% of surveyed patients at 6 practices participating in the EY evaluation said they were given choices about treatment to think about. This was above the average for the total of 11 practices included in this analysis. On average 48% of surveyed patients at 6 practices participating in the EY evaluation said they were given a list of things to do to improve their health. This was below the average for the total of 11 practices included in this analysis.
	Patient portal Patients appreciated getting information but not all could understand the information provided.	The patient portal was popular with some patients but the process could be simplified and publicity increased. Practice data 2011 to 2012 indicates an increase in patients registered with the patient portal from and having activated their accounts.	The patient portal is being used by more patients. There have been some concerns about ease of operation of the portal. Several staff have suggested there should be on-going patient education on the use of the portal and of the new forms of consultation (as new patients join the practices as well as new staff). In mid-October 2014 71% of eligible patients at Pukete and Thomas Rd sites were registered along with 41% of Grandview patients (in total almost 7,000 patients).	On average 78% of surveyed patients at 6 practices participating in the EY evaluation reported using the Patient Portal. This was well above the average for the total of 11 practices included in this analysis.
	Models of self-care and self-management Sixty percent of 447 respondents found information provided by the centre really easy to understand 31% as fairly easy. Māori and Pacific were less likely to find information provided easy to understand. Asked ‘how well do you look after your own health?’ 25% of 447 respondents	Sixty percent of patient respondents found the information they received from the centre really easy to understand and another 33% found it fairly easy.		On average 72.3% of surveyed patients at 6 practices participating in the EY evaluation reported being shown how to manage their condition. This was below the average for the total of 11 practices included in this analysis. On average 58.3% of surveyed patients at 6 practices participating in the EY

Elements	2011	2012	2014	2015
	replied great, 46% good, 23% average, 4% poor and 2% hopeless. Māori and Pacific were less likely to report looking after their own health well.			evaluation reported being asked about their goals for improving health and wellbeing. This was below the average for the total of 11 practices included in this analysis. On average 59% of surveyed patients at 6 practices participating in the EY evaluation reported being asked how their ongoing condition affected their life. This was above the average for the total of 11 practices included in this analysis.
Standardisation and efficiency Establish call management and demand monitoring process Undertake LEAN or similar review Develop facility standards Clarify and define clinical and non-clinical roles	**Clarify and define clinical and non-clinical roles** Thirty-nine percent of responding patients had a visit with a nurse without seeing a doctor in the last six months, with high positive ratings. Fifty-two percent of 447 respondents said they always got to see the person they wanted to.	Forty-three percent of respondents reported a visit with a nurse without seeing a doctor over the last six months with high positive ratings. MCAs found themselves at the centre of changes and reported a positive experience of their new role. Forty-five percent of patient respondents said they always got to see the clinician they requested (less than in 2011). For all patients, the rate of face to face (F2F) consultations decreased by 12% (24% for Māori).	Some nurses have taken on more specialised and independent roles, supported by the work of the MCAs. MCAs are in place in all practices; they find the role fulfilling and their contribution is appreciated by other staff. GPs appreciate the MCA and CP role. They note that simpler consultations are being undertaken by PNs to a greater extent than before. There are few "easy and simple" GP consultations and there is a need for longer consultations to deal with more complex problems. Work around this is planned under the next phase of model development. All NorthCare evaluation groups saw a decline in the rate of F2F GP consults over the 2011-2014 period. All NorthCare evaluation groups now have a lower F2F consult rate per 1,000 than control counterparts. Changes in F2F rates have seen a convergence between NorthCare Māori and non-Māori patients aged 0-5 years. Over time F2F consults with a GP have been partially replaced by new types of consults. F2F has now declined to around 80 per cent, with 15% now via email, and another 2-3% via phone consult. Consult volumes increased 15% at Pukete & Thomas Rd with a decline in the level of GP FTE available for clinical	GPs are generally seeing people of higher complexity, while practice nurses (in at least one practice) are seeing 50% more consultations than before. One practice reports an average of 25% (a range of 9% to 30%) capacity gain across GPs. This has enabled a 14% increase in patient enrolment. This practice also reports no negative impact on the practice bottom line.

Elements	2011	2012	2014	2015
			work. NorthCare Grandview volumes were up 7% with the same monthly average of GP FTE.	
	Call management and demand monitoring process	Patients said it was easy to get appointments and there was little waiting. More user friendly processes. Safer triage routines. More appropriate practice bookings. More consistent patient follow-up. More complete document processing.		
	LEAN/efficiency Forty-seven percent of 447 respondents rated the efficiency of the health centre as great and 31% as good.	LEAN methodology – had been used, somewhat inconsistently, to improve systems and to resolve a variety of problems. Fifty-four percent of patient respondents rated the efficiency of the medical centre as great and 33% as good.		
GP co-ordinated and integrated system Processes commenced to co-ordinate with specialist community services, hospital services, pharmacy, laboratory and allied health providers Establish community partnerships to support integration	**Co-ordination with other health and social services** Eighty-seven percent of 152 respondents who had visited hospital said staff had the information they needed. The percentage was lower among Māori and Pacific (63 vs 90).	District nurses employed by the DHB attend huddles/team meetings at each site to improve care planning for shared patients. There is a trial of a Bone Health Clinic, available to NorthCare patients run by existing clinical staff. Sport Waikato have an office at Pukete Road, where patients can be referred for lifestyle advice etc. A mental health co-ordinator based at NorthCare accepts referrals from all three sites. Workwise coordinators work over the three sites to aid people into work or help those with mental health issues.		On average 65% of surveyed patients at 6 practices participating in the EY evaluation reported being told how visits to other doctors affected their condition. This was below the average for the total of 11 practices included in this analysis. In one practice, the pharmacist is now doing International Normalised Ratio (INR) testing for blood coagulation management and more Medicines Management Service (MMS) reviews. Communication has been enhanced with the use of an instant messaging system.
Establish infrastructure Introduce cloud based practice management system	Some IT problems - significant delay in switching the PMS to a new user.	IT issues had improved, although PMS was still a bit slow.	PAC now manages a range of services which reduce the work of the practice; these include: follow-up and recall for	

Elements	2011	2012	2014	2015
Introduce federated telephony Establish web-based portal infrastructure	Additional PAC functions, including billing, document scanning and follow-up (immunisations, cervical screening etc.) were not fully operational.		multiple services; document processing; credit management; and text reminders.	
Establish quality and support team care Standardise consulting rooms and communal spaces Create additional patient-free working spaces Participate in quality accreditation	**Standardisation and quality** Several informants felt that standardised rooms made patient movement easier and saved clinician time. The kiosk was popular with some patients.	Positive responses included: with generic rooms staff knew where everything was; having an "in consult" screen meant staff knew where everybody was and enabled efficient room use.	Standardisation of the consulting rooms is in place and increases the flexibility with which patients are managed.	Clinicians at the workshop noted how much easier it felt to work in a practice with standardised consulting rooms, with all supplies in the same place, trolleys stocked in the same way, and a system for ensuring replenishment and replacement of out of date material.
	Off-stage space and patient kiosk Off-stage space and patient kiosk had been implemented but rooming was only practiced at Pukete Road due to limitations of space at Grandview and Thomas Road. The off-stage area was thought to be useful and allowed collegial discussion.	Building at Grandview was in progress and rooming was planned. Rooming had not been implemented at Thomas Road where space was too limited. The off-stage area worked well and improved collegiality.	The off-stage space is valued by staff and increases collegiality, provides space to undertake phone and email consultations and paperwork.	Clinicians at the workshop noted how much they had come to value the off-stage work area – they had swung from seeing it as slightly unnecessary or a 'nice-to-have' to seeing it as an integral part of the HCH model.
Build workforce capacity Provide leadership training for managers and clinicians Provide front of house service training to reception staff Provide training for clinical staff in new models of practice Establish new positions – clinical pharmacist Establish new positions – medical centre assistants Establish new positions – nurse practitioner	**Provide training for clinical staff**	Salaried doctors tended to be unwilling to take up after-hours education. Practice nurses seemed to be developing increased levels of skill, had more job satisfaction and were doing higher level work.		In one practice, PNs have undertaken 900 hours of professional development to support the required increase in their scope of practice. Many team members comment that this enables them to make a better contribution while achieving greater professional work satisfaction.
	Provide training for non-clinical staff			Reception team report feeling more empowered to make decisions around a patient's care and assist the patient in taking greater responsibility for their own care. Reception team now refer patients to the appropriate care team member (not necessarily the GP).
	Establish new positions – medical centre assistant (MCAs)	MCAs were moving up in what they could do but needed more mentoring. MCAs were in the middle of their training. They found the training good	The MCA role is expanding as individuals complete formal training. The MCA role includes: managing "huddles"; rooming patients; stocking rooms and replenishing stores; sterilisation and management of the cold chain;	

Elements	2011	2012	2014	2015
		with excellent material but found organisation of the training poor. MCAs indicated that training had increased the range of tasks they could safely undertake.	measuring blood pressure, urine testing, pregnancy tests; and billing and enrolment.	
	Establish new positions – care co-ordinator			A care coordinator role has been introduced in in one practice and has assisted the practice to provide more planned and coordinated care for vulnerable patients and patients with complex health needs.
	Establish new positions – clinical pharmacist Ninety-four percent of 477 respondents had picked up all the medicine the doctor prescribed over the previous six months.	Fifty-five percent of patients had a face-to-face visit with the clinical pharmacist over the last six months. However, this included the community pharmacy. The percentage of respondents reporting a pharmacist visit was: higher for Māori and Pacific (66%) than for other ethnicities. The clinical pharmacist continued to deliver appreciated assistance to clinicians and patients across the three practice sites. The pharmacist service was considered a major asset and the role had recently been expanded to include the development of medication quality systems. Ninety-two percent of respondents had picked up all prescribed medicine.	The clinical pharmacist (CP) provides expert advice and assistance to clinicians and patients. Her contribution remains highly valued by all staff. Her work, including monitoring hospital discharge summaries, reduces medication errors, frees up GP and PN time and improves prescribing standards overall. Patients aged 65+ years are major beneficiaries of the CP services, particularly around multiple medications or medication initiation, followed by those aged 45-64 years.	
	Staff satisfaction There was a sense among staff that there was no “go-to” person when issues needed resolving. The mean score on the Work Survey was 3.2 out of 5 (where 3 may be seen as neutral).	GPs appreciated the periods set aside for virtual consultations. Practice staff appreciated the reduced number of phone calls. Formal training was underway, the range of tasks undertaken was increasing and clinician time spent on non-clinical tasks had reduced. There were some staff difficulties, related partly to the new model of care	Staff are more used to, and satisfied with the new model of care. Staff report better organised patient flow and more constructive use of consultations; greater role clarity and dedicated time is set aside for important non-urgent tasks. There is further evidence emerging that staff are now more satisfied with their work in general practice – with satisfaction scores for rewarding work,	Members of the practice nursing team in one practice commented that professional development has enabled them to make a better contribution while achieving greater professional work satisfaction.

Elements	2011	2012	2014	2015
		and partly to situational constraints and inter-personal disagreement. Staff reactions to the changes varied from positive to negative. Some staff left as the model did not suit them. The mean score on the Work Survey was 3.4 out of 5 (where 3 may be seen as neutral). This is a small increase from 2011. Unresolved issues raised by staff included: ► Need for better coverage when staff away ► Insufficient time for paperwork ► Need for longer consults (all slots still 15 minutes) ► People want to see the same doctor and cannot	clinical support, administrative support and work-life balance increasing over the three years since the model of care change began.	

7.8 Patient and staff perceptions over time

7.8.1 Reported changes to 2012

In 2011 and 2012, patients enrolled in NorthCare practices were asked to respond to surveys designed to assess their experience of the new models of care (IFHC and then HCH). There were some minor changes in questions asked across the two years.

Generally speaking, responses were very positive in the initial survey. In the following year, in most cases, there were small positive increases in patient perspectives and experiences, from this high baseline.

Negative change between 2011 and 2012 was seen in answers related to:

- *Do the staff know about you?*
- *Rating of staff knowledge*
- *Seeing the person you want to see*

Report authors noted possible contributors to this result as some staffing issues that occurred at the time. Later recommendations included maintaining ongoing education of patients and staff about the model of care, to manage behaviours and expectations.

There were increases in services used, other than for outbound calls, which decreased in 2012 from the 2011 baseline. Ratings improved for all services included in the survey.

Below are graphs showing the increase or decrease in percentage responses for questions that were common across both 2011 and 2012 surveys.

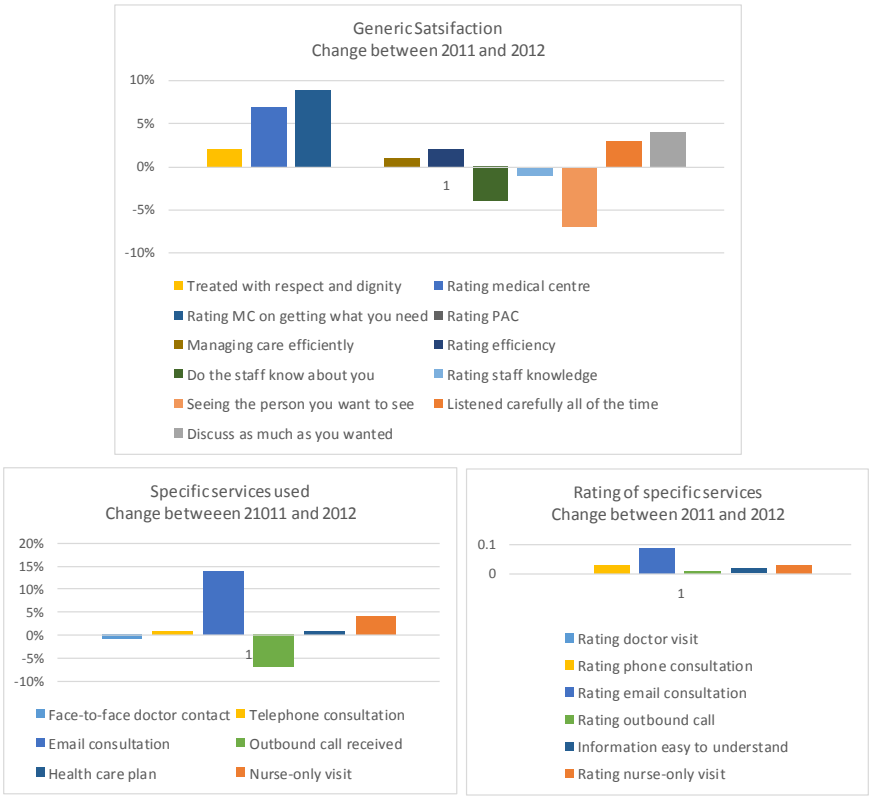


Figure 8: Percentage responses to 2011 and 2012 patient surveys

During this period many of the elements of the IFHC/HCH model were being established, as well as change management activities still taking place with existing staff and establishment of new positions and roles.

This was reflected in qualitative data, where expressed concerns tended to relate to changes, unmet expectations and the normal adaptive processes for new ways of working. For example, in relation to the introduction of a separate telephone answering system, the Patient Access Centre (PAC), there were some concerns expressed regarding patient privacy, and processes for managing complex presentations were still being addressed. Some early IT issues needed to be resolved. Clinical pre-work processes were new, with staff roles and ways of working with these processes still being developed. Medical centre assistant (MCA) roles were still being established. It was taking time to make some of the necessary infrastructure changes.

Patients were responding positively to email and phone consultations and wanted to feel they were part of the health care team, but may not necessarily have understood what that meant. The patient portal was being used but could benefit from simplification of processes. Māori and Pacific patients still experienced access problem, with lower positive responses to questions regard getting what they needed from the first person with whom they spoke.

By 2012, some of these issues had been resolved or were on track to being resolved, although access issues for Māori and Pacific patients, despite increased positive responses, were not progressing as quickly as was intended.

7.8.2 Reported changes to 2015

By 2015 many the key elements of the HCH were well established and impacting favourably on the views of staff and patients. Key changes assessed through qualitative data are summarised below:

Managing unplanned care: By 2014, many of the early teething problems for the PAC were resolved, with improved transfer of information and anticipation of problems. The PAC was managing follow-up and recall for multiple services, including document processing; credit management; and text reminders. It was viewed as contributing positively to workload at the front desk and patient waiting times, although some nurses still reported increased workload dealing with unclear situations. The use of email and phone consults had increased. The management of incoming calls for same day appointment by senior clinicians (mainly GPs) was viewed as a fundamental step in freeing up clinical time for the planned and proactive care work, and being able to provide extended consultations.

Planned and proactive care: The "Huddle", as managed by MCAs, appeared to be having a positive impact on the day's workflow and was valued by all staff, but "Fishing" was not yet consistently established and there were continued challenges in identifying patient needs and contacting patients.

Access and preventive care: The patient portal was in place and being accessed but there were some issues with ease of operation and understanding of the portal.

Standardisation and efficiency: MCAs were in place and taking on responsibilities suitable to the role, nurses were able to take on more specialised roles through working with MCAs, and GPs were reporting dealing with more complex patients and for longer consultations, demonstrating a shift to practicing at top of scope.

Infrastructure, quality and supporting team care: Standardisation of rooms was progressing and getting more support. The advantages of knowing where everything was in any clinical space outweighing concerns about losing individually-customised spaces. Off-stage spaces were more established. They were perceived by staff to support collegiality, and seemed to become more highly valued the longer they had been available.

Build workforce capacity: Training for MCAs to increase their scope and roles had been conducted. Clinical pharmacist positions were in place in the practices.

Staff at one practice noted that *"a lot of trial and error was required, but with the changes being small and gradual, it never became overwhelming and large scale change became achievable"*[13].

[13] Travis Medical Centre

In one practice, the key changes with the greatest impact were noted as being:

- Aligning tasks with members of the care team to whose roles they were most suited
- Managing unplanned care by allocating separate time for acute and unplanned patients
- Patient management plans and identifying/utilising preventive care opportunities through the PMS

These align with the reported experience of other practices. This practice also reported no negative impact on the practice bottom line. That is, excluding change costs, once steady-state was achieved the ongoing net position was similar.

A patient survey was undertaken in 2015 of 14 MHN practices (see page 45). The survey was treated as a baseline, but included some practices that had been implementing the HCH model. Two clinics (Coromandel Family Health and Victoria Clinic) have been removed from this analysis as the number of patients participating was very low (n=1 and 19 respectively) so unlikely to be representative of those practices patients.

The questions asked in this survey did not align with those from earlier surveys, so in most cases, there is not a continuous improvement line to measure. The questions in this survey, however, were treated as baseline, so may be repeated in future surveys and enable tracking of patient experience and activation in the evaluation practices.

Use of the patient portal in the evaluation practices was well above the average for this survey. Responses were on average higher for the evaluation practices in elements such as being given choices about treatment, and being shown how a patient's own action influenced their condition. In other cases, patient scores averaged slightly lower for the practices that are subject to this evaluation.

Scores indicated there is room for improvement in supporting patients to manage their own care and in involving patients in their own care (as measured by patients having a treatment plan). Results are provided graphically below.

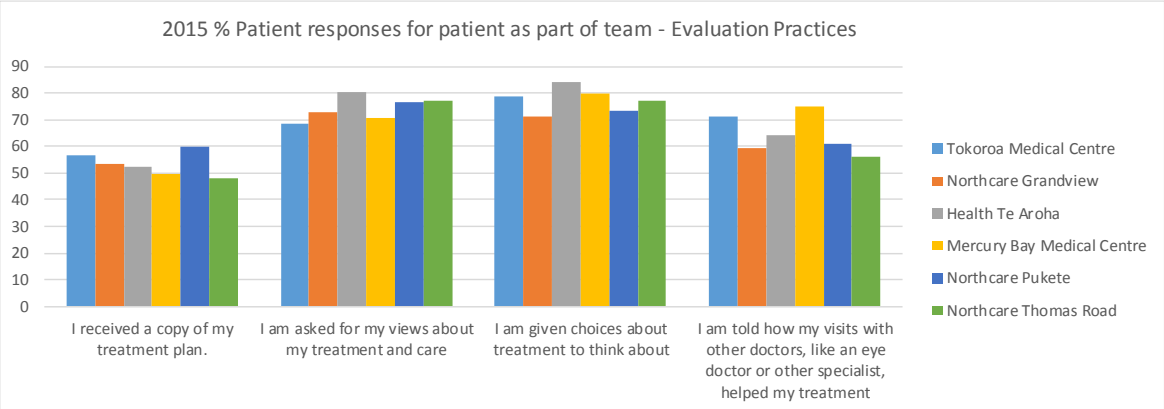


Figure 9: Patient responses – patient as part of team

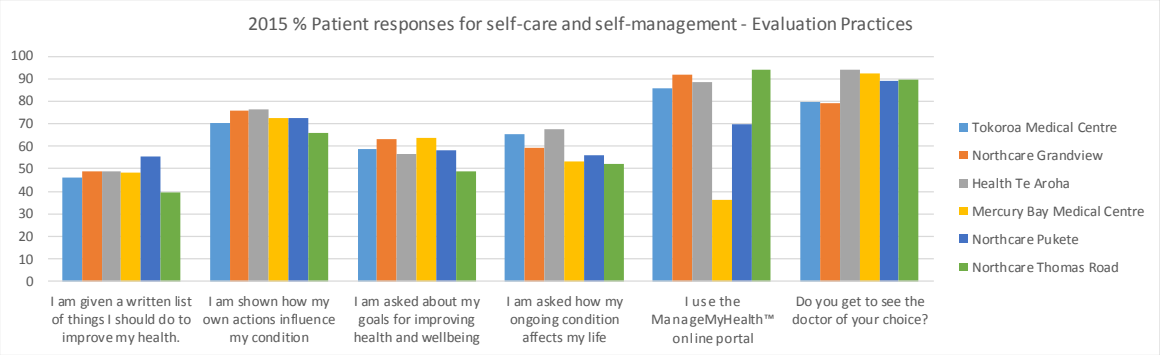


Figure 10: Patient responses – self-care and self-management

7.8.3 Patient portal

By Q2 2016 41% of the patients in the included HCH practices were registered for the patient portal (range by practice 17-77%). In comparison the selected control practices were at 19% (range 2%-24%). The patient portal allows enrolees access to their personal health information from any internet device, and is an important step in the journey to the well-informed self-managing patient.

The table below illustrates the increased registrations of patients on the patient portal for 11 practices. The patient portal is one of the key elements to support co-ordinated patient care.

Table 10: Patient registrations on patient portal as a % of eligible patients

Practice	Portal registrations	Total eligible ESUs	%
Practice 1	4358	13647	32%
Practice 2	2441	8878	27%
Practice 3	6650	7473	89%
Practice 4	1696	4404	39%
Practice 5	396	5158	8%
Practice 6	686	2673	26%
Practice 7	1043	4143	25%
Practice 8	1165	3491	33%
Practice 9	100	3522	3%
Practice 10	1337	7257	18%
Practice 11	1006	13025	8%

Data provided by PMHN

7.8.4 Saving time for patients

GP triage is one of the key means by which patient time is saved. The tables below have been provided by PMHN and illustrate the impact in terms of saved patient time through having alternatives to a face to face in-practice visit. The table below shows the outcomes in terms of patient contacts for triage calls addressed between 1 October 2015 and 30 September 2016 for four HCH practices.

Table 11: Outcomes of patient contacts – 4 practices (1 year)

Practice	No of PT Triage calls	See GP later in week	See GP today	F2F nurse today	Phone Advice only	A&M/ED for clinical reasons	Booked formal tel consult
Practice 1	6370	913 (14.3%)	3121 (49%)	183 (2.9%)	1656 (26%)	375 (5.9%)	122 (1.9%)
Practice 2	2577	404 (15.7%)	1408 (54.6%)	23 (0.9%)	424 (16.4%)	301 (11.7%)	17 (0.7%)
Practice 3	6035	890 (14.7%)	3518 (58.3%)	1154 (19.1%)	406 (6.7%)	58 (1%)	8 (0.1%)
Practice 4	4482	522 (11.6%)	2116 (47.2%)	617 (13.8%)	1222 (27.3%)	4 (0.1%)	1 (0.02%)

The table below translates these contacts into saved time for patients.

Table 12: Time saved for patients from triage and subsequent contacts – 4 practices (1 year)

Practice	# Patients Different Experience	Patients avoiding surgery visit	Patients time saved (hrs)*	Patient time saved (weeks)**
Practice 1	2691 (42.2%)	1778	1778	44.45
Practice 2	845 (32.8)	441	441	10.1
Practice 3	1304 (21.6%)	414	414	10.4
Practice 4	1745 (38.9%)	1223	1223	30.5

**Assuming on average an hour is saved per patient* ***Assuming a 40-hour working week*

The table below quantifies GP time saved though GP triage.

Table 13: GP time saved from triage and subsequent contacts – 4 practices (1 year)

Practice	GP time saved with Ph advice (mins)*	GP time saved (hrs)	Average time saved/week (hrs)
Practice 1	16560	276	5.3
Practice 2	4240	70.7	1.36
Practice 3	4060	67.7	1.3
Practice 4	12,220	203.7	3.9

**Assuming 10 minutes saved on each consultation*

7.8.5 Improving telephone access

All HCH practices identified a 18-25% call abandonment rate at peak times during the HCH modelling phase (this phenomenon is often invisible to practices unless specifically audited). However data reported for 2016 shows a substantial decrease in call abandonment rates for all participating practices. Reported call abandonment rates in 2016 varied from 1.59% to 7.73%. The PAC answered 294,087 calls across 10 PMHN sites (not all sites have been with PAC for the full year). Patients waited an average of 38 seconds for their call to be answered and 4.5% of calls were abandoned at peak times.

7.8.6 Improving staff experience

The HCH aims to improve the working life of the professionals working in the practice, addressing some of the dissatisfiers in general practice as it currently operates. An example of a small practice response to the HCH model was provided to the evaluators and can be accessed at: http://www.healthcarehome.co.nz/case-studies/hauraki-plains-health-centre-path/. In this example a GP in a small practice describes how he believes the HCH model will make the difference between his staying in the practice and leaving it.

7.9 Access and equity

In 2011 a higher proportion of Māori and Pacific respondents received an outbound call than non-Māori and Pacific respondents (39% vs 31%). The percentage of respondents receiving an outbound call in 2012 was higher for Māori and Pacific at 40%.

The percentage of respondents reporting a phone consult with a doctor in 2011 was also higher among Māori and Pacific (43% vs 31%). In 2012, the percentage of respondents with a telephone consultation with a doctor or nurse had increased for Māori and Pacific at 44%.

In 2011 the percentage of respondents saying they had a face-to-face visit with a doctor in the last six months was lower among Māori and Pacific (86% vs 93%). In 2012 this had changed and the percentage of respondents with a doctor visit was higher for Māori and Pacific (98% vs 91%). Practice

data before and after (2012) the practice changes shows that for all patients the rate of face to face consultations decreased by 12%, but taking Māori alone, the decrease was 24%.

In 2012 the percentage of respondents with a nurse-only visit was higher for Māori and Pacific (48%). The percentage of respondents reporting a pharmacist visit was also higher for Māori and Pacific in 2012 (66%), compared to other ethnicities (54%).

In 2011 Māori and Pacific were less likely to find information provided by the centre easy to understand. In 2012, this was not the case and there was little variation across different groups of patients. In 2011 and 2012 Māori and Pacific were less likely to report looking after their own health well.

In 2011 the great majority of the respondents (93%) indicated that they were treated with respect and dignity all the time. This was consistent across groups. In 2012, this had increased to 96%, however a lower proportion of Māori and Pacific respondents (92%) reported this. In 2012, there were generally positive patient statements made regarding nurses - one nurse was described as “culturally sensitive”.

7.10 A financial case study

The table below describes the financial changes occurring in a single practice implementing the HCH. The practice went live with the HCH in 2014, following a year of consolidation and adjustment, where three practices merged, there was a building change, a GP retired and there was a loss of 500 patients who moved to another practice.

Table 14: Six year Financial Report – one practice

Net income/deficit based on management accounts FY ending June	2011	2012	2013	2014	2015	2016
Total Income	2,313,151	2,928,283	2,915,601	3,316,554	3,178,505	3,210,682
Total Operating Expenses	1,901,404	2,738,306	2,928,002	3,288,243	3,104,890	2,906,796
Net Income before Non-cash expenses	**411,747**	**189,977**	**-12,401**	**28,311**	**73,615**	**303,886**
Total Non-Cash Expenses:	56,169	76,904	83,269	109,982	184,410	26,491
Total Net Income	**355,578**	**113,073**	**-95,670**	**-81,671**	**-110,795**	**277,395**

There has been an upward trend in 2016, follow a significant downward trend prior to 2013 and deficits in 2014 and 2015. These figures also illustrate the vulnerability of practice viability to the impact of change. It will be of interest to continue to track the income trends for this practice as the HCH matures.

7.11 Conclusion from meta-analysis

This chapter has considered the qualitative and quantitative data available from previous evaluations and reports provided. There is some consistency between the data collection methods for three reports, but not for all, as the evolving introduction of different HCH elements provided a different focus of investigation over time. This provides a richer and more varied source of views and evaluative frames but does limit the extent to which progression can be reliably measured. The analysis recognises this and views the progression across the years 2011 to 2015 as a series of snapshots.

Nevertheless, the findings seem clear. For those practices who have implemented the key elements of the HCH model and consistently followed through, there appear to be reported improvements in patient experience, clinician satisfaction, and care delivery, possibly without negative impact on the bottom line (reported by one practice). Some elements of the model have been more challenging to implement and may need review or longer time to establish. A key message has been that this kind of transformative change takes time, a lot of pre-work and ongoing monitoring and support.

Areas that were not examined in detail in the evaluations to date include financial aspects, and improvements in staff retention, both at a practice level and a network level. Information provided by PMHN provides case study views that indicate a positive effect on GP retention. Reports from one practice indicate no impact on the bottom line while another case study provided by PMHN indicates a slight decrease in net income with an upward trend showing.

8. Quantitative analysis

This chapter describes the results of a quantitative analysis of activity data that might be affected by the HCH and data on practice activity provided through the PMHN.

8.1 Summary

An analysis was undertaken of the data held in the New Zealand National Collections to assess the potential impacts of the HCH model on secondary care utilisation. Changes in patient enrolment numbers were also noted together with data on practice activity changes. Practice level data provided by PMHN was also examined. Areas covered included:

- Patient enrolments
- Patient touches
- ED usage
- Hospitalisation rates
- Bed day rates
- Outpatient attendances
- Outpatient DNA rates

Key findings include:

- A wide range of practice styles and types are represented in the HCH practices included in this quantitative analysis. In 2015 practice sizes ranged from 4,000 to 10,000, average deprivation levels 4 to 8 and proportion of Māori or Pacific enrolees from 10 to 50%. Geographically two practices were in Hamilton, three in rural Waikato, and one in Christchurch.

- While control practices were relatively close in size and geography to the HCH practices they had fewer Māori and Pacific enrolees on average, and were less deprived than their HCH counterparts. HCH practices had more children aged 0-14 and fewer enrolees aged 75+ than controls, but moved closer over the course of the study period.

- Overall enrolled patient numbers remained steady across HCH implementation, with a low turnover of 3-4% per quarter. If anything retention improved during the implementation period. Some practices had closed books for a time as a change management controlling response, so increases in enrolments were not expected.

- Improvements to the patient experience focused on: saving patient time through improved triaging and reduced face to face visits; improving telephone access (PAC for PMHN practices) as illustrated by lower levels of call abandonment; and improving and standardising co-ordinated proactive care. Over 12 months, one practice estimated a saving of 44.45 weeks of patient time, through effective GP triaging and offering alternatives to face to face care in the surgery.

- Two practices reported in 2012 an increase in patient consultations. There was a 12% increase in patient touches between 2010 and 2015, notably in virtual consultations. This occurred at the same time as a decrease in GP and nursing FTE, demonstrating increased capacity.

- In Q2 2016 41% of the patients in the included HCH practices were registered for the patient portal (range 17-77%). By comparison, the selected control practices were at 19% (range 2%-24%).

- Little difference in secondary care utilisation was evident in comparing HCH and control practices:

    - For non-admitted ED attendances, after removing an outlier practice HCHs had a small non-significant rise, while the relevant controls showed a significant rise.

- For all acute admissions, and ASH in 15-74 year olds specifically, there was a rise across both groups. For ASH in children, control practices had a marginally significant increase compared to a non-significant increase in HCH practices, but the time trends do not appear very different.

- Outpatient non-attendance (DNA) rates fell in both HCH and control practices, while remaining largely steady in other N4 practices overall. The higher Māori/Pacific and deprived populations in HCH practices did not translate into higher DNA rates compared with the control practices as might be expected.

- Overall for secondary care utilisation impacts there may have been a lower increase in non-admitted ED compared with controls, and a lower increase in 0-14 ASH. Increases in bed days, 15-74 year-old ASH or indeed all medical-surgical admissions were similar to control practices – despite the significant change processes entered into by the HCH practices.

- Proactive care management for long term conditions is one of the key components of the logic model that drives the expectation of improvements in ED, hospitalisation and ASH rates, but this:

  - Takes time to take effect

  - Was a relatively late addition to the HCH implementation path for practices in this analysis

  - Is being addressed through other initiatives nationally, and by DHBs and PHOs working in an alliancing environment, which may obscure any specific HCH effect

8.2 Analysis framework

The performance framework developed as part of this evaluation was used to identify the quantitative data to be used, though inevitably it was restricted to that which was available through currently collected data. The practice enrolment data was linked with ED, inpatient and outpatient data. The specific HCH practices were identified, along with selected like non-HCH practices as controls. These were identified by the PHOs concerned as comparable practices to use, but it was noted that some of the controls had also been active in assessing the quality and range of their offerings. To cover this, a comparison with all practices in the N4 group was also undertaken. Here the comparison is with non-HCH non-control N4 practices, excluding some specialised practices such as student health and residential care/retirement village. All data was anonymised – no patient-identifiable data was used in the analysis.

Time trends for each practice were created, as was a before/after period to compare HCH practices with themselves in their pre-HCH period-combining practices based on the date of change. The period covering 6 months before to 6 months after initiation date was designating the 'during' period, and was excluded from the before/after comparison for both HCHs and their corresponding controls. For the non-HCH non-control N4 practices 2009-11 was designated 'before' and 2013-15 designated 'after' for the purposes of this analysis.

Data used covered calendar years 2008 to 2015. Practices examined are listed in the table below. Several practices are underway with the HCH transition or have implemented parts of the model. These have not been included in the main analysis (either as HCHs or as part of the controls) but are shown in a small separate analysis in Appendix B.

Table 15: Practices and comparison practices under examination

Practice	Commence date	Enrolments in 2015	Control practice	Enrolments in 2015
NorthCare Pukete Rd / Thomas Rd, Hamilton	Apr 2011	10,300	2 controls	30,000
NorthCare Grandview, Hamilton	Apr 2011	4,800	1 control	5,000
Travis, Canterbury	Apr 2011	5,800	1 control	3,000
Mercury Bay Medical Centre, Waikato	Jul 2013	4,100	1 control	4,000
Health Te Aroha, Waikato	Apr 2013	5,300	1 control	3,000
Tokoroa Medical Centre, Waikato	Mar 2013	9,900	2 controls	9,000

Practice	Commence date	Enrolments in 2015	Control practice	Enrolments in 2015
Other practices with partial implementations				
Clendon Medical Centre, Auckland		8,650		
Otara Family & Christian Health Centre, Auckland		8,600		
Pukekohe Family Health Care, Waikato		19,100		
Turuki Healthcare, Auckland		5,300		
Newlands Medical Centre, Wellington		9,200		
Hora te Pai, Wellington		2,900		

8.2.1 Analysis limitations

This analysis is of an 'open cohort', with the practice populations changing each quarter. The analysis takes the population registered at the practice at the start of each quarter and checks the utilisation for that quarter. This relies on the changes in the population from quarter to quarter to be basically random; that is not changing the utilisation risk. Any tendency for this not to be random, for example if more complex patients differentially enrolled/switched to HCH practices, then the utilisation data might be skewed. No risk adjustment was undertaken for this analysis.

Another issue to note is the 'commence date' used to generate the before/after analyses. As has come through the qualitative work, and shown through the HCH implementation tool, the change management process around moving to the HCH model takes considerable time. While practices may have started changes in 2010 to 'go live' in 2011, they continue adapting and changing, and bringing in new elements over the following years. Pragmatically we show the changes here based on the official 'go live' dates, but the varying implementation paths and timings will soften measurement of the impacts of the changes that might accrue in terms of the full HCH model. For example, many of the more proactive care components of the model only came on line more latterly once time was freed up from acute call management and response. It is this improved care of chronic conditions that is one of the key components of the logic model that drives the expectation of improvements in ED, hospitalisation and ASH rates, but this might be expected to appear at a later stage.

Practices close to the HCH practices geographically and in size have been selected as controls. However the controls themselves have not been standing still. There has been significant PHO and DHB activity over the past five years (and longer) around chronic care management, ED diversion and improvements in integration, which might be expected to impact on both HCH and controls. These changes cannot be easily disentangled from any changes due to HCH implementation.

8.3 Practice demography

HCH practices have been relatively stable in enrolment numbers over the evaluation period, in contrast to the control practices which have shown some growth (Figure 11). The large growth seen in 2009-10 for non-HCH non-control N4 is the result of PHO mergers, and practices shifting PHOs. Sudden increases for HCHs and controls are the result doctors moving practices bringing their existing patient enrolees with them.

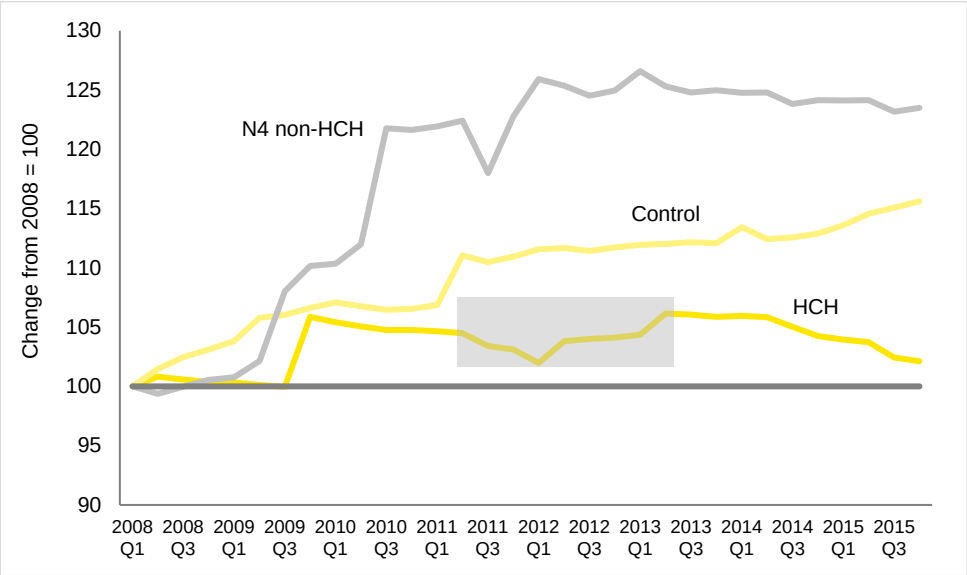


Figure 11: PHO enrolments 2008-2015 by quarter – change from 2008

Source: PHO registers. Q1 2008 set at 100, others figures proportional to that. Grey box = HCH implementation period.

Two of the HCH practices had around 10,000 enrolees, with the others in the 4,000 to 6,000 range – broadly representative of New Zealand general practice sizes (Figure 12).

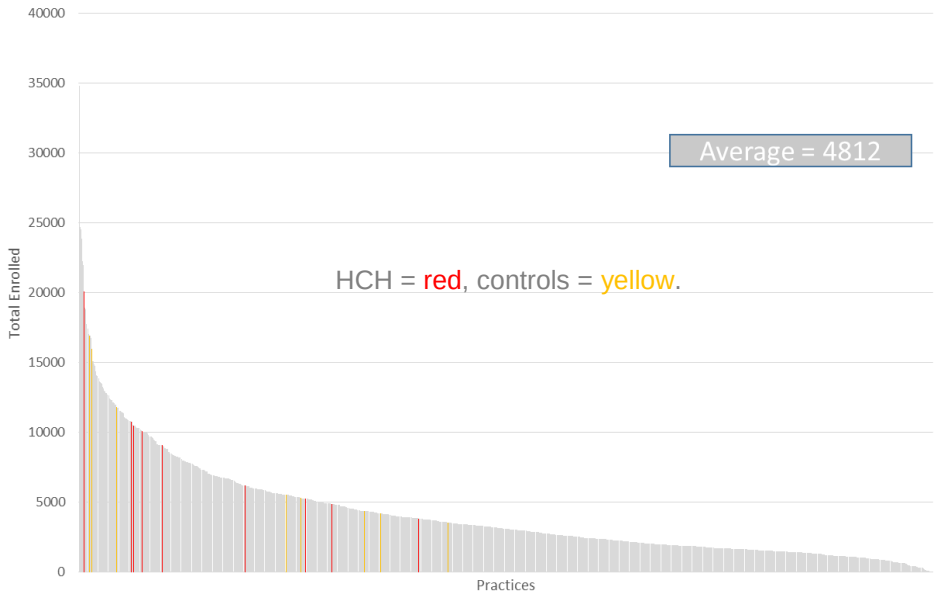


Figure 12: Enrolments by practice for New Zealand, 2013 quarter 4, sorted by practice size

Source: PHO registers. Excludes student health and retirement home practices. HCH practices shown include those partially implemented

Patient turnover was assessed by comparing the (encrypted) NHIs in each practice's register from one quarter to the next. Control and HCH practices had similar consistencies across the time period at 96-97%. Interestingly, where one might have thought the change process for HCHs might see an increased patient turnover the rates if anything showed a slight increase in retention in the 'during' period:

Before	96.1%
During	96.7%
After	96.5%

Turnover

The metric used is the percentage of enrolees in one quarter that are present in the next quarter. So, for example, if 95 of 100 enrolees returned, with 5 new ones enrolling the roll would hold steady at 100, but the consistency would be 95%.

There was no difference in turnover between HCH and Control practices in the 'before' or 'after' periods – the time trends are shown in the figure below. Some practices had closed books for a time as a change management controlling response, so increases in enrolments were not expected.

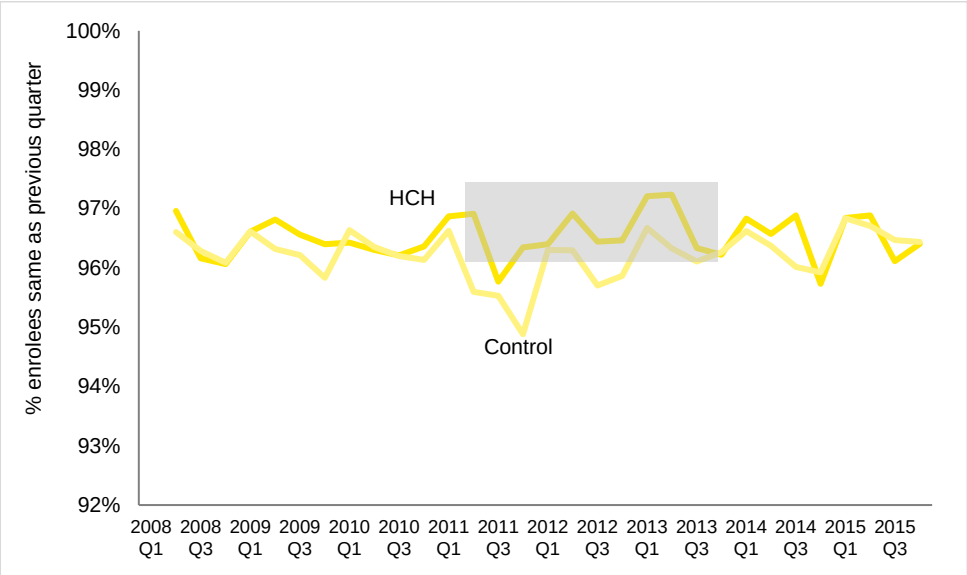


Figure 13: Enrolment consistency per practice (combined) 2008-2015 by quarter

Source: PHO registers, EY analysis. Consistency is defined as the percentage of enrolees still present in the following quarter (NB not calculated for rest of N4).

8.3.1 Children 0-14 years

The proportion of children enrolled in HCH practices and the selected control practices fell over the time period (Figure 14), while being largely maintained in the rest of the N4 practices. Within the HCH practices the proportions of children ranged from 18% to 27%.

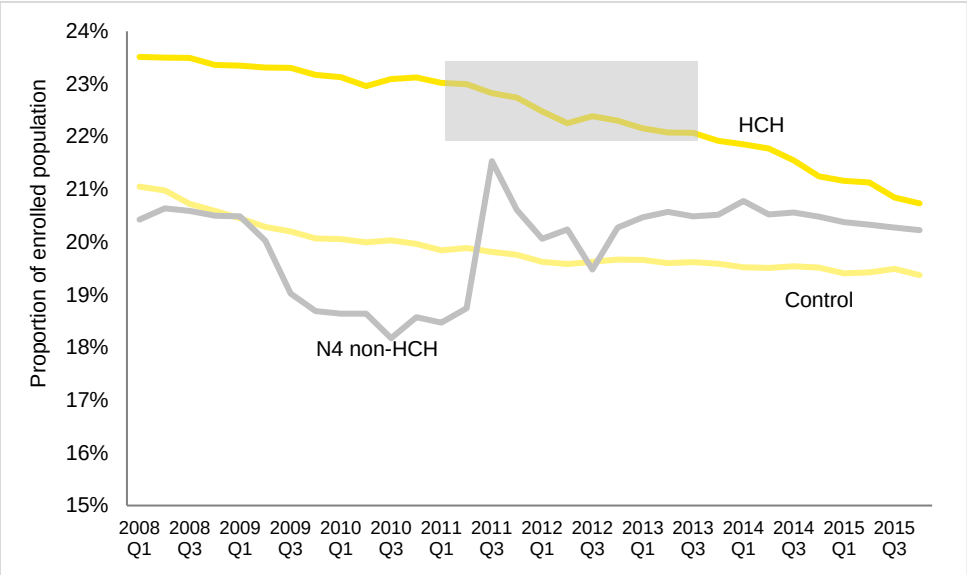


Figure 14: Proportion of enrolments aged 0-14, 2008-2015 by quarter

Source: PHO registers. Grey box = HCH implementation period

8.3.2 Elderly aged 75+ years

HCH practices showed the largest increase in elderly enrolees, rising from 5.4% to 7.1% of enrolees from 2008-2015 (Figure 15) – a 4.2% per annum growth. Control and other N4 practices showed smaller rises of 2.2% and 0.9% respectively. Within the HCH practices the proportions aged 75+ ranged from 4% to 12%.

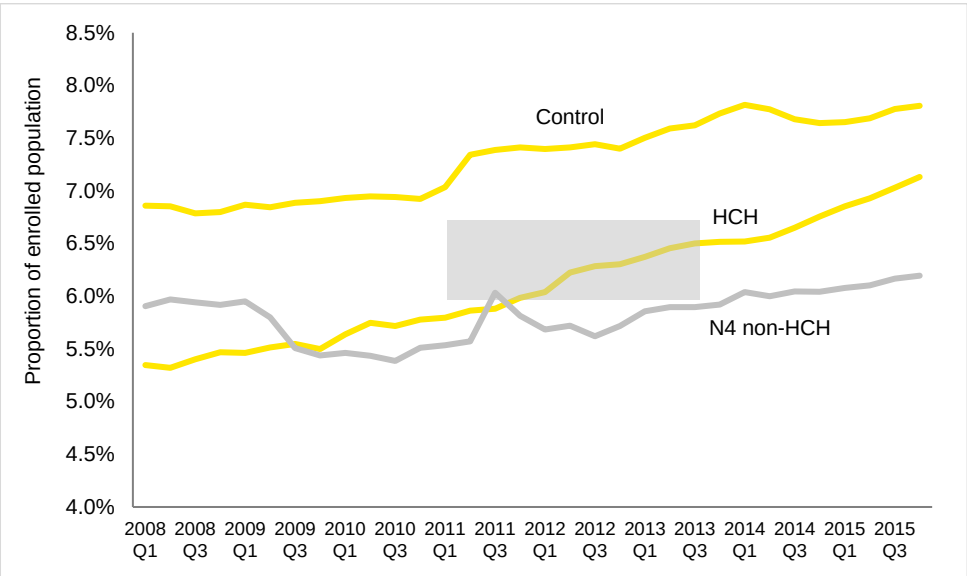


Figure 15: Proportion of enrolments aged 75+, 2008-2015 by quarter

Source: PHO registers. Grey box = HCH implementation period

8.3.3 Māori and Pacific

HCH practices had the largest proportion of Māori and Pacific enrolees – at around 22% - compared with control and other practices (Figure 16). This is just above the national average of 20% (Figure 17). Rates were static for HCH practices, but rose by about two percentage points over the period for control and other practices. Within the HCH practices included in the study the proportions ranged from 7% to 50%, indicating the wide range of practices represented.

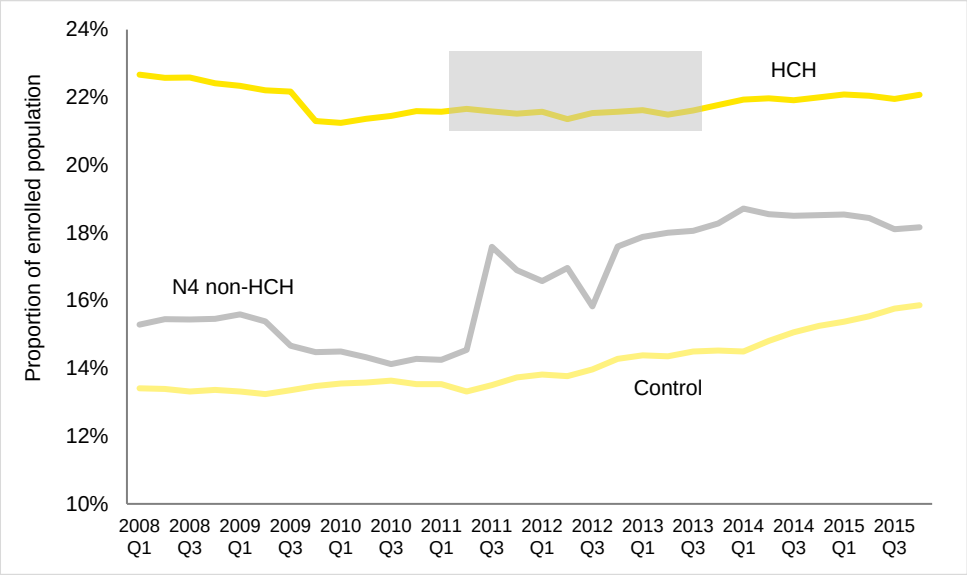


Figure 16: Proportion of Māori or Pacific enrolments, 2008-2015 by quarter

Source: PHO registers. Grey box = HCH implementation period

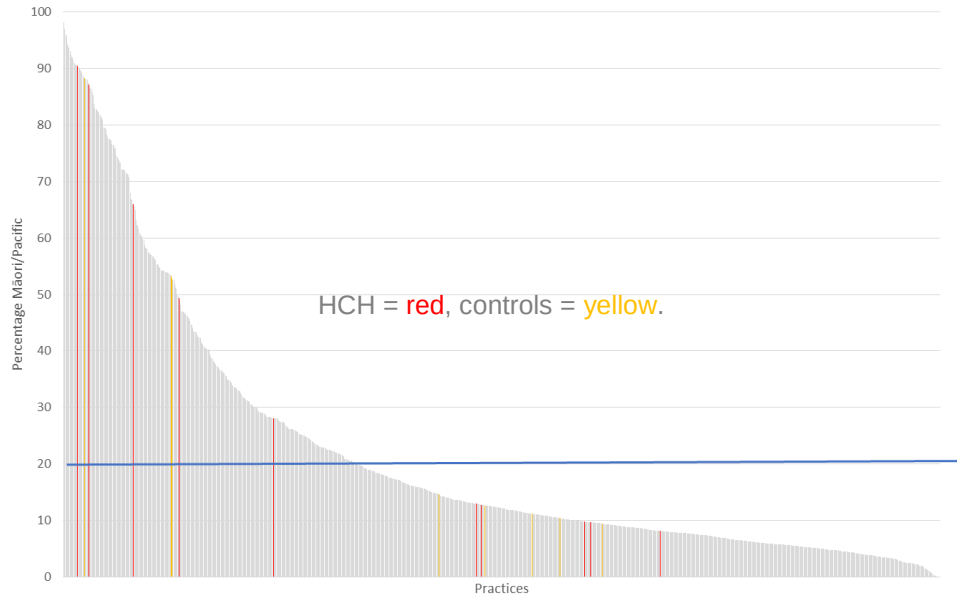


Figure 17: Proportion of enrolments Māori or Pacific, 2013 quarter 4, all NZ practices

Source: PHO registers. HCH practices shown include those partially implemented.

8.3.4 Deprivation

Average deprivation levels for HCH practices was 6.4 on a scale of 1 least deprived to 10 most deprived, compared with 6.0 for control practices and 5.3 for the others[14]. Within the HCH practices the average deprivation levels ranged from 4 to 8 (Figure 18), with deprivation linked to the proportion of the practice with Māori and Pacific enrolees.

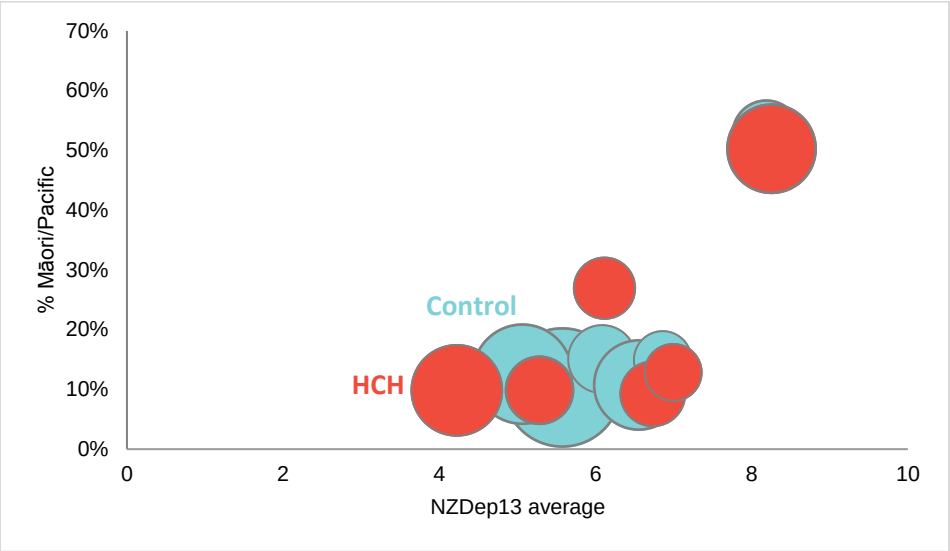


Figure 18: Deprivation compared with Māori or Pacific proportion, 2015

Source: PHO registers. Circle areas in proportion to practice size. NZDep13 averaged at CAU level for deciles, so only approximate.

8.4 Patient touches

There is evidence that the HCH has increased capacity within general practice, while reducing GP and nursing FTEs. For example, in a single practice:

- There has been a decrease in GP and nursing FTEs from 2011 to 2016, but an increase in patient touches of 12% (raw data). Non-GP/nursing staff have increased (clinical pharmacist and MCA).
- Increased patient touches mainly relate to virtual care, with both GPs and nurses decreasing face to face consultations and increasing virtual consultations (5% and 2% respectively).
- New roles of the medical centre assistant (MCA) and clinical pharmacist have contributed to increased activity.

Touches are defined as:

- All face to face for GP (NZMC), nurse (NZNC), clinical pharmacist (CPHA) and MCA
- Patient inbound email from portal
- Planned telephone consults replacing face to face
- Triage calls (but not PAC calls)

The graph below illustrates the shifts in patient touches between 2010 and 2016, including new roles.

[14] Only the decile scores for each patient were available in the base data. Averaging decile scores is not strictly accurate, but does give a proportionate sense of the relative deprivation levels – NZDep06 to 2014, then NZDep13 thereafter

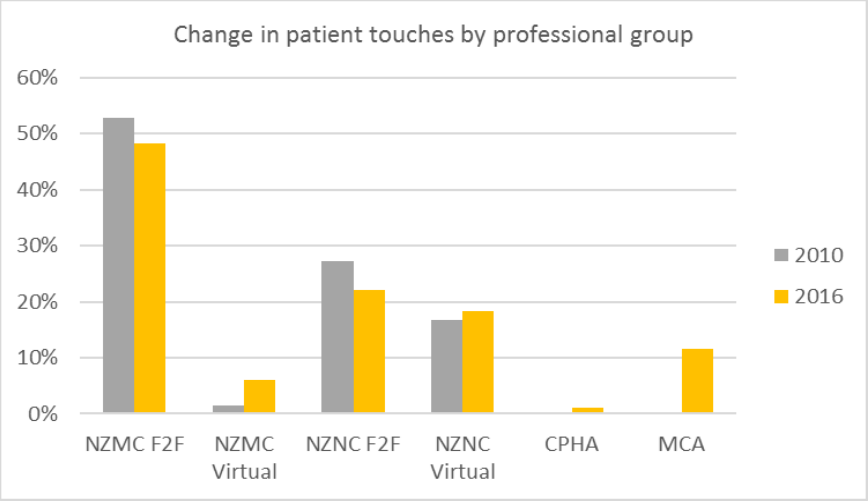


Figure 19: Changes in patient touches by professional group

Source: PMHN

8.5 Emergency department

Two facets of ED use were examined – all non-admitted ED attendances, and all triage 4 and 5 attendances. Triage data was available from October 2010 onwards, with levels 4 and 5 representing people with less urgent needs. These are considered more suitable for primary care management. Only non-admitted ED attendances were examined here, as admitted patients are examined in the next section. Enrolees were linked with ED attendances by quarter for each practice, with time trends and before/after analyses performed. Only public hospital ED attendances are included – data from private accident & medical centre (A&M) were not available for analysis.

Note that ED attendance is not a perfect measure of primary care performance due to varying supply of A&M services around the country, and the known variance with distance from domicile to ED. For example, other things being equal one would expect ED rates to vary with deprivation level – the relationship is discernible in the figure below, but there are many high deprivation practices with low usage of public hospital ED.

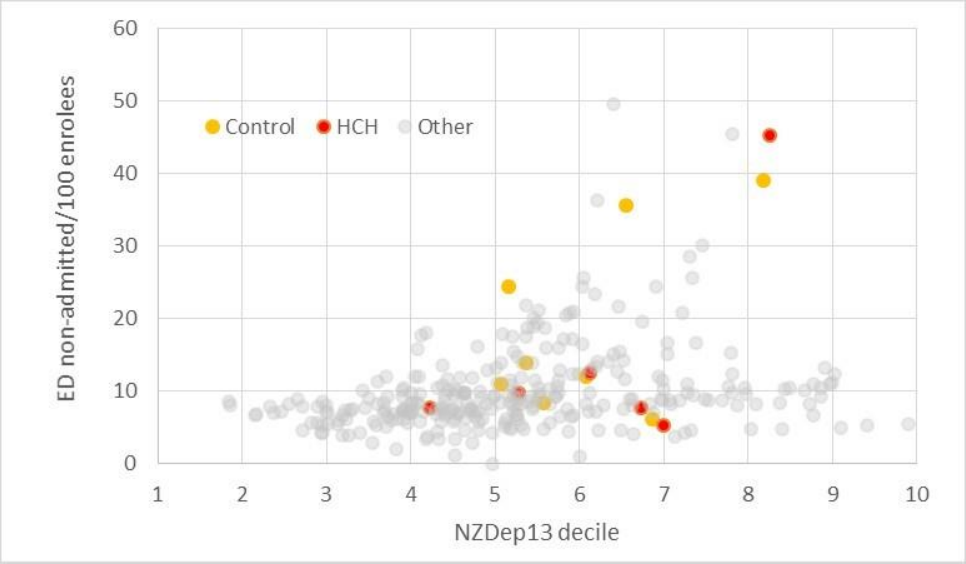


Figure 20: Annual rate of attendance at ED 2015 (non-admitted only) by N4 practice 2015

Source: PHO registers and NNPAC data, EY analysis. All N4 practices excluding student and retirement home practices – "Other" = non-HCH non-control practices.

8.5.1 Non-admitted ED attendances

In any one quarter around 4 to 4.5% of enrolees in HCH or control practices attended ED, with the rates rising slightly across the time period (Figure 21). Within the before/after analysis the HCH practices showed a small combined drop, from 4% to 3.6%, similar in size for control practices, and non-significant.

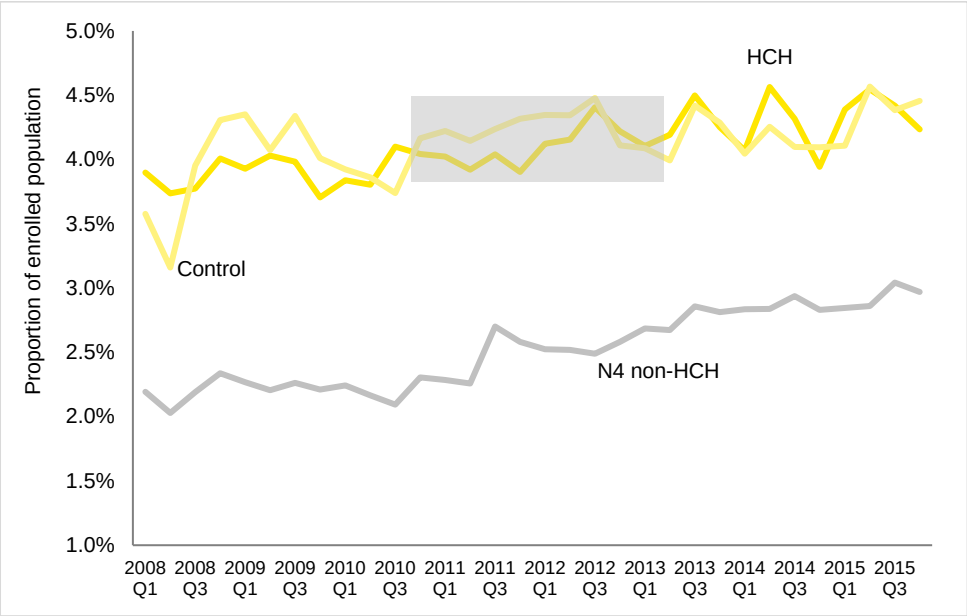
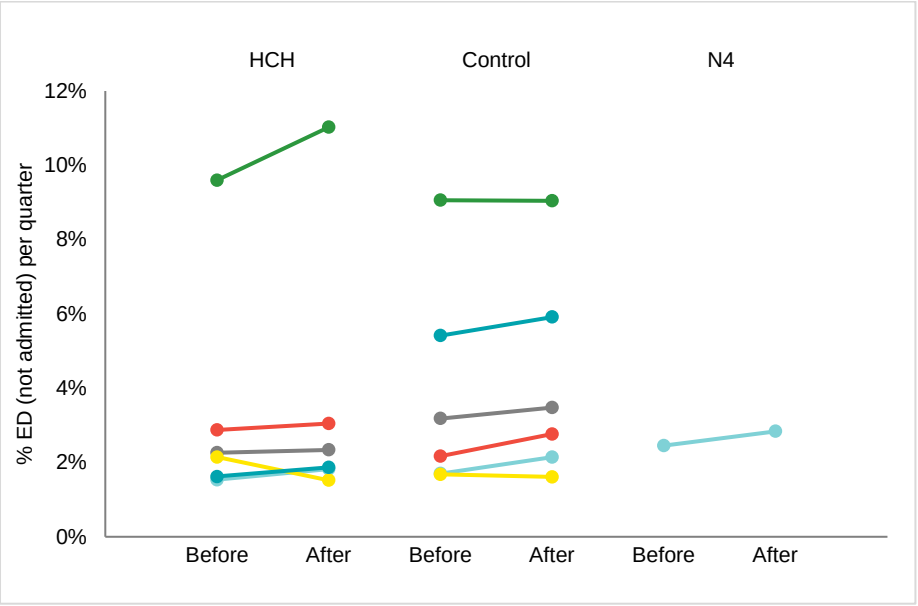


Figure 21: Proportion of enrolees attending ED per quarter, 2008-2015 (non-admitted only)

Source: PHO registers and NNPAC data, EY analysis. Grey box = HCH implementation period.

Within that overall decrease one HCH practice had a rise, one a drop, and the others were stable (Figure 22). The HCH ED data are dominated by one practice which had a very high use of the local ED – 10% of enrolees using the ED in any one quarter (essentially acting as the urgent care service of the local practices). Figure 22 shows the before-after results for each practice highlighting the outlier and its corresponding control. If that practice is removed the overall rate moves to 2.0% before and 2.1% after for HCH practices and 2.2% to 2.5% for controls (differences non-significant for HCH but significant for controls p=0.04). The rest of N4 showed a significant 0.4 percentage point rise.



Source: PHO registers and NNPAC data, EY analysis.

'Before' = from Oct 2010 to 6 months prior to commencement,

'After' = period 6 months after commencement to Dec 2015 (2-4 years).

N4 = non-HCH non-control practices.

Figure 22: Proportion of enrolees attending ED per quarter by practice per quarter before/after HCH instigation

8.5.2 ED attendances audit

A manual audit was undertaken of two HCH practices for Quarter 2 2016 triage 4&5 and showed the following for ED non-admitted attendances.

Table 16: Practice 1 ED non-admitted attendances

	No. attending *	Practice Appropriate	GP referred from practice (referred from Anglesea A&M)	ED appropriate
In hours	30	13	7 (2)	8
Out of hours	40	21	(10)	9

Note: 20 additional patients not included as there was no discharge information for 10 and 10 were not patients of this practice

Based on this audit, approximately one patient per week could have been managed differently within hours and possibly 7 per week who self-referred after hours.

Table 17: Practice 2 ED non-admitted attendances

	No. attending *	Practice Appropriate	GP referred from practice (referred from Anglesea A&M)	ED appropriate
In hours	24	6	9 (1)	8
Out of hours	47	28	2	17

Note: 8 other patients not included as no discharge information

Based on this audit, approximately two patients per month could have been managed differently within hours, and two to three per week who self-referred after hours.

8.5.3 Triage 4 and 5 ED attendances

The triage 4 and 5 data were a little more difficult to interpret as the 'before' period is relatively short for some of the practices (Figure 23), and there may have been some variability in the collection and definitions being used to record triage category within the EDs as the new collection started. Within the before/after analysis the HCH showed a drop but again figures were quite skewed by a single practice (Figure 24), while the practices commencing in 2011 do not have enough 'before' time to set a reasonable baseline.

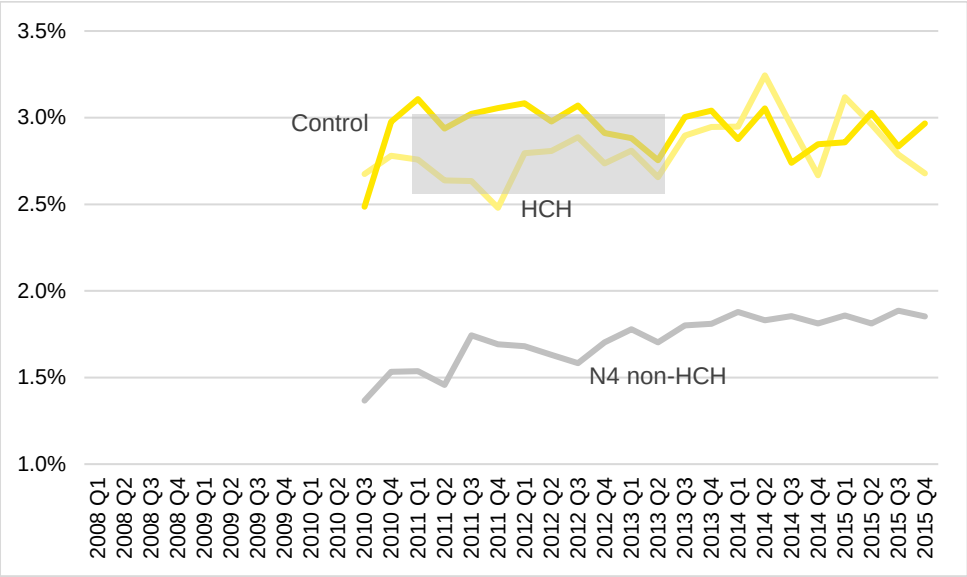
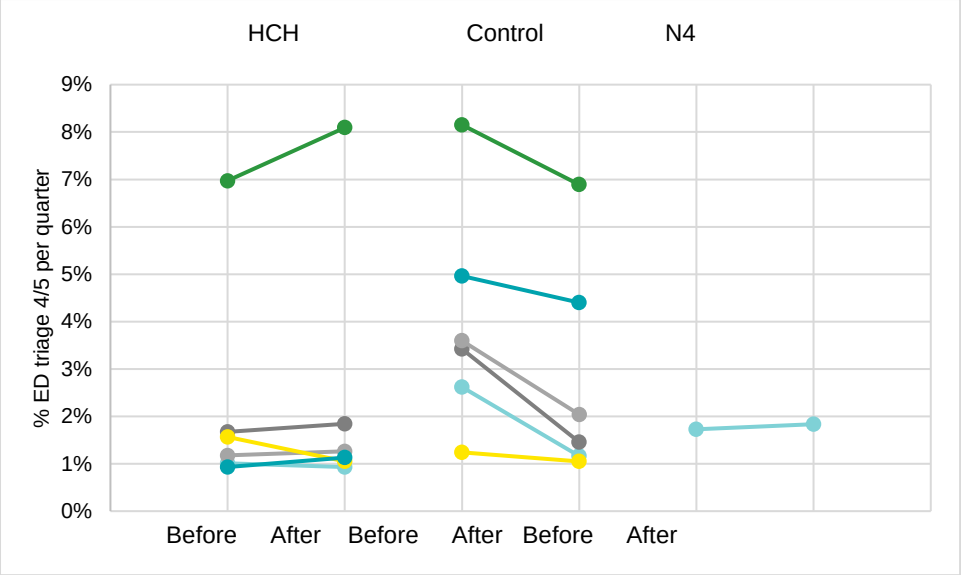


Figure 23: Proportion of enrolees attending ED in triage 4 and 5 categories per quarter, 2008-2015

Source: PHO registers and NNPAC data, EY analysis. Triage categories became fully collected in October 2010.



Source: PHO registers and NNPAC data, EY analysis.

'Before' = from Oct 2010 to 6 months prior to commencement,

'After' = period 6 months after commencement to Dec 2015 (2-4 years).

N4 = non-HCH non-control practices.

Figure 24: Proportion of enrolees attending ED in triage 4 and 5 categories by practice per quarter before/after HCH instigation

8.6 Inpatient care

Inpatient care was examined for several different facets:

- All acute medical/surgical hospitalisations
- Acute medical/surgical bed days used
- Ambulatory sensitive hospitalisations aged 15-74
- Ambulatory sensitive hospitalisations aged 0-14

Measuring bed days is used in addition to the straight count of hospitalisations as a proxy measure of chronic disease planning and support – if well-managed patients are admitted with an exacerbation of an existing condition it might be expected that they would be able to be stabilised sooner and able to leave hospital earlier. Enrolees were linked with NMDS data for each quarter for each practice, with time trends and before/after analyses performed.

8.6.1 Acute medical/surgical hospitalisations

In any one quarter around 3.5 to 4% of enrolees in HCH practices or 4-4.5% in control practices were hospitalised, with the rates rising across the time period (Figure 25). Within the before/after analysis the HCH practices increased from 3.4% to 3.7%, a similar change to that of the control practices (3.7 to 4.0%), and non-significant.

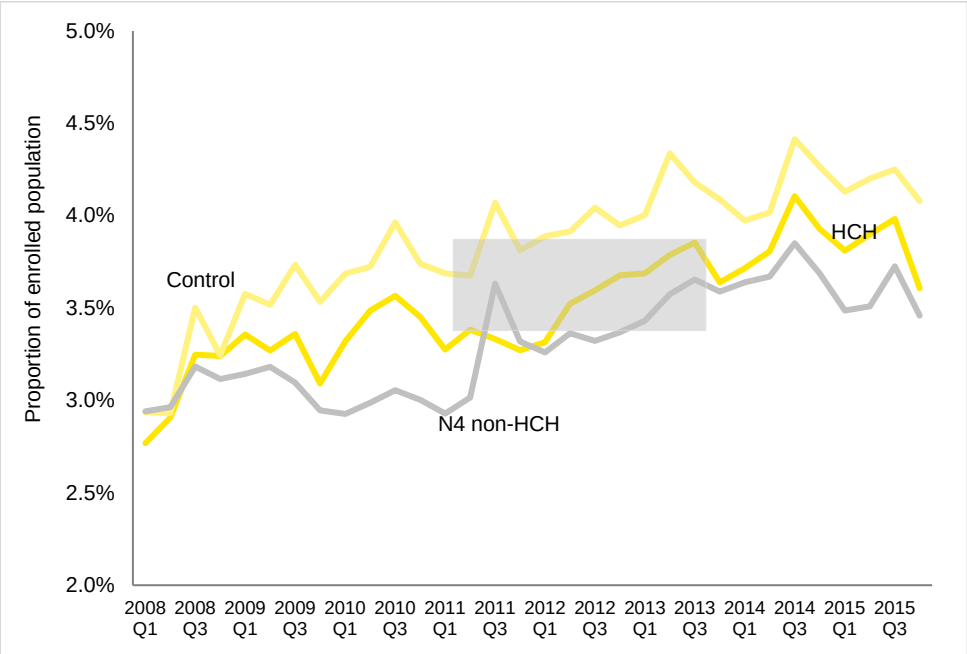
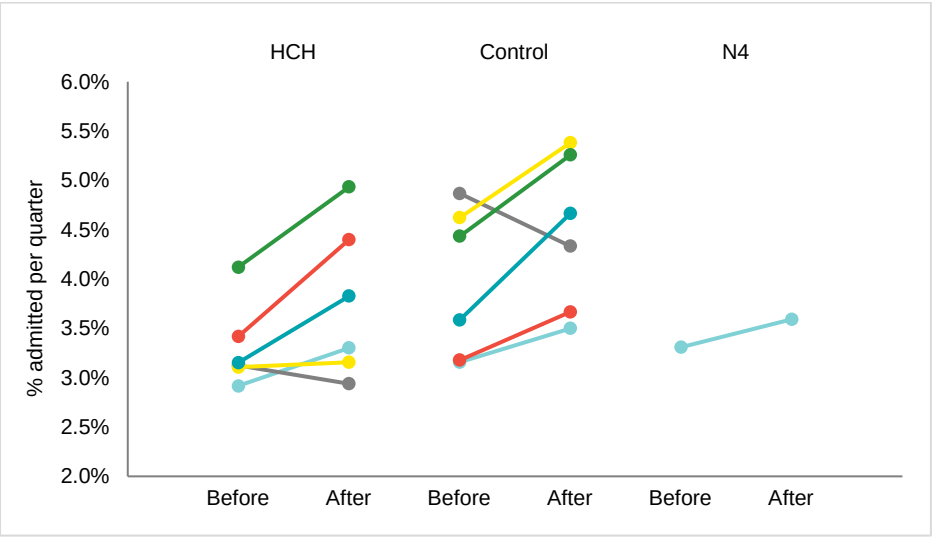


Figure 25: Proportion of enrolees hospitalised per quarter, 2008-2015

Source: PHO registers and NMDS data, EY analysis. Includes medical-surgical acute or arranged hospitalisations.

Two practices showed little or no growth, matched by one of the controls, while rises were similar between HCHs and their controls for the other practices. Both sets showed similar growth to rest of N4 practices (Figure 26).



Source: PHO registers and NNPAC data, EY analysis.

'Before' = from Oct 2010 to 6 months prior to commencement,

'After' = period 6 months after commencement to Dec 2015 (2-4 years).

N4 = non-HCH non-control practices.

Figure 26: Proportion of enrolees hospitalised by practice per quarter before/after HCH instigation

8.6.2 Acute medical/surgical bed days

The general trend of decreasing length of stay in hospital dominates the bed day picture. The rate of use by HCH practices was lower than for control practices across the period, but similar percentage reductions were seen (Figure 27).

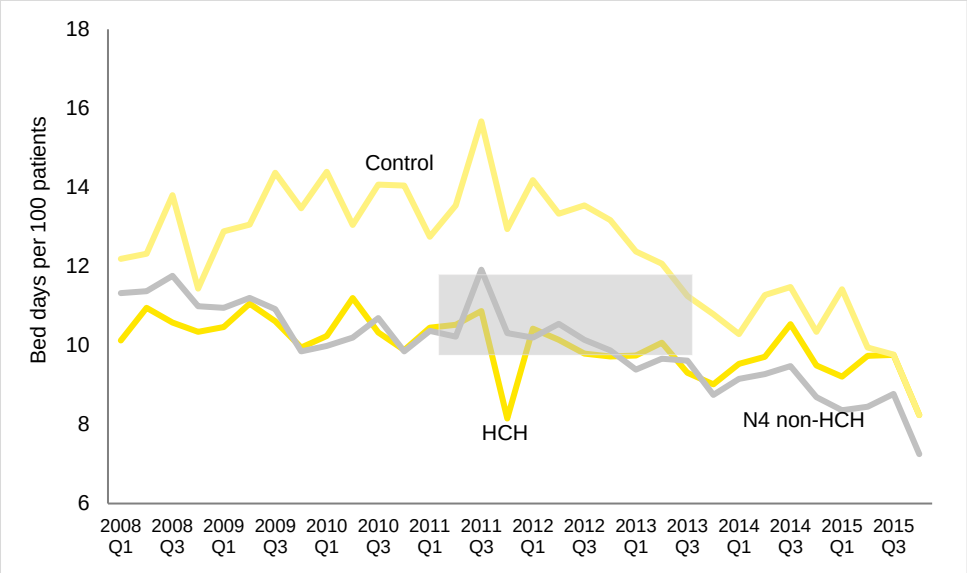
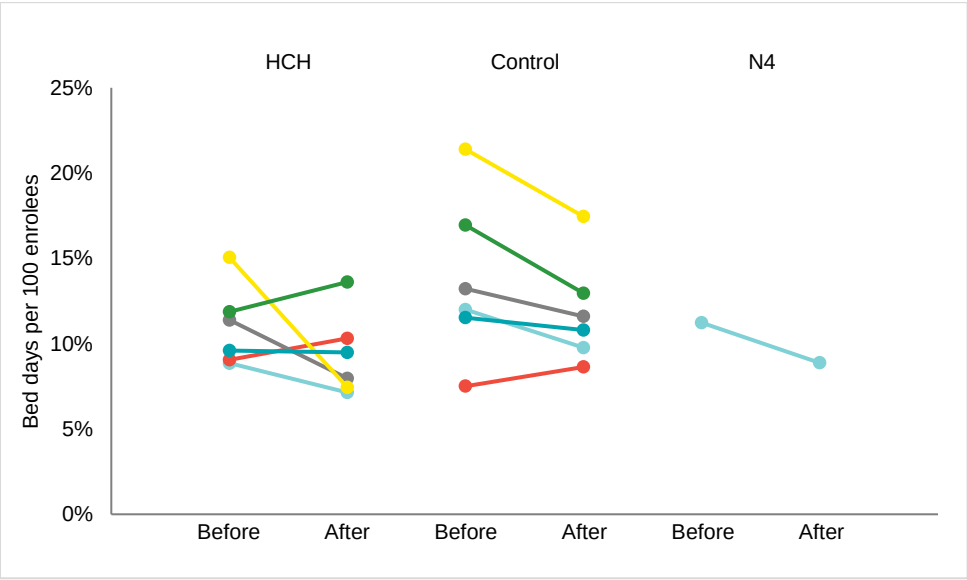


Figure 27: Bed days per 100 enrolees per quarter, 2008-2015

Source: PHO registers and NMDS data, EY analysis. Includes medical-surgical acute or arranged bed days

Three HCH practices showed clear bed day decreases, matched by their controls. Both sets showed similar proportionate decreases to the rest of N4 practices (Figure 28).



Source: PHO registers and NNPAC data, EY analysis.

'Before' = from Oct 2010 to 6 months prior to commencement,

'After' = period 6 months after commencement to Dec 2015 (2-4 years).

N4 = non-HCH non-control practices.

Figure 28: Bed days per quarter per 100 enrolees by practice before/after HCH instigation

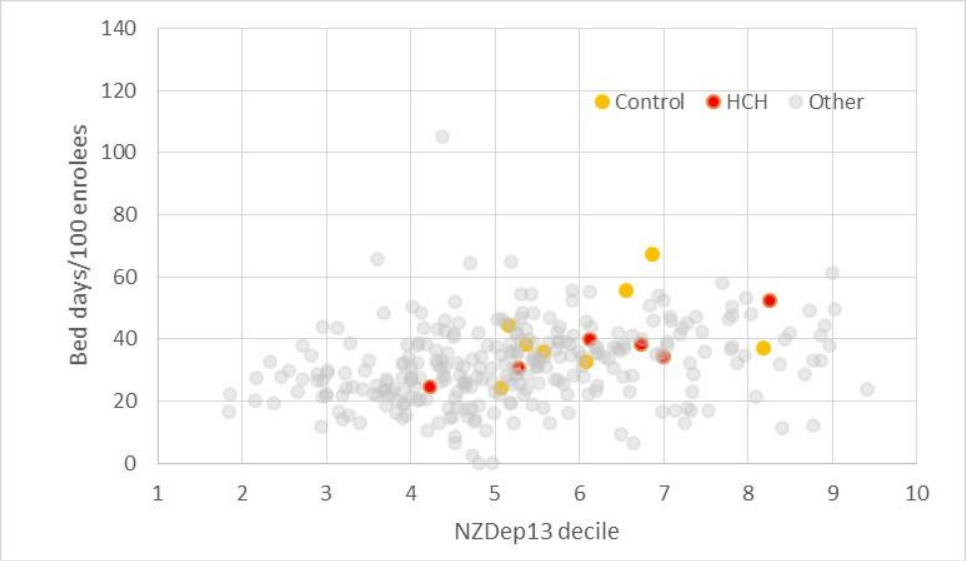


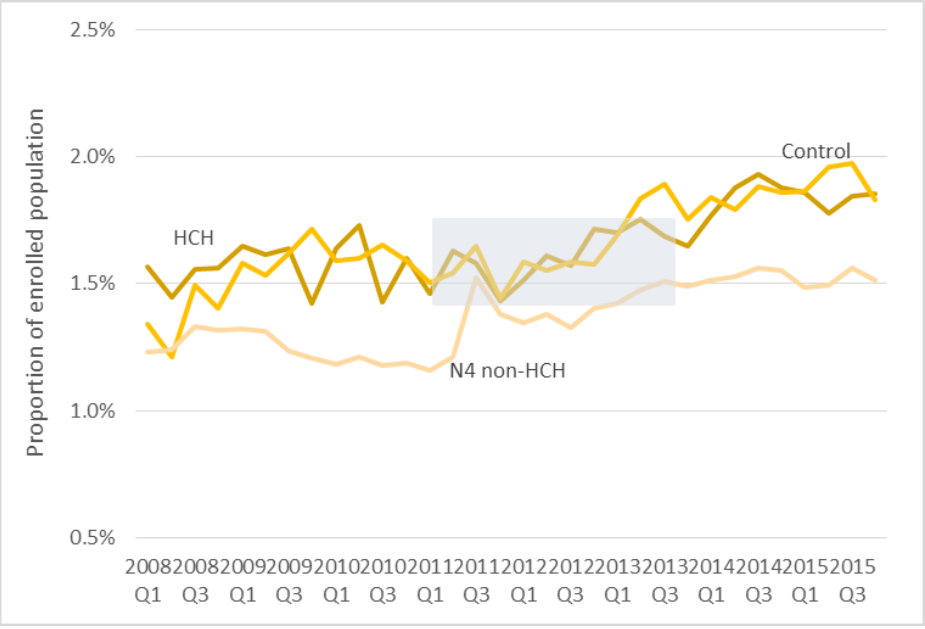
Figure 29: Bed days per 100 enrolees by N4 practice, 2015

Source: PHO registers and NMDS data, EY analysis. All N4 practices excluding student and retirement home practices – "Other" = non-HCH non-control practices.

8.6.3 Ambulatory sensitive hospitalisations aged 15-74

Based on the main reason people were admitted to hospital, ASH attempts to categorise hospitalisations as to whether they were potentially preventable through primary care in the weeks or months leading up to the event. Not all such events will in fact have been avoidable in the circumstances, but a proportion may have been. As much a measure of socio-economic impact as primary care, changes over time should be interpreted cautiously.

In any one quarter around 1.5 to 2% of 15-74 year-old enrolees in HCH or control practices were hospitalised as an ASH admission, making up a quarter to a third of all acute hospitalisations. The rates rose significantly across the time period for all practice groupings (Figure 30). Within the before/after analysis the HCH practices increased from 1.45% to 1.59%, a similar percentage change to that of the control practices, and other N4 practices.

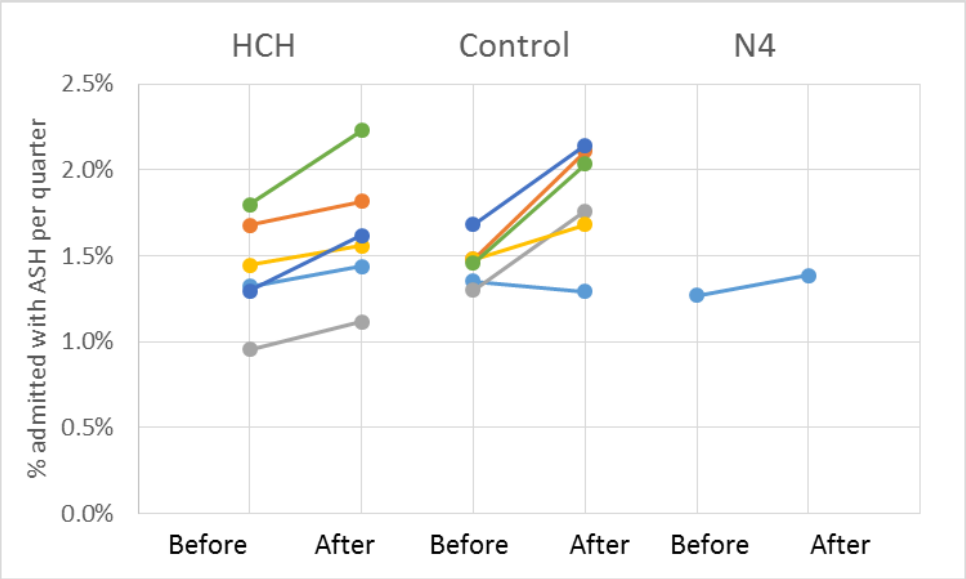


Source: PHO registers and NMDS data, EY analysis based on MOH ASH ICD10 codes.

Includes medical-surgical acute or arranged hospitalisations – note elective dental admissions normally included in ASH are excluded from this analysis as not likely to be affected by the HCH initiative-control practices.

Figure 30: Proportion of enrolees aged 15-74 with an ambulatory sensitive hospitalisation per quarter, 2008-2015

All of the HCH practices showed increases in ASH for 15-74 year olds, while one of the controls showed no change (see below).



Source: PHO registers and NMDS data, EY analysis.

'Before' = the three years prior to commencement,

'After' = period 6 months after commencement to Dec 2015 (2-4 years).

N4 = non-HCH non-control practices.

Figure 31: Proportion of enrolees aged 15-74 with an ambulatory sensitive hospitalisation per quarter by practice before/after HCH instigation

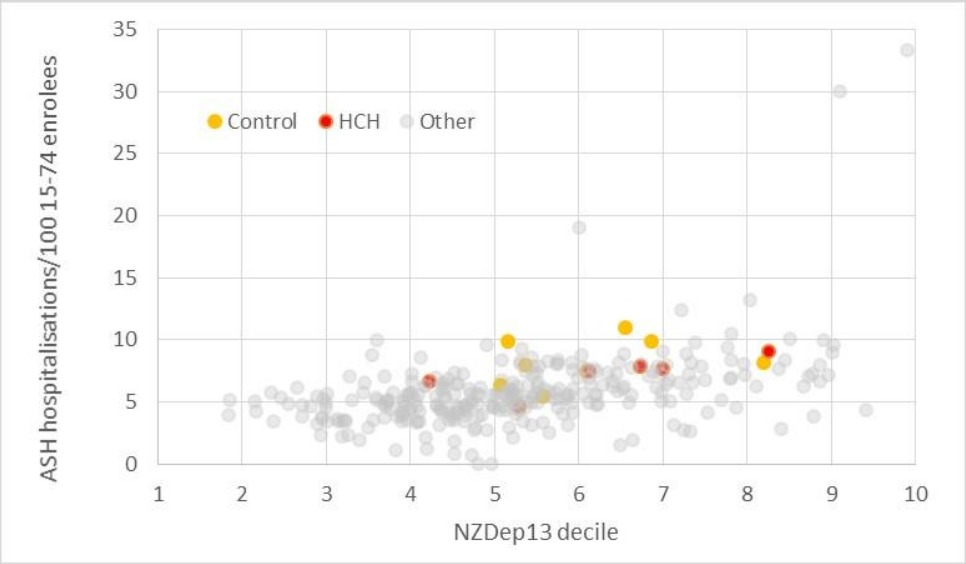
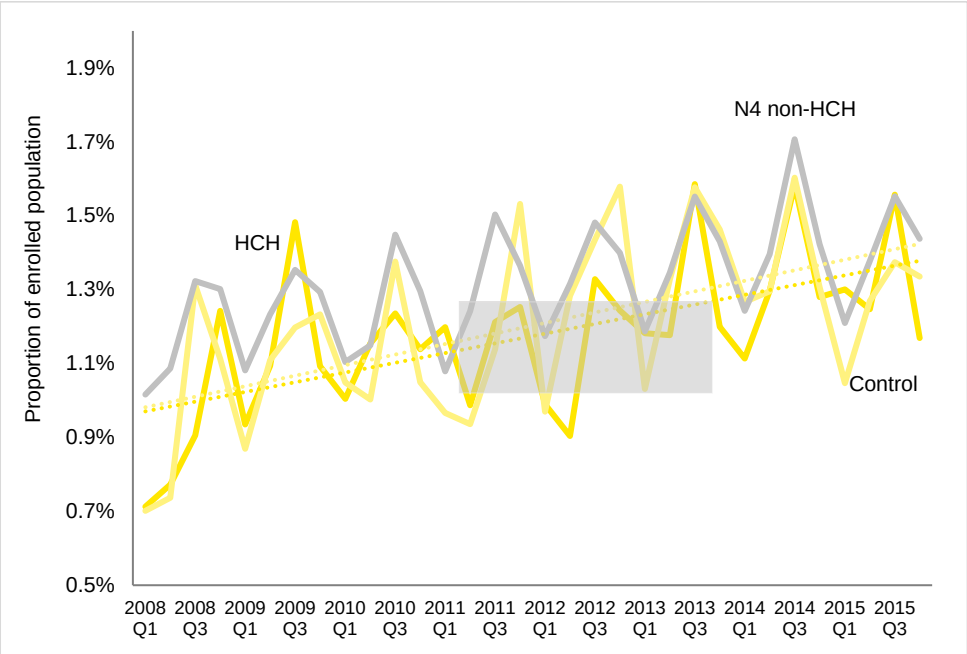


Figure 32: Proportion of enrolees aged 15-74 with an ambulatory sensitive hospitalisation by N4 practice for 2015

Source: PHO registers and NMDS data, EY analysis. All N4 practices excluding student and retirement home practices – "Other" = non-HCH non-control practices.

8.6.4 Ambulatory sensitive hospitalisations aged 0-14

ASH in children is mainly infectious disease-related, and thus has a strong seasonal component, with winter respiratory infections dominating (Figure 33). Trend lines for HCH and control practices show similar trends with rising rates. An added chart with annual rather than quarterly figures shows this more clearly (Figure 34).



Source: PHO registers and NMDS data, EY analysis based on MOH ASH ICD10 codes.

Includes medical-surgical acute or arranged hospitalisations – note elective dental admissions normally included in ASH are excluded from this analysis as not likely to be affected by the HCH initiative-control practices.

Figure 33: Proportion of enrolees aged 0-14 with an ambulatory sensitive hospitalisation per quarter, 2008-2015

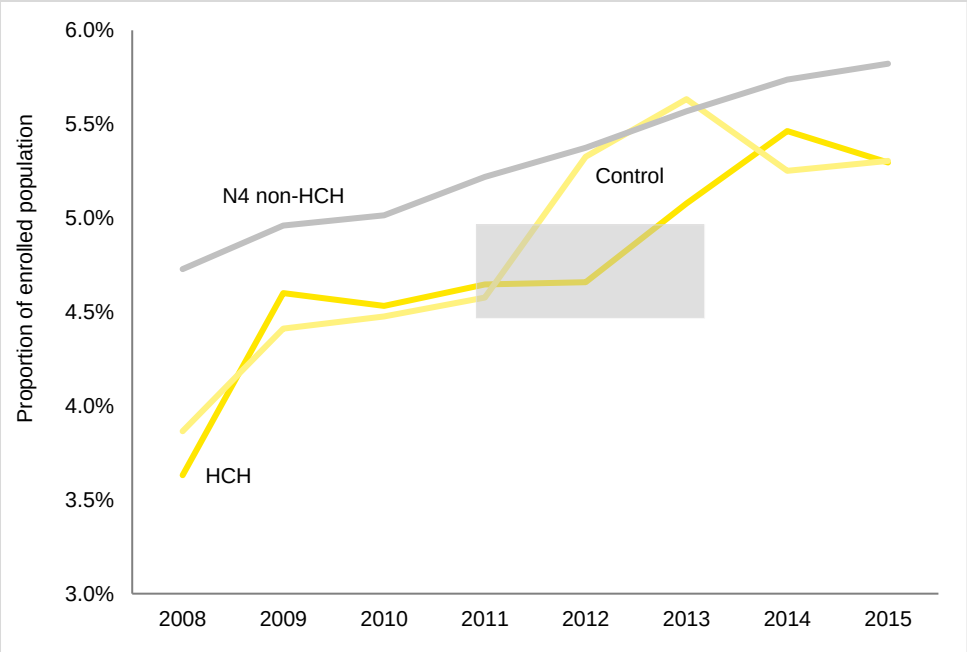
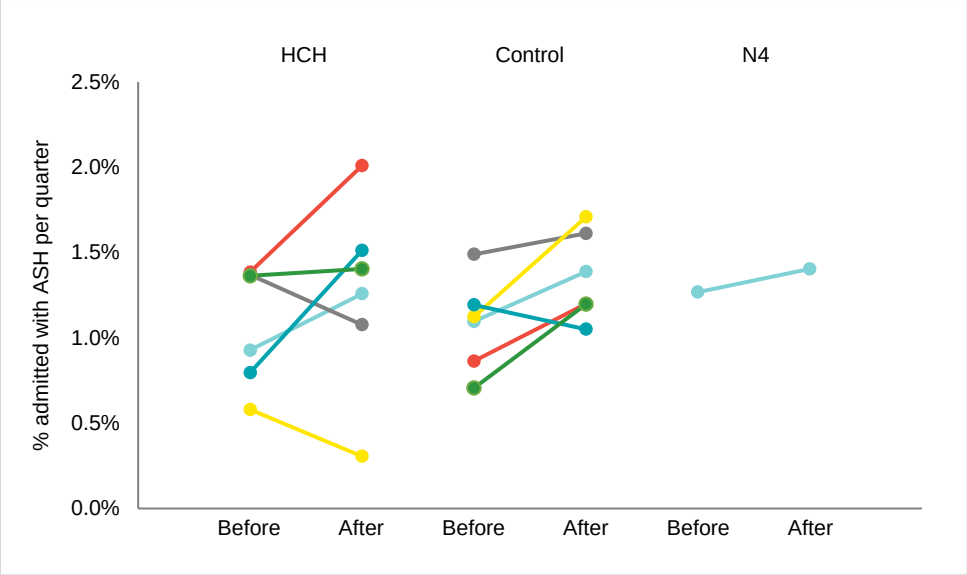


Figure 34: Proportion of enrolees aged 0-14 with an ambulatory sensitive hospitalisation per year, 2008-2015

Three of the HCH practices showed decreases or no change in ASH for 0-14 year olds, while only one of the controls showed a decrease (Figure 25). Overall controls had a marginally significant increase (p=0.047), while HCH practice changes were non-significant.



Source: PHO registers and NMDS data, EY analysis.

'Before' = the three years prior to commencement,

'After' = period 6 months after commencement to Dec 2015 (2-4 years).

N4 = non-HCH non-control practices.

Figure 35: Proportion of enrolees aged 0-14 with an ambulatory sensitive hospitalisation by practice per quarter before/after HCH instigation

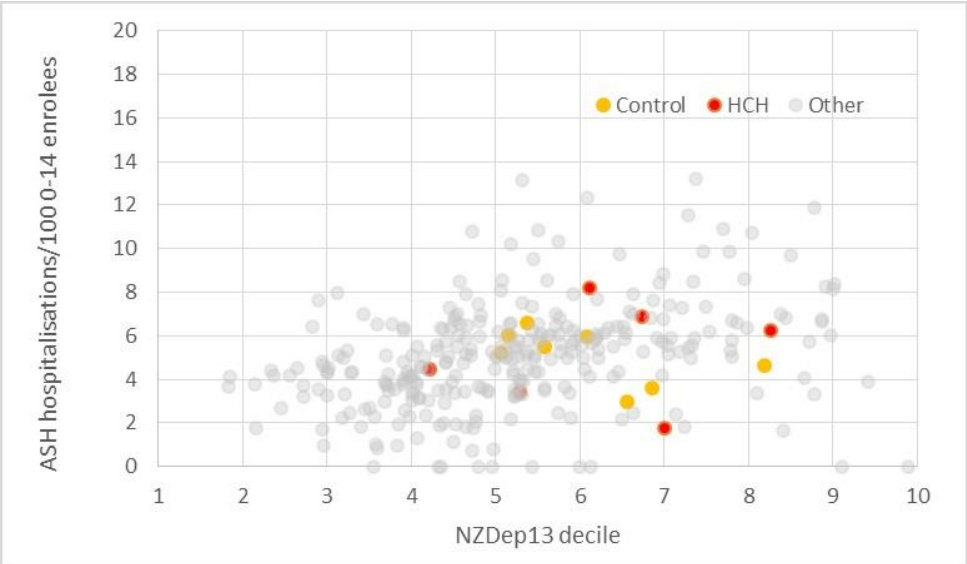


Figure 36: Proportion of enrolees aged 0-14 with an ambulatory sensitive hospitalisation by N4 practice for 2015

Source: PHO registers and NMDS data, EY analysis. All N4 practices excluding student and retirement home practices – "Other" = non-HCH non-control practices.

8.7 Outpatient care

For outpatient care (visits to publicly-funded medical and surgical specialists) no specific change in overall activity was expected with the introduction of the HCH clinics.

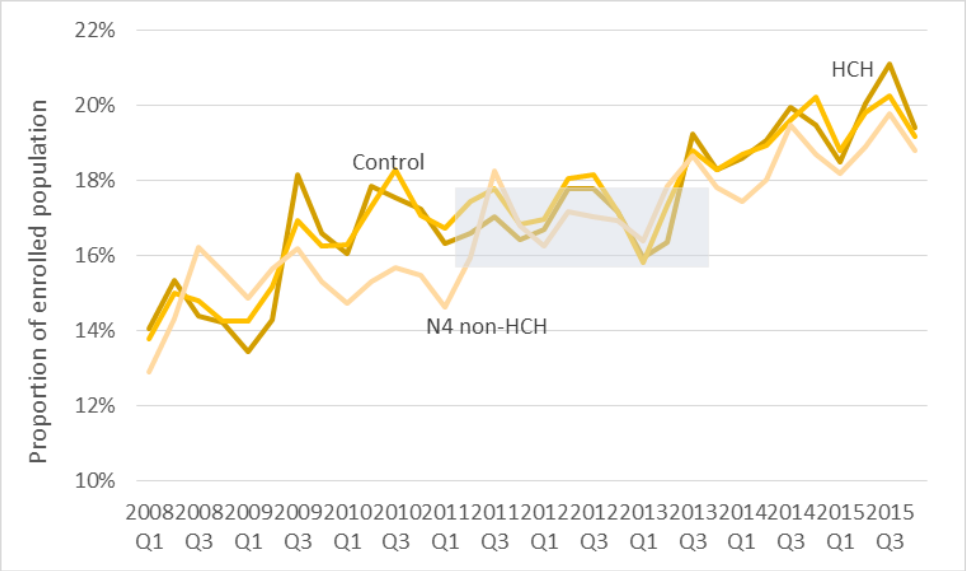


Figure 37: Proportion of enrolees attending an outpatient appointment per quarter, 2008-2015

Source: PHO registers and NMDS data, EY analysis. Includes all attended medical/surgical outpatient visits

However, there was potential for the rate of non-attendance (so-called DNAs) to fall as a result of better-engaged patients. However, many DHBs have been active in this area, with text reminders and other initiatives designed to improve efficiency in the outpatient setting including reducing DNA rates, which may swamp any HCH effect.

Overall DNA rates fell in both HCH and control practices, while remaining largely steady in non-HCH non-control N4 practices (see below). Non-attendance rates tend to be higher for Māori, Pacific and more deprived populations – an effect reflected in the higher DNA rates for the control and HCH practices compared with the rest of N4.

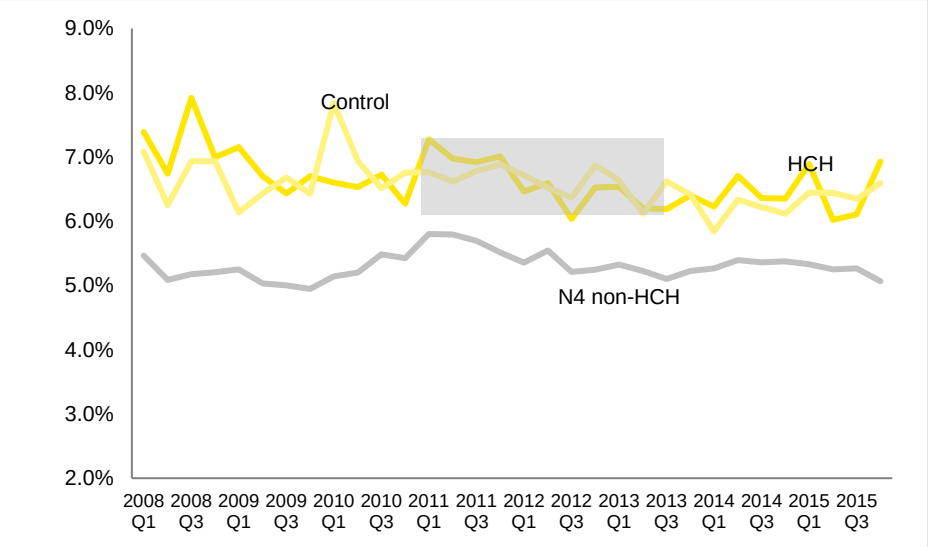


Figure 38: Proportion of enrolees not attending an outpatient appointment per quarter, 2008-2015

Source: PHO registers and NNPAC data, EY analysis. Includes medical and surgical outpatients.

Three of the HCH practices had falls in non-attendance rates in the before/after analysis, while three were stable or rose slightly. Control practices showed a similar mix, while the other N4 practices showed a small fall. No particular effect of HCH introduction is evident.

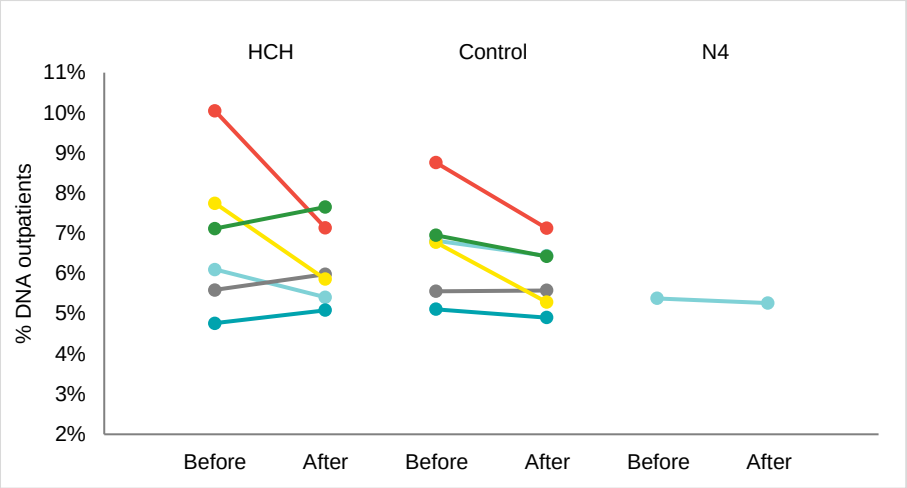


Figure 39: Proportion of enrolees not attending an outpatient appointment by practice before/after HCH instigation

Source: PHO registers and NMDS data, EY analysis. 'Before' = the three years prior to commencement, 'After' = period from 6 months after commencement to Dec 2015 (2-4 years). N4 = non-HCH non-control practices excluding student health and retirement home practices.

8.8 Partial implementation

Four practices in one PHO and two in another PHO implemented aspects of the HCH model. While not part of the main comparison, time trends are shown in Appendix B. Like the other HCH practices analysed, a wide variety of practice size and make-up is evident. No major differences over time were seen in these 'potential' HCH practices compared with the non-HCH non-control N4 average[15] for this high-level comparison, although there is a hint of a reduction in hospitalisation rates towards the end of the time period.

[15] The comparison used was the same as the main analysis – the N4 practices excluding those involved in the main analysis – HCHs or controls, and excluding student practices and those based in retirement or rest homes.

9. Conclusion

This evaluation of the New Zealand Health Care Home draws together previous qualitative evaluations and analyses quantitative data related to hospital activity. The defining feature of the evaluation was the development of a programme logic model that described the elements of the HCH and tracked them to desired outcomes. This then formed the foundations for a HCH Performance Framework and the identification of a possible set of indicators. These will require further discussion.

The evaluation findings have generally been positive with regards to the implementation of the model, although quantitative analysis of hospital data has not shown significant changes. This evaluation provides information that is of interest nationally and to other practices considering implementing the HCH.

Appendix A Summary of national and international primary care performance indicators

Table 18: National and international PC performance indicators

Country	Framework	Characteristics	Elements	Level
NZ	System Level Measures Framework[16]	**System Level Measures** are high-level goals for the health system that help show the outcomes of the system – how it is performing and the value the country is receiving from it. **Contributory measures** have a quality improvement focus and are front line service level measurements that show a tangible and meaningful result of the interaction between clinicians and patients. They are locally chosen based on the needs and priorities of communities and district level health services.	The four new System Level Measures implemented from 1 July 2016 are: 1. Ambulatory Sensitive Hospitalisation (ASH) rates per 100,000 for 0-4 year olds (i.e. Keeping children out of the hospital) 2. Acute hospital bed days per capita (i.e. Using health resources effectively) 3. Patient experience of care (i.e. Person-centred care) 4. Amenable Mortality rates (i.e. Prevention and early detection) 5. The following two System Level Measures are being developed for implementation from 1 July 2017: 6. Proportion of babies who live in a smoke-free household at six weeks post natal (i.e. Healthy start) 7. Youth access to and utilisation of youth appropriate health services (i.e. Teens make good choices about their health and wellbeing) ► Two of the five 2015/16 IPIF measures remain National Health Targets: Better help for smokers to quit and Increased immunisation at eight months old. More heart and diabetes checks and Increased immunisation for two year olds remain DHB non-financial performance measures. These along with cervical screening coverage are important measures that contribute to the System Level Measures of Ambulatory Sensitive Hospitalisation (ASH) rates for 0–4 year olds, Acute hospital bed days and Amenable mortality rates.	System / Service
NZ	Whānau Ora Collectives[17]	Performance of general practices in Whānau Ora collectives	1. CVD risk recorded 2. Diabetes patient review 3. Diabetes management 4. Smoking cessation advice 5. Cervical smear recorded 6. Mammography for high needs 7. Flu vaccination 65+ 8. Percentage of enrolled patients with prescriptions for conditions and diagnosis 9. Mental health 10. Mean fee charged for enrolled patients 11. Median BMI of enrolled patients	Practice

[16] http://www.health.govt.nz/new-zealand-health-system/system-level-measures-framework/system-level-measures-framework-questions-and-answers

[17] Ministry of Health. 2016. *Report on the Performance of General Practices in Whanau Ora Collectives as at September 2015*. (2016) Wellington: Ministry of Health.

Country	Framework	Characteristics	Elements	Level
USA	PCMH[18]	2014 PCMH Performance Indicators, including "must haves"	1. Patient Centered Access ► Patient Centered Appointment Access ► 24/7 Access to Clinical Advice ► Electronic Access 2. Team Based Care ► Continuity ► Medical Home Responsibilities ► Culturally and Linguistically Appropriate Services ► The Practice Team 3. Population Health Management ► Patient Information ► Clinical Data ► Comprehensive Health Assessment ► Use Data for Population Management ► Implement Evidence-Based Decision Support 4. Care Management and Support ► Identify Patients for Care Management ► Care Planning and Self-Care Support ► Medication Management ► Use Electronic Prescribing ► Support Self-Care & Shared Decision Making 5. Care Coordination and Care Transitions ► Test Tracking and Follow-Up ► Referral Tracking and Follow-Up ► Coordinate Care Transitions 6. Performance Measurement and Quality Improvement ► Measure Clinical Quality Performance ► Measure Resource Use and Care Coordination ► Measure Patient/Family Experience ► Implement Continuous Quality Improvement ► Demonstrate Continuous Quality Improvement ► Report Performance ► Use Certified EHR Technology	PCMH / Practice

[18]NCQA, Sneak Preview: 2014 Patient-Centered Medical Home Recognition; http://www.ncqa.org/newsroom/media-events/sneak-preview-new-ncqa-pcmh-standards

Country	Framework	Characteristics	Elements	Level
USA	ACO[19]		1. Patient/caregiver experience (8 measures) 2. Care coordination/patient safety (10 measures) 3. At-risk population ► Diabetes (2 measures evaluated as a 1 composite measure) ► Hypertension (1 measure) ► Ischemic Vascular Disease (1 measure) ► Heart Failure (1 measure) ► Coronary Artery Disease (1 measure) ► Depression (1 measure) 4. Preventive Care (8 measures)	Practice / PO
England	QOF[20]	Focuses on disease registers and application of evidence-based guidelines	Clinical Indicators relate to treatment for key clinical conditions, including: ► CVD ► Respiratory ► Dementia ► Mental Health ► Cancer ► Muscular Skeletal conditions ► End of life Population/preventive indicators relate to: ► CVD prevention ► Blood pressure ► Obesity ► Smoking ► Cervical cancer screening ► Contraception	Practice
Scotland	QOF[21]	Scotland is in the process of moving from the QOF to a new model of performance management, which removes the link between the QOF and payments but requires action from practices in specific areas.	Scotland is currently reviewing its performance framework and focusing on reporting against: ► Integration and GP Cluster working ► Flu immunisation ► Access ► Anticipatory Care Plans (ACPs) ► Datasets for Continuous Quality Improvement ► Quality Prescribing	Practice

[19] RTI International; Accountable Care Organization 2015 - Program Analysis Quality Performance Standards Narrative Measure Specifications
[20] https://www.bma.org.uk/gofguidance
[21] https://www.bma.org.uk/collective-voice/committees/general-practitioners-committee/gp-contract-negotiations/contract-agreement-scotland

Country	Framework	Characteristics	Elements	Level
Canada	Primary Care Quality Indicators[22]	Ontario has developed a comprehensive set of 229 quality indicators for primary care.	1. Access 2. Patient-Centredness 3. Integration 4. Effectiveness 5. Focus on Population Health 6. Efficiency 7. Safety 8. Appropriate Resources 9. Equity	Practice and system
Australia	Aboriginal and Torres Strait Islander Primary Health Care[23]		1. Maternal and child health indicators ► First antenatal visit (at <13 weeks) ► Birthweight recorded ► Birthweight result (low) ► MBS health assessment—children aged 0-4 ► Child immunisation 2. Preventative health indicators ► Smoking status recorded ► Alcohol consumption recorded ► MBS health assessment—adults aged 25 and over ► Cervical screening – 2 years ► Clients aged 50 and over who were immunised against influenza ► Smoking status result - Current smoker ► BMI classified as overweight and obese 3. Chronic disease management indicators ► General Practitioner Management Plan—clients with type 2 diabetes ► Team Care Arrangement—clients with type 2 diabetes ► Blood pressure recorded—clients with type 2 diabetes ► HbA1c result recorded (6 months)—clients with type 2 diabetes ► Kidney function test recorded for clients with Type 2 diabetes, CVD ► Immunised against influenza, clients with Type 2 diabetes, COPD ► Blood pressure result is ≤130/80mmHg—clients with type 2 diabetes ► HbA1c result (6 months, ≤7%)—clients with type 2 diabetes	Practice / system

[22] http://www.hqontario.ca/portals/0/Documents/pr/pc-performance-measurement-framework-en.pdf
[23] Australian Institute of Health and Welfare 2015. National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care: results from December 2014. National key performance indicators for Aboriginal and Torres Strait Islander primary health care series no.3. Cat. no. IHW 161. Canberra: AIHW.

Appendix B Partially implemented HCH practices

Four practices in one PHO and two in another PHO implemented aspects of the HCH model. While not part of the main comparison, time trends are shown here. Like the other HCH practices a wide variety of practice size and make-up is evident. No major differences over time were seen in these 'potential' HCH practices compared with the non-HCH non-control N4 average[24] for these high level measures, although there is a small reduction in hospitalisation rates towards the end of the period.

Demography

The potential HCH practices ranged in size from 3,000 to 19,000 enrolees in 2015. The main changes seen over time come with doctors arriving or leaving the practice concerned, taking their patient lists with them (see below).

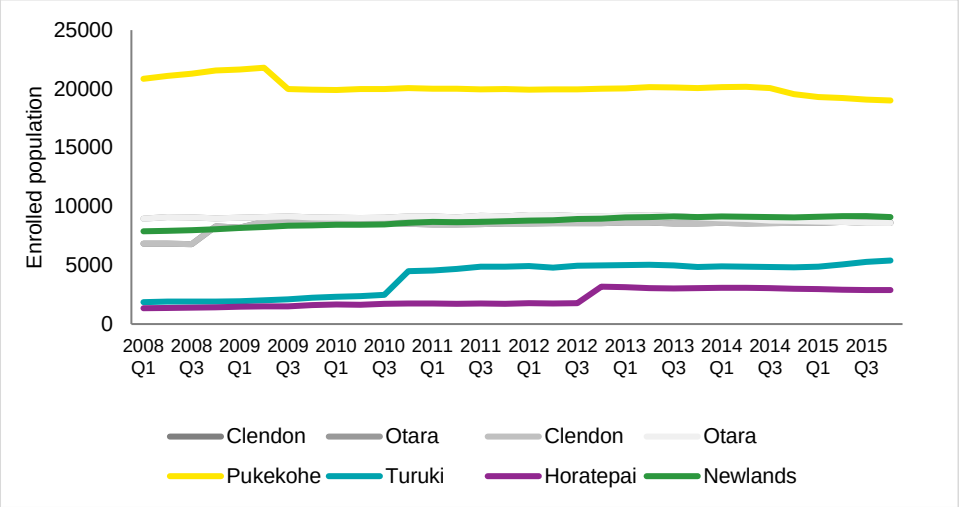


Figure 40: Enrolled populations for potential HCH practices per quarter, 2008-2015

Source: PHO registers

The potential HCH practices had higher proportions of 0-14 year olds than the average for N4 (Figure 41), and a corresponding lower proportion of elderly (Figure 42).

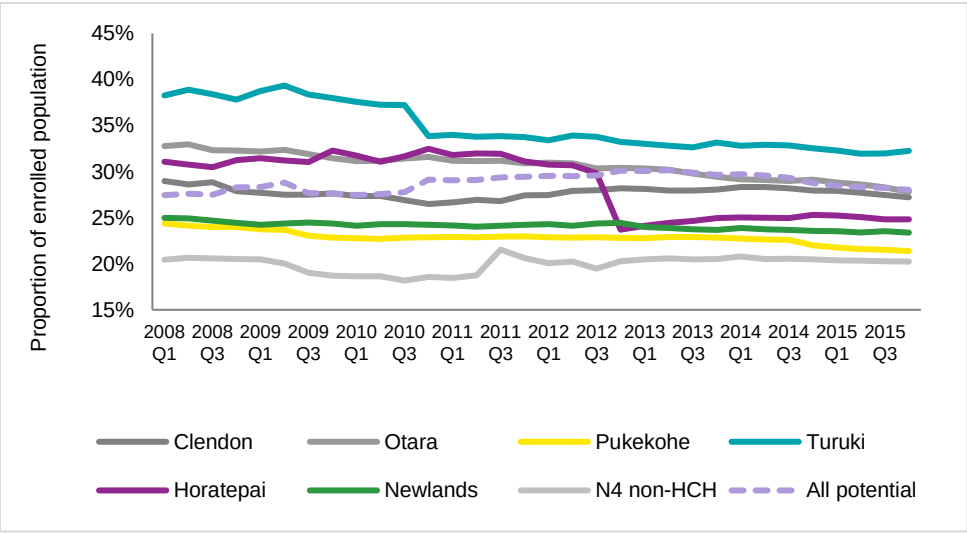


Figure 41: Proportion of enrolments aged 0-14, 2008-2015 by quarter

Source: PHO registers

[24] The comparison used was the same as the main analysis – the N4 practices excluding those involved in the main analysis – HCHs or controls, and excluding student practices and those based in retirement or rest homes.

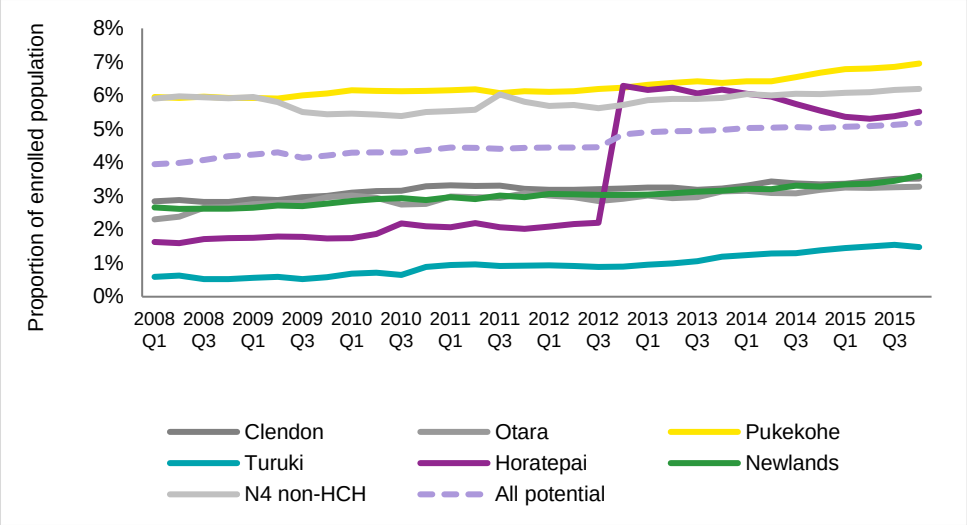


Figure 42: Proportion of enrolments aged 75+, 2008-2015 by quarter

Source: PHO registers

Several of the potential HCH practices had very high (over 80%) Māori and Pacific people enrolment, while others were around the N4 practice average of 18% (Figure 43).

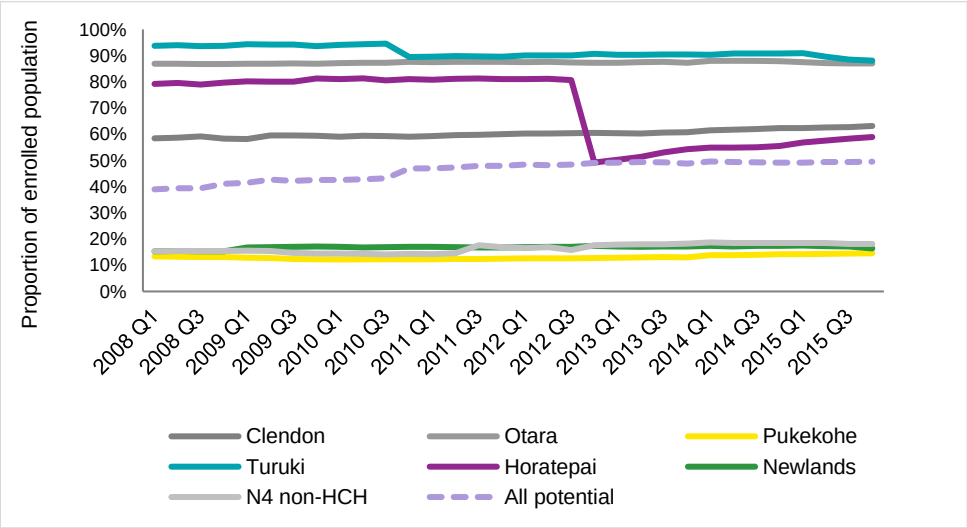
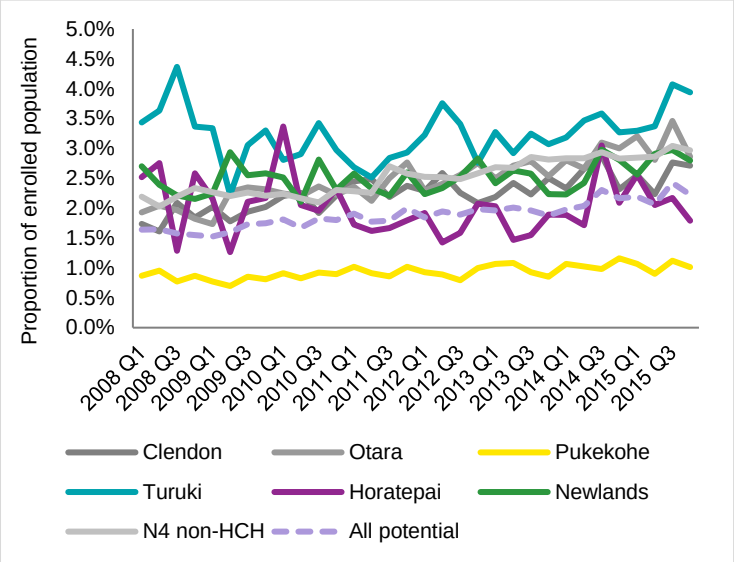


Figure 43: Proportion of enrolments Māori or Pacific, 2008-2015 by quarter

Source: PHO registers

Utilisation

ED non-admitted attendance rates varied across the practices, but the overall trend was for the potential HCH practices was similar to that for non-HCH N4 practices overall (Figure 44). If one takes calendar year 2015 and compares with calendar year 2011 then the potential HCH practices increased 0.4 percentage points, while non-HCH N4 practices increased 0.5.

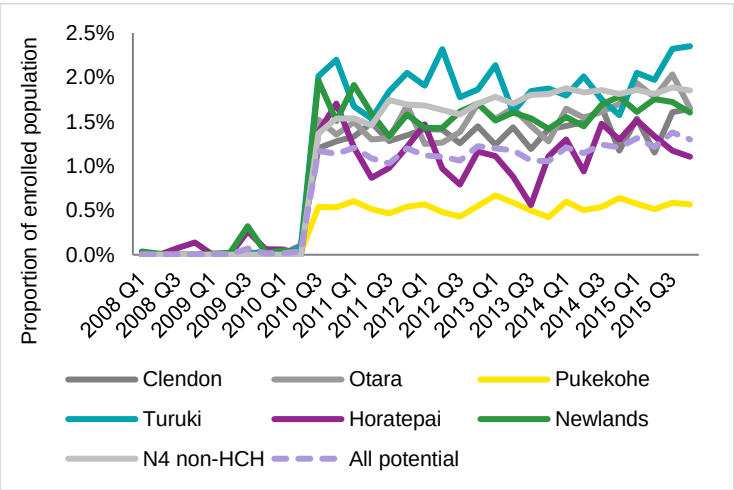


	2011	2015	Diff
Clendon	2.4%	2.6%	0.2%
Otara	2.4%	3.1%	0.6%
Pukekohe	1.0%	1.0%	0.1%
Turuki	2.7%	3.7%	0.9%
Horatepai	1.7%	2.1%	0.4%
Newlands	2.4%	2.8%	0.4%
All potential	1.9%	2.2%	0.4%
N4 non-HCH	2.5%	2.9%	0.5%

Figure 44: Proportion of enrolees attending ED per quarter, 2008-2015 (non-admitted only)

Source: PHO registers and NNPAC data, EY analysis

ED triage 4 and 5 attendance rates showed similar variability across the practices, with a similar overall trend. Comparing 2015 with 2011 potential HCH practices and non-HCH N4 practices both increased 0.2 percentage points.

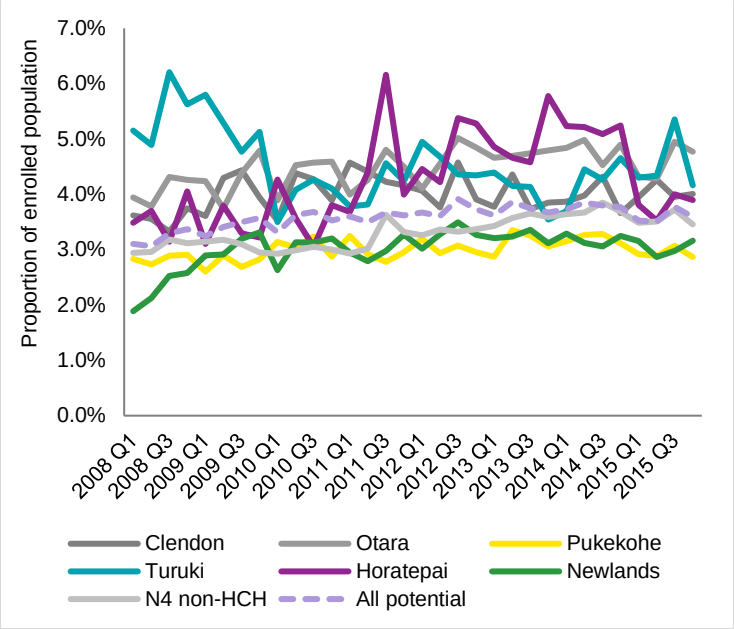


	2011	2015	Diff
Clendon	1.4%	1.5%	0.1%
Otara	1.4%	1.8%	0.4%
Pukekohe	0.5%	0.6%	0.0%
Turuki	1.8%	2.2%	0.4%
Horatepai	1.1%	1.3%	0.2%
Newlands	1.6%	1.7%	0.1%
All potential	1.1%	1.3%	0.2%
N4 non-HCH	1.6%	1.9%	0.2%

Figure 45: Proportion of enrolees attending ED in triage 4 and 5 categories per quarter, 2008-2015

Source: PHO registers and NNPAC data, EY analysis

In any one quarter 3% to 5% of enrolees in potential HCH practices were hospitalised for an acute medical/surgical condition, with the rates rising across the time period (Figure 46). Increases were similar to that for the non-HCH N4 practices across the 8 years, but comparing 2015 with 2011 the potential HCH practices showed no growth in aggregate, while the non-HCH N4 practices showed a 0.3 percentage point growth.

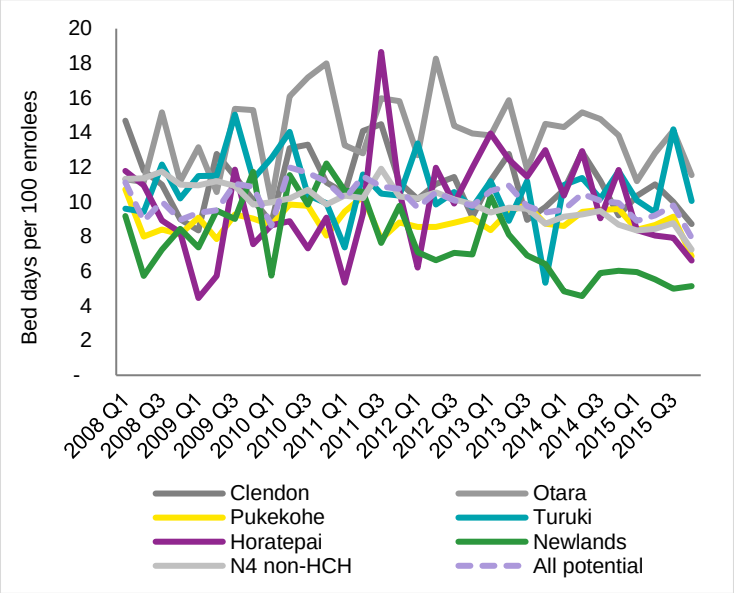


	2011	2015	Diff
Clendon	4.3%	4.0%	-0.3%
Otara	4.4%	4.6%	0.2%
Pukekohe	3.0%	2.9%	0.0%
Turuki	4.1%	4.5%	0.4%
Horatepai	4.6%	3.8%	-0.7%
Newlands	3.0%	3.0%	0.0%
All potential	3.6%	3.6%	0.0%
N4 non-HCH	3.2%	3.5%	0.3%

Figure 46: Proportion of enrolees hospitalised per quarter, 2008-2015

Source: PHO registers and NMDS data, EY analysis. Includes medical-surgical acute or arranged hospitalisations

Days in hospital fell across the time period, with potential HCH practices having a slightly lower fall than non-HCH N4 practices from 2011 to 2015 (Figure 47).

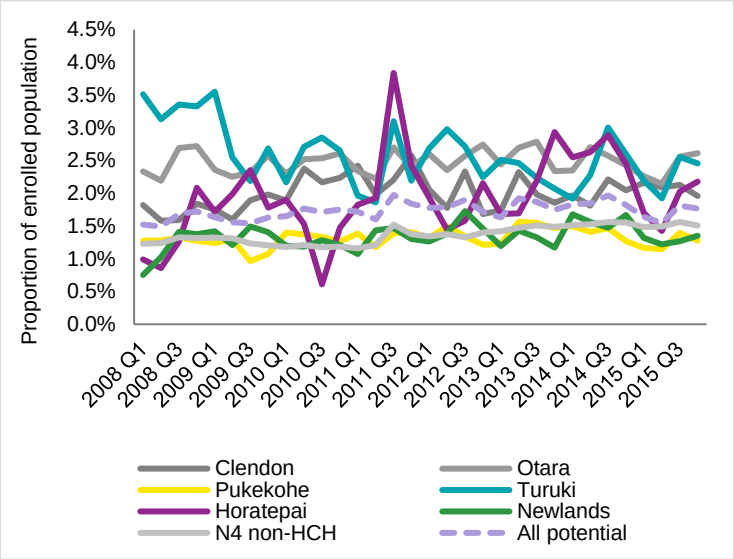


	2011	2015	Diff
Clendon	12.6	10.0	-2.5
Otara	14.5	12.4	-2.0
Pukekohe	9.1	8.3	-0.8
Turuki	9.9	10.9	1.0
Horatepai	11.0	7.7	-3.2
Newlands	9.7	5.4	-4.2
All potential	10.8	9.0	-1.9
N4 non-HCH	10.7	8.2	-2.5

Figure 47: Bed days per 100 enrolees per quarter, 2008-2015

Source: PHO registers and NMDS data, EY analysis. Includes medical-surgical acute or arranged bed days.

ASH rates for adults rose across the time period for non-HCH N4 practices (Figure 48), while potential HCH practices rose then fell slightly after 2011.

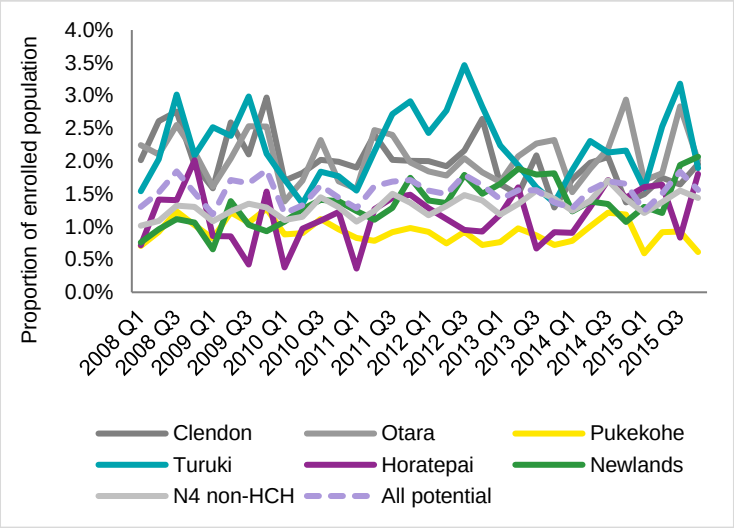


	2011	2015	Diff
Clendon	2.3%	2.1%	-0.2%
Otara	2.4%	2.4%	0.0%
Pukekohe	1.3%	1.2%	-0.1%
Turuki	2.3%	2.3%	0.0%
Horatepai	2.5%	1.8%	-0.7%
Newlands	1.3%	1.3%	0.0%
All potential	1.8%	1.7%	-0.1%
N4 non-HCH	1.3%	1.5%	0.2%

Figure 48: Proportion of enrolees aged 15-74 with an ambulatory sensitive hospitalisation per quarter, 2008-2015

Source: PHO registers and NMDS data, EY analysis based on MOH ASH ICD10 codes. Includes medical-surgical acute or arranged hospitalisations – note elective dental admissions normally included in ASH are excluded from this analysis as not likely to be affected by the HCH initiative.

ASH rates for children rose slightly across the time period for non-HCH N4 practices, while potential HCH practices had if anything a slight fall (Figure 49).

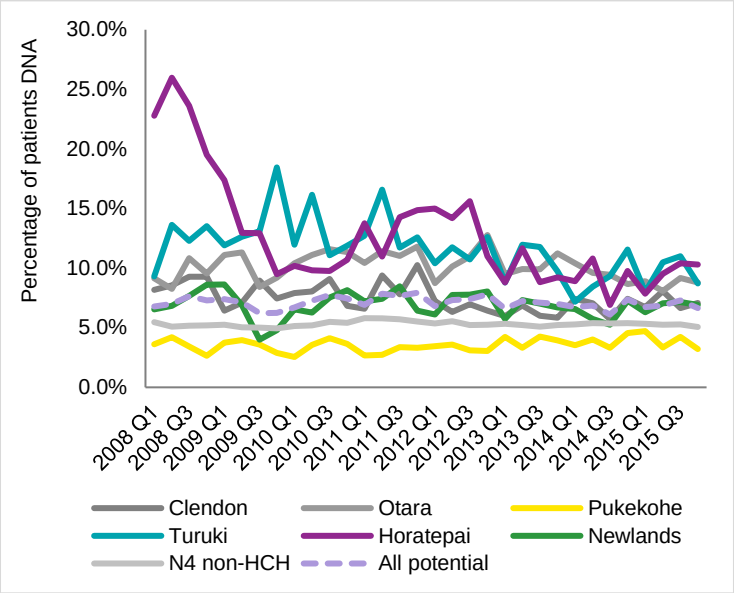


	2011	2015	Diff
Clendon	2.1%	1.7%	-0.4%
Otara	2.1%	2.1%	0.0%
Pukekohe	0.9%	0.8%	-0.1%
Turuki	2.3%	2.3%	0.0%
Horatepai	1.1%	1.5%	0.3%
Newlands	1.3%	1.6%	0.3%
All potential	1.6%	1.5%	0.0%
N4 non-HCH	1.3%	1.4%	0.1%

Figure 49: Proportion of enrolees aged 0-14 with an ambulatory sensitive hospitalisation per quarter, 2008-2015

Source: PHO registers and NMDS data, EY analysis based on MOH ASH ICD10 codes. Includes medical-surgical acute or arranged hospitalisations – note elective dental admissions normally included in ASH are excluded from this analysis as not likely to be affected by the HCH initiative.

Overall outpatient DNA rates fell in both potential HCH and non-HCH N4 practices in a similar fashion between 2011 and 2015 (Figure 50).



	2011	2015	Diff
Clendon	8.5%	7.1%	-1.4%
Otara	11.2%	8.7%	-2.4%
Pukekohe	3.0%	3.9%	0.8%
Turuki	13.4%	9.5%	-3.9%
Horatepai	13.5%	9.5%	-4.0%
Newlands	7.4%	6.9%	-0.5%
All potential	7.6%	6.9%	-0.7%
N4 non-HCH	5.7%	5.2%	-0.5%

Figure 50: Proportion of enrolees not attending an outpatient appointment per quarter, 2008-2015

Source: PHO registers and NNPAC data, EY analysis. Includes medical and surgical outpatients.

Appendix C Domains of the NZ HCH Implementation Tool

Table 19: Domains of the NZ HCH Implementation Tool

Managing unplanned care											
1	**Characteristic**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1.1	The approach to providing same-day access relies on	…squeezing in urgent patients into a clinician's schedule.	…designating a "clinician of the day" who has slots open for urgent care.		…reserving a few slots in each clinician's daily schedule for urgent appointments.			…systematically implementing a schedule that reserves sufficient appointment slots each day to match documented historical demand.			
1.2	Appointment systems	…are limited to a single office visit type.	…provide some flexibility in scheduling different visit lengths.		…provide flexibility and include sufficient capacity for same day visits.			…are flexible and can accommodate customized visit lengths, same day visits, scheduled follow-up, phone and email, and multiple provider visits.			
1.3	Contacting the practice team during regular business hours	…is difficult.	…relies on the practice's ability to respond to telephone messages.		…is accomplished by staff responding by telephone within the same day.			…is accomplished by providing a patient a choice between email and phone interaction, utilizing systems which are monitored for timeliness and ensuring no calls are missed.			
1.4	Triage, either by phone or email	…is not done systematically.	…is limited to providing patients appointment times/modalities based on assessed need.		…assesses patient needs in a systematic manner to appropriately decide the next step of care.			…assesses patient needs in a systematic manner, including the use of a senior, experienced clinician managing the call directly avoiding the need for the patient to visit the practice.			
1.5	The booking system	…only includes individual, face-to-face visits with doctors.	…includes a few visit formats, such as visits with chronic care nurses and/or group visits.		…includes a variety of visits formats convenient to the patient, such as group visits, home visits, email or phone visits, visits with non-GP members of the care team.			…includes a variety of visits formats; the number of doctor visits is reduced to allow time for group and e-visits, and a significant amount of care is provided through alternatives to the doctor visit. Any planned care needs are incorporated where possible.			
1.6	Planned same day phone/email consultations	…are not done.	…are done sometimes but not done systematically.		…are available to avoid the need for the patient who does not need a physical examination to visit the practice.			…are a planned regular part of the practice day, avoiding the need for the patient who does not need a physical examination to visit the practice.			
1.7	Practice operating hours	…are a normal business day, 4.5 days a week.	…are a normal business day, 5 days a week.		…are extended one or two weekdays until at least 8pm.			…are a regular part of the practice three or more weekdays to 8pm and/or Saturdays.			

Planned proactive care											
2	**Characteristic**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
2.1	A patient who comes in for an appointment and is overdue for care (e.g. diabetes monitoring, cancer screening)	…will only get that care if they request it or their provider notices it.	…might be identified as being overdue for needed care through a health maintenance screen or system of alerts, but this is inconsistently used.		…will likely be identified as being overdue for care through a health maintenance screen or system of alerts, but team members may not act on these overdue care items e.g. due to capacity constraints			…will be identified as being overdue for care through a health maintenance screen or system of alerts that is used consistently, and all appropriate team members may act on these overdue care items as capacity is available.			
2.2	When patients are overdue for care (e.g. diabetes check, cancer screen) but do not come in for an appointment	…there is no effort on the part of the practice to contact them to ask them to come in for care.	…they might be contacted as part of special events or using volunteers but outreach is not part of regular practice.		…they would be contacted and asked to come in for care, but team members may not act on these overdue care items without patient-specific orders from the doctor			…as a practice routine they would be contacted and asked to come in for care, with team members acting on these overdue care items (e.g. order lab tests) based on standing orders.			
2.3	Visits	…largely focus on acute problems of patient.	…are organized around acute problems but with attention to ongoing illness and prevention needs if time permits.		…are organized around acute problems but with attention to ongoing illness and prevention needs if time permits. The practice also uses subpopulation reports to proactively call groups of patients in for planned care visits.			…are organized to address both acute and planned care needs. Tailored guideline-based information is used in pre-visit team meetings (e.g. "huddles") to ensure all outstanding patient needs are met at each encounter.			
2.4	Patients are encouraged to see their preferred GP and practice team	…only at the patient's request.	…by the practice team, but is not a priority in appointment scheduling.		…by the practice team and is a priority in appointment scheduling, but patients commonly see other GPs because of limited availability or other issues.			…by the practice team, is a priority in appointment scheduling, and patients usually see their own GP or practice team.			
2.5	Practice-level reports on care outcomes	…are not routinely available within the practice.	…are available within the practice for some measures (e.g. immunisation rates), but not reported externally.		…are routinely available for a range of measures, and sometimes reported externally (e.g. to patients, other teams or external agencies)			…are routinely and transparently reported externally to patients, other teams and external agencies.			
2.6	Disease registers/high care needs patient identification	…are not available to assess or manage care for practice populations.	…are available to assess and manage care for practice populations, but only on an ad hoc basis.		…are regularly available to assess and manage care for practice populations, but only for a limited number of diseases and risk states.			…are routinely used for pre-visit planning and patient outreach, across a comprehensive set of diseases and risk states. Population risk stratification takes place. High and complex needs patients have a named care coordinator.			
2.7	Evidence to guide care for individual patients	…is not available to practice teams for pre-visit planning or patient outreach.	…is available to practice teams in the form of guidelines or pathway information but are not much used for care planning or patient outreach.		…is available to practice teams, and used for referrals, care planning and patient outreach, but only for a limited number of diseases and risk states.			…is available to practice teams, embedded in the electronic health record, and routinely used for individualised care planning, including pre-visit and patient outreach, across all common diseases and risk states.			
2.8	Health plans or care plans for patients	…are not routinely developed or recorded.	…are developed and mostly recorded but reflect providers' priorities only, with no framework.		…are developed collaboratively with patients and families and include self-management and clinical goals. They are done within an agreed framework, but on an ad hoc basis.			…are developed collaboratively, include self-management and clinical management goals, routinely recorded and guide care at subsequent points of service, and may be shared with other healthcare providers. Most patients have a health or care plan.			

Planned proactive care					
2.9	Multidisciplinary meetings on individual patient's care	…do not occur.	…are not part of routine practice.	…occur on an ad hoc basis, not part of systematic organised care.	…are a standard component of care available for very complex patients, and may involve other healthcare providers.

Patient-centred care											
3	**Characteristic**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
3.1	Appointments for planned care	…are in standard slot sizes for physicians only.	…slot sizes vary with patient need.		... can be of varying length, and be with any clinician in the practice.			…can be with any team member, of any length including extended consults, and can include email, phone and other modalities.			
3.2	Patient wait times attending the practice	…are not monitored.	…are not a priority for staff.		…are measured from time to time, and are reduced through assessing likely appointment lengths at booking.			…are minimised through e.g. active management of staff loads throughout the day; clinics run to time, clinicians have reserved time for their other work minimising double-booking. Waiting area space can be reduced, becoming available for other uses.			
3.3	Patient culture, language and other barriers to equitable care	…are not specifically dealt with.	…are managed in an ad hoc way.		…are managed through specific policies, e.g. to address affordability, or ability to access interpreters.			...have a planned approach to facilitate access to care, including managing affordability (e.g. for more deprived families), and culturally-specific needs (e.g. Māori) based on the practice population. Health equity is assessed as part of CQI activity.			
3.4	Self-management support	…is limited to the distribution of information.	…is accomplished by referral to self-management classes or educators.		…is provided by goal setting and action planning with members of the practice team.			…is provided by members of the practice team trained in patient empowerment and problem-solving methodologies, and supported by mobile apps and/or patient electronic access to care plans.			
3.5	Health and care plans	…are not communicated to patients.	…are communicated to patients based on an ad hoc approach.		…are systematically communicated to patients in a way that is convenient to the practice.			…are systematically accessible to patients in a variety of ways that are convenient to patients – e.g. patient portal, mobile apps.			
3.6	Assessing patient and family values and preferences	…is not done.	…is done, but not used in planning and organizing care.		…is done and providers incorporate it in planning and organizing care on ad hoc basis.			…is systematically done and incorporated in planning and organizing care.			
3.7	Involving patients in decision-making and care	…is not a priority.	…is accomplished by provision of patient education materials or referrals to classes.		…is supported and documented by practice teams.			…is systematically supported by practice teams trained in decision making techniques.			
3.8	Patient comprehension of verbal and written materials	…is not assessed.	…is assessed and accomplished by assuring that materials are at a level and language that patients understand.		…is assessed and accomplished by hiring multi-lingual staff if needed, and assuring that both materials and communications are at a level and language that patients understand.			…is supported at an organizational level by translation services, hiring multi- lingual staff, and training staff in health literacy and communication techniques (such as closing the loop) assuring that patients know what to do to manage conditions at home.			
3.9	Measurement of patient-centered interactions	…is not done.	…is done using a survey administered sporadically at the organizational level.		…is accomplished through patient representation on boards and regularly soliciting patient input through surveys.			…is accomplished by getting frequent and actionable input from patients and their families on all care delivery activities, and incorporating their feedback in quality improvement activities.			

Standardisation and efficiency											
4	**Characteristic**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
4.1	Clinicians and clinical support staff	…work in different pairings every day.	…are arranged in teams but are frequently reassigned.		…consistently work with a small group of providers or clinical support staff in a team.			…work as a team, meeting most days to cover the work of the day, including specific patient issues for those attending that day.			
4.2	Workflows for clinical teams	…have not been documented and/or are different for each person or team.	…have been documented, but are not used to standardise workflows across the practice.		…have been documented and are utilized to standardise practice.			…have been documented, are utilised to standardise workflows, and are evaluated and modified on a regular basis.			
4.3	Review of process efficiency	…is undertaken in response to an event.	…is undertaken as part of accreditation and review processes.		...is undertaken regularly using recognised tools such as LEAN.			…is built into practice operations and daily business, with staff trained in efficiency methodologies (e.g. LEAN).			
4.4	Rooms	…are idiosyncratically laid out.	…all have the same basic equipment.		…all have an agreed minimum set of equipment, everything is stored in the same place in each room.			…all have an agreed minimum set of equipment, everything is stored in the same place in each room and a systemised process ensures consumables are replaced routinely.			
4.5	Equipment and supplies	…have not been documented and/or are different for each person or team.	…have been documented, but are not standardised across the practice.		…have been documented and standardised across the practice, and has a specified location.			…have been documented, are standardised, are evaluated and modified on a regular basis, and a systemised process ensures equipment is maintained and consumables are replaced routinely.			
4.6	Change management and continuous improvement for the practice	…is not specifically managed.	…occurs sporadically, usually around urgent issues that have arisen.		…is undertaken as specific projects proactively covering some aspects of the practice.			…is organised and prioritised at a team level, with allocated time to organise and undertake specific projects proactively, covering all aspects of the practice including cultural responsiveness.			
4.7	Continuous clinical quality improvement	…is not specifically managed.	…occurs in some areas of the practice, e.g. through individual audit.		…is supported at the team level with regular measurement and audit.			…is supported at the team level with regular measurement and audit, with allocated time to organise and undertake specific projects proactively, covering all aspects of the practice including health inequalities.			

Co-ordination and integration											
5	**Characteristic**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
5.1	Patients in need of specialty care, hospital care, or supportive community-based resources including Kaupapa Māori	…cannot reliably obtain needed referrals to providers with whom the practice has a relationship.	…obtain needed referrals to providers with whom the practice has a relationship.		…obtain needed referrals to providers with whom the practice has a relationship and relevant information is communicated in advance.			…obtain needed referrals to providers with relevant information communicated in advance, with some visits occurring within the practice.			
5.2	Linking patients to supportive community-based resources	…is not done systematically.	…is limited to providing patients a list of identified community resources in an accessible format.		…is accomplished through planned proactive work within the practice connecting patients with community resources, including whanau support.			…is accomplished through proactive coordination between the health system, community service agencies and patients, including structured, scheduled multidisciplinary team meetings.			
5.3	Access to medication advice and review	…is the patient's responsibility.	…is recommended by the practice and referrals offered to local pharmacies.		…is provided by an on-site pharmacist if requested.			…is proactively provided by a pharmacist who is a member of the practice team.			
5.4	Health records/care summaries	…are not shared.	…are shared within the practice.		…are shared within the practice and with after-hours providers, can be provided ad-hoc to other agencies			…are shared within the practice/ after-hours providers, and a care record is shared systematically with other health and community agencies involved in care.			
5.5	Clinical test results (e.g. lab, radiology)	…are not shared.	…are shared within the practice.		…are shared within the practice and with after-hours providers, can be provided ad-hoc to other agencies			…are shared systematically with other health agencies involved in care (e.g. hospital).			
5.6	Pharmaceutical dispensing information	….is unknown.	…can be found by contacting the local pharmacist.		…is available for individual patients by linking in to a separate system.			…is updated into the patient record, unfilled prescriptions are flagged for attention.			
5.7	Clinical communications	…are kept in hard copy.	…are scanned and kept in the electronic clinical notes.		…are received electronically, and are searchable (e.g. for key words).			…after being actioned are automatically updated into the patient record in a systematic way.			

Workforce Development											
6	**Characteristic**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
6.1	Managers / owners	…are focused on short-term business priorities.	…visibly support and create an infrastructure for process and quality improvement, but do not commit resources.		…allocate resources and actively encourage improvement initiatives.			…support continuous learning throughout the organisation, review and act upon data in a transparent way, and have a long-term strategy and business plan that addresses continuous improvement and sustainability.			
6.2	Clinical leaders	…intermittently focus on improving quality.	…have developed a vision for quality improvement, but no consistent process for getting there.		…are committed to a quality improvement process, and sometimes engage teams in implementation and problem solving.			…consistently champion and engage clinical teams in improving patient experience of care and clinical outcomes, and have a long-term vision for the practice.			
6.3	Workforce planning	…does not have an organised approach in the practice.	…includes routinely assesses staff roles and responsibilities.		…includes routinely assesses staff roles and responsibilities, and supports staff taking on wider roles ("top of scope").			...supports staff taking on wider roles, and actively investigates the value of additional roles (e.g. medical centre assistants) that would add to the team's efficiency and patient well-being.			
6.4	Workforce training	…does not have an organised approach in the practice.	…includes routinely assessing training needs for clinical staff and assures that staff are appropriately trained for their roles and responsibilities.		…includes routinely assessing training needs for all staff, assures that staff are appropriately trained for their roles and responsibilities, and provides some extra training to encourage staffing flexibility.			…includes routinely assessing training needs for all staff, assures that staff are appropriately trained for their roles and responsibilities, and provides opportunities for cross-training and skill enhancement to assure that patient needs are consistently met.			
6.5	Non-clinical care assistants	…play a limited role in patient care.	…are primarily tasked with managing patient flow and triage.		…provide some direct patient services such as assessment or self-management support.			…perform key service roles that match their abilities and credentials, and have organised training.			
6.6	Non-physician clinical practice team members	…play a limited role in providing clinical care.	…are primarily tasked with supporting the physician.		…provide some clinical services such as immunisation, wound care, chronic disease management.			…perform key clinical service roles that match their abilities and credentials, have organised training, and can have scheduled patient appointments.			
6.7	Clinical pharmacists	…are not part of the practice team.	…play a limited role in providing clinical care.		…provide some services such as medication review and reconciliation.			…provide services such as medication review and reconciliation, as well as providing patient consultations.			

Infrastructure											
7	**Characteristic**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
7.1	The practice is physically laid out in a way that	…is indistinguishable from a regular practice.	…standardises consulting rooms.		…allows more effective use of physical space, including standardisation of consulting rooms and better use of waiting areas.			…allows more effective use of physical space, including standardisation of consulting rooms, better use of waiting areas, and largely phone-free reception.			
7.2	Facility infrastructure	…does not include spaces for "off-stage" work	…has allocated some multi-use space that can include "off-stage" work		…includes dedicated space for "off-stage" work			…has been purpose-redesigned to allow for planned HCH processes, including "off-stage" work and team space.			
7.3	Information technology	…is available to support clinicians.	…is available to support clinicians in all rooms, and includes an electronic health record		….supports clinicians with a shared electronic health record, with some automatic bring-ups and prompts individualised to the patient.			…supports all clinicians with a shared electronic health record, embedded evidence and individualised guidance for decision-making, with controllable automatic bring-ups and prompts across all aspects of care.			
7.4	IT infrastructure	…supports a practice-based PMS	…supports some level of patient interaction, e.g. making appointments.		…supports access for patients to their health information, appointment and interactions with practice team.			…supports comprehensive patient access and provider access for shared records with health providers and social care agencies, including Wi-Fi in the practice.			
7.5	Patients	…do not have electronic access to practice data.	… have email access to the practice.		…are able to use email, and have access to basic care information through a patient portal.			…have a choice of ways of accessing comprehensive care records through secure mobile phone or internet-based portals.			
7.6	Telephone and other patient access modalities	…are not monitored for quality.	… are audited from time to time.		…are able to provide call waiting times and alert when calls were missed.			…allow complete monitoring and management of calls, alerts, and messages, including those that were missed or remain unanswered.			

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Review of the EY Health Care Home Evaluation

Background

The idea of integrated, comprehensive primary health care centres is not new and versions of it have been trialled in many countries that have integrated primary care systems. The Pinnacle Midlands Health Network (PMHN) version is predicated on an American model that was developed by a community governed health insurance organisation – Group Health based in Seattle. Group Health concentrated mainly on primary care and did not own many secondary care facilities – rather using its purchasing power as a health insurer to purchase services. Group Health were recently purchased by a more integrated HMO, Kaiser Permanente that owns and runs hospitals as well as primary care centres.

The PHMN Health Care Home has been developed out of its original proposals for an Integrated Family Health Centre that was in line with the Better Sooner More Convenient health strategy. The proposals indicated a range of objectives including trying to make the provision of health services more efficient through changing the workforce model, reducing the need for face to face consultations, a "lean" approach to system change, increasing use of technology and a greater emphasis on patient participation in care. The Group Health model of care also aimed to improve quality through increasing standardisation and the use of evidence to drive health care performance. As a DHB we have supported the Integrated Family Health and Health Care Home initiatives and have looked forward to getting an understanding of the impact that they were having on the health care system as a whole. The key components of good primary care include being a first point of contact with the health system, providing comprehensive primary care services, providing co-ordination of health care services, providing continuity of care and having a good engagement with the community being served. These key components are picked up by the measurement of the key elements of a high performing practice outlined in the evaluation. In addition are the measures of population and preventive health, patient experience, ED use, Costs and efficiency (including costs to patients) and safety and quality. It would have seemed reasonable that as the change to the workforce is an important component of the implementation of the health care home that as part of the costing element of the evaluation changes to the staffing that occurred should have been included.

Proposed evaluation

It does seem that the HCH Model is viewed as a binary intervention – i.e. it has either been taken up or not. However it seems that the model comprises a range of changes to usual practice and that these changes have not been universally adopted or have taken a variable time period to implement. It would seem logical that some of these changes will have more impact than others, and that each component is likely to affect different outcome measures.

From a DHB point of view the key questions that we were interested in were; can changes in the model of care

1. *Impact on quality of care including preventative health activity*

2. *Impact on patient access to primary care*
3. *Impact on primary care system costs*
4. *Impact on the staffing mix and staff time*
5. *Impact on the health care system e.g. through reduced attendances at ED and reduced admission rates to hospital*
6. *Impact on patient experience of care*
7. *Impact on staff experience of the system changes*

These seem reasonable aspirations. Obviously the ability to measure each of these components would vary but we would have liked to have discussed what were the objectives of the evaluation and the methodology to be adopted. Waikato DHB was not included in these discussions. This may be reasonable as the Report is clearly commissioned by N4.

One would have expected a rigorous evaluation to have included a comprehensive review of the literature, a selection of a sufficient number of patients who had experienced the changed model of care and a sufficient control population, a considered measurement of the intervention/change model (so a "dose" response could be considered) and then objective measures of the key outcomes. The inclusion of previous evaluations should have informed this document – but we cannot see evidence of a meta-analysis of data and do not feel that this has added further to our understanding.

We would consider that the report of the literature review is scanty – there are a few references on page 18 and 29 but little else. The literature around the effectiveness of different components of the model of care are extensive and a review and synthesis of the findings would have helped the DHBs understand which of the components of the model of care could be expected to effect changes in health outcomes and health service utilisation. If the findings were consistent with the literature then DHBs could have more confidence in the model of care being truly effective.

The selection of the patient sample is poorly described. It has involved the selection of "intervention" practices and controls. As acknowledged the practice populations differed in size, age profile, ethnicity, SES and in addition the practice population is changing over time with patients leaving and joining during the time period of the evaluation. The practices included in the evaluation vary in the document from 5, 6 (page 44), 7 (page 45) to 12 (page 63). The selection of control practices is not well described including whether they are from the same PHOs. The differences between intervention and control practices are thus difficult to interpret.

Outcome measures

It would have been of interest to understand the differences in quality of care between intervention and control practices. This could have easily been measured using markers such as immunisation rates, smoking cessation advice etc and to have benchmarked the practices against others in the PMHN. In addition in the longer term measures of health outcomes would be hoped for. In particular the emphasis of the MCH on improving chronic disease management is welcome. In future a comparative analysis of changes in quality of care for patients with diabetes, COPD, CVD etc between MCH and control practices would be valuable

With regards access to primary care this is a key component of the model. We are not told how many of the practices offer 24/7 services or what alternative times are available compared with control practices. We would note from our own work in the DHB that the impact on the secondary care services through a practice providing 24 hour cover seems to be a substantial. The aim of improving the access by phone for patients and reducing the number of dropped calls is commendable – but again the difference that this telephone system has made is not systematically evaluated – rather anecdotal examples from some individual practices are quoted. The use of the patient portals and the increased uptake in MCH practices is welcome and an objective measure of change. How the use of portals influences health care has been investigated by PMHN and has been published in a Master's thesis but is not alluded to in this report. It would have been helpful to understand how many patient contacts a day were occurring per doctor and how many of these were face to face compared to the number of daily contacts in control practices. It would also have been good to measure the patient contacts with nurses, MCA and where they are present the pharmacist or physician assistant. The description of this key component of the model of care is well described in the Group Health exemplars and to see how this is being implemented in the New Zealand setting seems a missed opportunity.

More importantly we would have benefited from an understanding of the turnover of staff before and after the Health Care Home was implemented compared to control practices – especially the general practitioners. Staff stability is of particular interest. Continuity of care and being able to access a particular GP is a key factor in reducing hospital use (Bankart).

The true impact on the financial aspects of the changes are also not well documented – especially the co-payments. A description of one practice is included which provides some anecdotal evidence. We can understand these data are sensitive but again the evaluation of the financial aspects does not seem to be adequately covered in this assessment?

As noted the impact on ED attendances and ASH rates are of interest. However as we well known these vary by age, gender, ethnicity, SES and the presence of co-morbidities. Practice factors such as its size and distance from the emergency department are also knon to be important variables. Some of these factors are are alluded to but have not been adjusted for in the analysis. A better methodology would have been to match by patients rather than practice.

With regards patient experience this has been covered in the report from previous assessment. No new data seem to have been collected for this evaluation or compared with patient experience in control practices. Importantly we are not given systematic data on whether patients are staying with the practice following the changes or whether some patients leave. We are aware one HCH has lost 13% of its patients since adopting the new model.

The impact of the changes on staff experience have been adequately covered and the self-reports of progress of change are of interest.

Summary

Overall the range of initiatives instituted by PMHN is of great interest and are in line with the New Zealand Health Strategy. It is interesting that after so many years that the number of PMHN practices adopting the model is so small. . The evidence for the components of the health care home model being able to influence change is not presented in this evaluation or referenced from the literature. We have no measures of how the health care homes are performing with regards important quality indicators such immunisation, smoking cessation etc. The financial impact of the model is not well described but the model seems more expensive and depends on increased flexible funding to offset co-payments from patients. The impact on the secondary care services seem to be minimal and the claim that the model has slowed acute demand is not convincing. The report gives little confidence for DHBs to invest in this model. Another independent report on the Group Health Model reported "To implement fully the GHMH model in NZ would require significant changes to health governance, primary care ownership and health care management at all levels, from national down to practice. The feasibility of such changes being implemented is remote for it would require not only a significant capital injection into primary care, but also total redesign of contracting and health care management processes." (Vause 2011). It would seem as though a more rigorous evaluation of the PMHN Health Care Home model of care is needed

Ross Lawrenson

March 2017

References

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MEMORANDUM TO THE BOARD
26 APRIL 2017

AGENDA ITEM 7.2

CREATING OUR FUTURES PROGRAMME BUSINESS CASE - STRATEGIC ASSESSMENT

Purpose	For approval.

The Creating Our Futures Strategic Assessment document is attached for the Board's review.

The Creating Our Futures Programme Strategic Assessment has been completed for Investment Ministers noting (as part of applying the Better Business Case process). The Strategic Assessment outlines the initial justification for the need to invest in change and is used to support a recommendation to proceed to further business case development. The key purpose of the Strategic Assessment includes:

- identify the strategic context and fit of the proposed investment
- outline the case for change and consider the need for investment
- provide early opportunity for the service and key stakeholders to influence the direction and structure of the proposed programme.

Recommendation
THAT
The Board:

1) Receives the Creating Our Futures Programme Strategic Assessment.
2) Approves the Creating Our Futures Programme.
3) Approves submission of the Creating Our Futures Programme Strategic Assessment to NZ Treasury and the Ministry of Health for presenting to Investment Ministers.
4) Supports the development of a 'Creating Our Futures Programme Business Case'.

DEREK WRIGHT
EXECUTIVE DIRECTOR
MENTAL HEALTH AND ADDICTIONS

IAN WOLSTENCROFT
EXECUTIVE DIRECTOR
STRATEGIC PROJECTS

Better Business Cases

Strategic Assessment:

Waikato DHB Mental Health and Addictions

Creating Our Futures Programme

Prepared by:	Dr Virginia Endres
Prepared for:	-
Date:	10/04/2017
Version:	v0.04
Status:	Approval Version

Better Business Cases
Strategic Assessment

Document Control

Document Information

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V0.01	27/02/2017	Programme Strategic Assessment document initiation
V0.02	23/03/2017	Stakeholder workshop feedback
V0.03	10/04/2017	Working group feedback

Document Review

Role	Name	Review Status
Review	Carol Serra – Treasury assessed BBC Expert Reviewer	23/03/2017; 06/04/2017
Review	Stakeholder Group	23/03/2017
Approval	Creating Our Futures Programme Board	10/04/2017
Approval	MH Clinical Governance Forum	18/04/2017
Approval	Waikato DHB Board	

Document Sign-off

Role	Name	Sign-off Date
Senior Responsible Owner	Derek Wright	
Senior Supplier	Ian Wolstencroft	
Senior User	Vicki Aitken	
Project Director	Dr Virginia Endres	

Contents

Executive Summary

This Waikato District Health Board (DHB) strategic assessment outlines the strategic context and case for change to ensure safe, effective and efficient service delivery and outcomes for Mental Health and Addictions service users and their family whanau, and for staff. This strategic assessment has been developed with input from a range of stakeholders: people with lived experience, staff, providers and community. Through a series of workshops the stakeholders identified and agreed the following key problems and attributed a percentage value to each:

- Problem 1: 33%
  Lack of an integrated and holistic model is resulting in significant barriers to timely and appropriate care.

  There is a growing body of evidence demonstrating the benefits associated with improved models of care. Evidence shows that intervening early before the condition reaches a more severe stage, reduces both the impact of mental illness and co-existing problems; and, reduces the system wide costs associated with the management of long term chronic conditions. Examples of innovative service models describe the opportunities to redesign care delivery in ways that improve and enhance integrated support that takes a *whole person* perspective. Integrated service models can support this by facilitating skills transfer and shifting notions of who is responsible for what and when. The Creating Our Futures programme makes the case for the integration of health and social care; primary and specialist care; and, physical and mental health and addictions.

- Problem 2: 33%
  Current building, designed to fit an outdated institutional model, does not provide a safe, therapeutic and effective environment for service users and staff.

  Despite considerable effort to implement potentially more safe, effective and efficient models of care (and improve space), implementation is being constrained by the need to deliver services within the outdated institutional design of the existing Waikato DHB Henry Rongomau Bennett Centre facility. Essentially, the service has been trying to make the service model fit within environments which cannot support contemporary standards. A number of independent inspections and reviews of the Waikato DHB Henry Rongomau Bennett Centre acute inpatient service found the current facilities do not meet contemporary standards of privacy, security and safety; and provide challenges to staff providing care to acutely unwell service users.

- Problem 3: 33%
  Existing service capacity is not meeting the increasing acuity / complexity and demand which at times results in compromised and unsafe care.

  Models of service delivery that are shown to be most effective and efficient are those that respond to dynamic population values and needs. Emerging issues include the increasing relative level of acuity and the complexities associated with co-morbidities / co-existing problems of individuals referred to our service. With these issues come increasing cost and significant expensive resource requirements. Currently the service has limited visibility of a number of factors they need to enable them to more

effectively match capacity to service user demand. The service information is gathered across a multitude of systems, which involves time consuming recording of clinical documentation, duplication of information into manual systems, and an inability to plan the end-to-end care journey. There is also a lack of ability to undertake production planning in the short or long term, and no way of determining resource requirements. Over the last 20 years, despite increasing demand and change values and need, there has been no significant change in resource capacity.

The Waikato DHB Mental Health and Addictions Creating Our Futures Programme 2016 - 2019 has been developed as a core enabler that will address the transformation required to address the identified problems and challenges. The focus of the programme is the development of a new Model of Care that will inform what it is the service delivers; the acute environment/s and capital infrastructure needed [including, the impacts of NZ Corrections Programme increasing Waikeria prison capacity by 2021; and, the Substance Addiction (Compulsory Assessment and Treatment) Act]; and, the resources required to that support delivery. The four components of the programme:

a) **Service strategy and engagement communication:** will assist the service to lift engagement and integration with the wider sector, which will include satisfaction, culture and values.

b) **Service provision and facilities:** will assist with the environment to support the Model of Care, informed by demand, values, needs, contemporary standards and best practice to ensure future sustainability.

c) **Service delivery:** will inform what it is the service delivers to ensure better health outcomes; and the competency requirements of staff for higher quality of care of our service users.

d) **Service information systems:** commenced under the information systems programme to support innovation and new technologies to support better value for money and greater performance (including, business intelligence toolset, electronic service user journey boards, and a single shared common electronic recovery plan).

The focus of the programme is on the development and implementation of a new Model of Care. If progressed well, the new model will provide an opportunity for Waikato DHB Mental Health and Addictions to actively work as a partner in an integrated health system that provides:

- ✓ Linkages and wrap around care which primarily focuses on forming therapeutic relationships within community
- ✓ Citizenship to maximise participation and inclusion within community
- ✓ An invested and capable community which easily recognises signs and symptoms; can provide early and brief interventions, and has an agenda that is oriented to advancing recovery and anti-stigma
- ✓ Visible, proactive and engaging care where everyone can play their part.

In response to the challenges and barriers identified by stakeholders, this section provides an illustrative outline of the new model of care possibilities.

The potential benefits and attributed value that could be realised through successful investment to address the identified problems were agreed by stakeholders as follows:

- ✓ **Benefit 1** 30%: **Improved access and health outcomes**
  The provision of fully integrated care that ensures the various needs of an individual are being met by using services and information in a co-ordinated way; where medical, social and psychological needs are being addressed together.

- ✓ **Benefit 2** 30%: **Improve experience and engagement**
  Care is advocated and co-ordinated between the different progressive transition components of the care journey.

- ✓ **Benefit 3** 10%: **Therapeutic and safe environments**
  The provision of holistic care and safe spaces to be responsive to the needs of all people.

- ✓ **Benefit 4** 20%: **Operational efficiencies and effectiveness gains**
  Monitoring and managing the care journey; proactive advocacy to ensure individuals have timely access to the most appropriate service: right time, right place, by the right person and in the right way, recognising the recovery journey

- ✓ **Benefit 5** 10%: **Workforce gains**
  Health Professionals are able to work at the top of their scope

This strategic assessment has undertaken a review of the key Mental Health and Addictions service delivery problems and challenges identified by stakeholders. A review of available evidence has confirmed these key challenges remain current and relevant. This assessment will be refined through the development of the several projects and work streams. It is recommended that this document be accepted and that partners continue to work together identify and to agree the next steps, including the development of a ‘Creating Our Futures Programme Business Case’.

Waikato DHB Mental Health and Addictions Creating Our Futures Programme

Introduction

1. This strategic assessment outlines the strategic case for change to ensure Waikato District Health Board (DHB) Mental Health and Addictions service provision is safe, effective and efficient without compromising outcomes for service users and their family whanau, and for staff; and, supports the regions' growing population needs, values and aspirations now and into the future.

2. The purpose of this strategic assessment is to review the key problems and challenges that were identified in the series of stakeholder and investment logic mapping workshops; Mental Health (Compulsory Assessment and Treatment) Act section 99 inspection; independent reviews; and, the Mental Health Strategic Plan 2016 – 2021.

3. The focus of this strategic assessment is on the development of a new Model of Care that will inform what it is the service delivers; the acute environment/s and capital infrastructure needed [including, the impacts of NZ Corrections Programme increasing Waikeria prison capacity by 2021; and, the Substance Addiction (Compulsory Assessment and Treatment) Bill]; and, the resources required to support that delivery. The outcome of this process will be used to help inform the investment priorities for the Creating Our Futures Programme 2016 – 2019, shape programme work packages, and identify new strategic responses that may be required to address specific challenges where gaps currently exist.

4. The remainder of this document identifies the key problems and rationale for investment, outlines the potential benefits of investment, and provides the strategic context and fit for future investment.

Strategic Assessment

The Mental Health and Addictions Creating Our Futures Programme

5. The Waikato DHB Mental Health and Addictions Strategic Plan 2016 – 2021 and Creating Our Futures Programme 2016 - 2019 (the programme) has been developed to progress the wellness and health system opportunities. The programme of work to respond to this strategic case forms the basis for the investment, and the need to challenge the status quo. As a service, we want to be part of a future where we work in partnership to build a new model that is characterised by more convenience, better outcomes, higher quality, better value, and greater performance that could ever be achieved under the current system.

6. The overall aim of the programme is to implement system-wide transformation, as described within the Creating Our Futures new Model of Care[1] by:

[1] Refer to annex 1 for the proposed Model of Care framework.

a. Transforming service delivery in order to improve safety, effectiveness and efficiency.

b. Creating safe and therapeutic environments that support holistic quality care at all times.

c. Building sustainable capacity and capability of services to meet future demand, values and need.

7. The Creating Our Futures programme is the core enabler that will address the transformation required. The four core components that make up the programme are described briefly below:

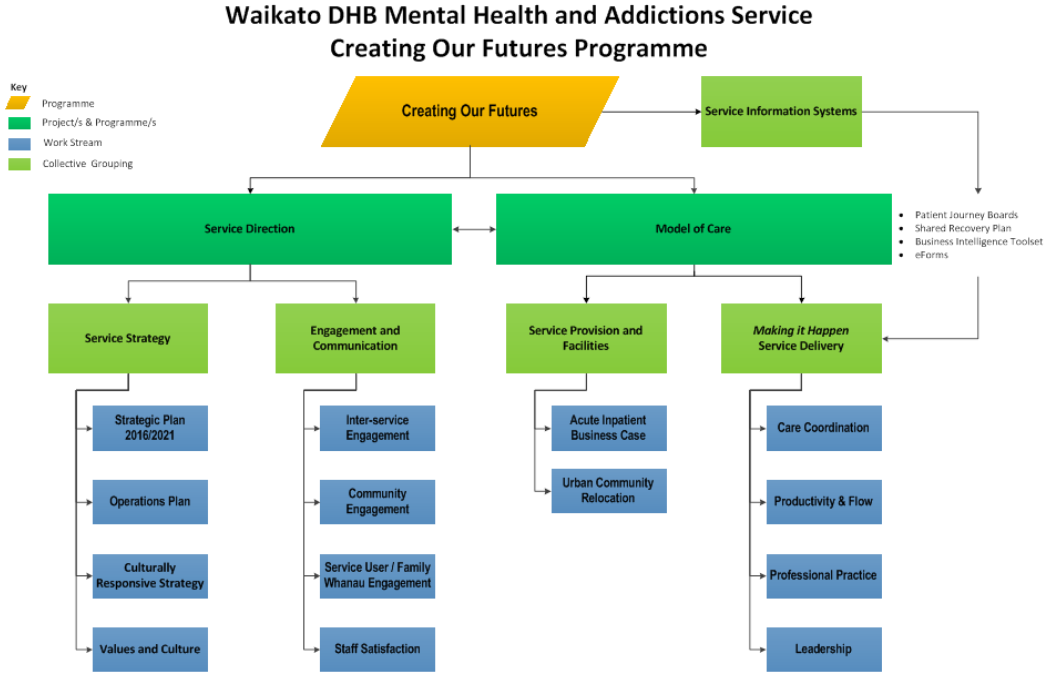
a. **Service strategy and engagement communication:** will assist the service to lift engagement and integration with the wider sector, which will include satisfaction, culture and values.

b. **Service provision and facilities:** will assist with the environment to support the Model of Care, informed by demand, values, needs, contemporary standards and best practice to ensure future sustainability.

c. **Service delivery:** will inform what it is the service delivers to ensure better health outcomes; and the competency requirements of staff for higher quality of care of our service users.

d. **Service information systems:** commenced under the information systems programme to support innovation and new technologies to support better value for money and greater performance (including, business intelligence toolset, electronic service user journey boards, and a single shared common electronic recovery plan).

8. The programme product breakdown:



Meeting the programme aim

9. For Waikato DHB Mental Health and Addictions services this includes the following work streams:

   - ✓ **Care Coordination** – provision of care that facilitates the seamless coordination of holistic interventions and fully integrated transition through the journey of care.

   - ✓ **Productivity and Flow** – processes and systems are in place to monitor and manage capacity, effectiveness and efficiencies; ensuring we are working smarter without compromising the care delivered. This will include conducting a series of time and motion studies to understand the impacts of implementation of programme initiatives.

   - ✓ **Professional Practice** – our workforce is caring, compassionate, courageous, competent, communicates, committed and culturally responsive in the delivery of high quality, safe care based on a culture of accountability, responsibility, continuous improvement, and innovation.

   - ✓ **Leadership Development and Management Capability** – attract, grow and cultivate a sustainable workforce; that are competent and able to work at the top of their scope of practice.

   - ✓ **Values and Culture** – adopt a values based culture that is authentic and includes the measurement of experience and satisfaction.

10. In parallel, the enablers that support the new Model of Care are:

    - ✓ **Information systems** – appropriate systems to support the care journey; and provide transparency and accountability.

    - ✓ **Fit for purpose environments** – spaces are therapeutic at all times and are responsive to the needs and values of the population now and into the future.

Defining the Problem/Opportunity

11. People with lived experience[2], clinical staff members, community, social and health providers have provided feedback on how the Mental Health and Addictions service can improve delivery of safe, effective and efficient services in the Waikato.

12. Through a series of Investment Logic Mapping workshops stakeholders identified three problems that challenge our service delivery.[3] These workshops were held on 22 November and 06 December 2016 independent accredited facilitation; and, 18 January and 08 February 2017 internal accredited facilitation. A service wide staff problem session was also held on 30 November 2016.

13. Our key stakeholders identified three key problems that this assessment seeks to validate:

- Problem 1: 33%
  Lack of an integrated and holistic model is resulting in significant barriers to timely and appropriate care.

- Problem 2: 33%
  Current building, designed to fit an outdated institutional model, does not provide a safe, therapeutic and effective environment for service users and staff.

- Problem 3: 33%
  Existing service capacity is not meeting the increasing acuity / complexity and demand which at times results in compromised and unsafe care.

Benefits/Opportunity of Investment

14. The programme benefits and potential opportunities identified by stakeholders:

Benefit 1: **Improved access and health outcomes** 30%
Mental health and addictions care is delivered as part of the wider health and social care system. The provision of fully integrated care that ensures the various needs of an individual are being met by using services and information in a co-ordinated way; where medical, social and psychological needs are being addressed together. Taking an integrated approach to collectively using resource within and between services that supports the servicer user and their family whanau aspirations to sustain recovery and achieve self-managed wellness.

[2] People with lived experience/s – includes service users and family whanau who are or who have had mental health and addictions experience/s both indirectly or directly. Mental health refers to any form of mental health condition (including, organic or functional), severe mental illness refers to conditions involving psychosis or very high levels of need, and wellbeing as a more general term capturing emotional and psychological state and resilience.

[3] Refer to annex 2 for the full Investment Logic Map.

Benefit 2: **Improved experience and engagement** 30%

Taking the *whole person* and people at heart perspective, where service users and family whanau are partners-in-care. Care is advocated and co-ordinated between the different progressive transition components of the care journey.

There is a need for services to be delivered 'parity of esteem' between mental and physical health – implying that mental health and addictions should be 'as good as' services for physical health.

Benefit 3: **Therapeutic and safe environments** 10%

Wellness should be viewed as an interrelated phenomenon, integrated and harmonious with the environment. Accordingly, the service is obligated to provide holistic and safe spaces to be responsive to the needs of all people, as an enabler for people to feel connected to recovery.

Benefit 4: **Operational efficiencies and effectiveness gains** 20%

Monitoring and managing the care journey; proactive advocacy to ensure individuals have timely access to the most appropriate service: right time, right place, by the right person and in the right way, recognising the recovery journey and that there is no set way.

Better health and information systems will improve the ability of end-users to co-ordinate work patterns and match capacity and capability to demand. Greater visualisation of information and functionality will enable clinicians to plan and see what is expected of them and when; resulting in a less reactive response.

Benefit 5: **Workforce gains** 10%

Health Professionals are able to work at the top of their scope. A focus on productivity and more efficient use of resources, without compromising care and outcomes is required to respond to intensifying demand to achieve and maintain a sustainable workforce.

Strategic Context

Organisational Overview

15. Our Waikato DHB region:

Waikato DHB covers over eight percent of New Zealand's population, from Northern Coromandel to close to Mt Ruapehu in the south, and from Raglan on the west coast to Waihi on the east. It takes in the city of Hamilton and towns such as Thames, Huntly, Cambridge, Te Awamutu, Matamata, Morrinsville, Ngaruawahia, Te Kuiti, Tokoroa and Taumarunui.

16. The Waikato DHB Mental Health and Addictions service has responsibility for ensuring service access to the top three percent[4] of the population who are most severely affected by mental illness. This is in line with the target set by the *Blueprint for Mental Health Services* in New Zealand (MH Commission, 1998).

- ✓ Adult Mental Health and Addictions services
- ✓ Specialty services and Integrated Care Coordination services
- ✓ Mental Health for Older People services
- ✓ Regional Forensic services.

17. The service aims to: strengthen communities, through trust and partnership through:

- ✓ provision of culturally responsive services with a specific focus on improving outcomes for Maori
- ✓ provision of effective and safe service that people and their loved ones trust
- ✓ service users are at the centre of their care
- ✓ ensuring a positive, healthy work environment that nurtures skills, knowledge and a caring attitude
- ✓ as a partner in a holistic system of care, removing barriers to the care and support of individuals, whanau and the community.

[4] Access data over time show that demand for services exceeds the three percent threshold.

18. The Waikato DHB plans to spend $133.8 million in the 16/17 financial year on mental health and addictions services. The funds are allocated as follows:

Waikato DHB Provider Arm[5]	$84.1m
External Providers	$47.2m
Inter-District Flows (IDF)	$2.5m
Forecast Total 16/17 Year	$133.8m

19. The Provider Arm plans to employ 733.3 paid Full Time Equivalent (FTE) in the 16/17 financial year under the following main disciplines.

Medical Personnel	76.8
Nursing Personnel	413.4
Allied Health Personnel	163.3
Management / Administration Personnel	79.8
Forecast Total Personnel	733.3

20. Key Waikato demographics 2015/2016 financial year:

- ✓ Our Waikato population was 394,340
- ✓ Our Waikato population is getting proportionately older (the 65+ year age group is projected to increase by more than 75 percent by 2026)
- ✓ The Waikato Maori population (estimated to be 23 percent of our population) is growing more rapidly than in other parts of New Zealand
- ✓ Our Waikato Pacific population is approximately three percent
- ✓ Approximately 60 percent of our Waikato population live outside the main urban areas
- ✓ Waikato has a larger proportion of people living in areas of high deprivation than in areas of low deprivation.

Anticipated Strategic Fit

21. The Waikato DHB Mental Health and Addictions service has recently refreshed their long term goals, in the context of the wider health and social sector system[6]. The *New Zealand Health Strategy 2016 - 2026* (MoH, 2016) outlines the high-level direction for our

[5] Waikato DHB Provider Arm funds are used for providing acute adult, older persons and forensic inpatient care. The Provider Arm also provides a range of community based services.

[6] Refer to annex 7 for the Waikato DHB Mental Health and Addiction Strategic Plan.

mental health and addictions system: all Waikato individuals live well, stay well, get well, in a system that is people-powered, provides services close to home, is designed for value and high performance, and works as one team in a smart system. The programme involves a focus on integration and coordination of care; innovative technologies; and, culture and values.[7]

a. **People Powered:** people centred - care is focused and organised around the individual health needs (including, mental, physical, social and cultural), aspirations and resources.

b. **Closer to Home:** connected – enable good connections with people and services around the individual no matter where an individual is at in their care journey.

c. **Value and High Performance:** care journey – service users will experience the same rapid access as everyone to quality care at the *right time*, *right order*, *right place*, by the *right person* and in the *right way*.

d. **One Team:** coordinated and joined up – the care journey is coordinated across care settings. People will know where to get help, what to expect when and by whom.

e. **Smart System:** integrated – one common and shared wellbeing plan. Service users, family whanau and professionals are partners in care all working together towards a common goal.

22. The *Commissioning Framework for Mental Health and Addiction: a New Zealand guide* (MoH, 2016) sets out an ideal approach to using available resources to achieve best outcomes in the most efficient, effective and sustainable way (including, mental, physical, social and cultural). The refresh of the Waikato DHB's Mental Health and Addictions strategy and the new Model of Care aims to place people at the heart of their care to achieve equitable access and outcomes. In addition, the programme involves a systematic focus on productivity and professional practice in response to intensifying complexity and acuity of need; and, workload demands.

23. The *Rising to the Challenge: the Mental Health and Addictions Service Development Plan 2012 – 2017* (MoH, 2012) is the keystone for service development. The key themes in the document are better use of resources; improved locality and hospital services integration; cementing and building on gains for the most vulnerable; intervening early in the lifecycle to prevent later problems; seclusion and restraint elimination. The Creating Our Futures programme involves a focus on integrated and joined up responses to care to ensure best use of resources and early intervention before the impact of mental illness and coexisting problems reaches a more severe stage. Delivery of care and support will be planned, proactive and holistic in the least restrictive environment.

24. To support the development, the Waikato DHB Strategy and Funding service Re-Think Programme will direct the development of new inter-sectorial models of care for Adult Mental Health; Older Person; Child and Adolescent; and, Alcohol and Other Drug. In addition, a Waikato region needs assessment is being undertaken in parallel.

[7] Refer to annex 3 for the alignment with the NZ Strategy: Action Plan.

Sector Support

25. This is not a programme that can be run in isolation inside the confines of the Waikato DHB. Indeed, writing a new Model of Care that does not engage the sector and community and take into account the varying needs, desires and requirements of our diverse population would be destined for failure. A co-design approach has been used, where stakeholders have and will continue to have an active and leading role in developing the Creating Our Futures deliverables.

26. Transformative strategies and projects that are closely related to the Creating Our Futures programme:

Table 1 A number of important projects are closely related to the implementation of the new Model of Care and capital infrastructure. Taking into account learnings from these projects as well as accounting for interdependencies will be essential activities.

MINISTRY OF HEALTH
MANATŪ HAUORA

- ✓ NZ Health Strategy 2016
- ✓ Electronic Health Record
- ✓ National Patient Flow Project
- ✓ Case Management and Care Co-ordination Training Project
- ✓ Youth Mental Health Project
- ✓ Hospital Redevelopment Project/s
- ✓ Substance Addiction (Compulsory Assessment and Treatment) Bill

Waikato District Health Board — **Key Projects**

- ✓ Smart Health
- ✓ TeleHealth
- ✓ eData – electronic forms
- ✓ Data eWarehouse Upgrade – business intelligence toolset
- ✓ eIMPACT – patient flow
- ✓ eClinical Health File

creating our futures

- ✓ Care Co-ordination
- ✓ Productivity, Workload and Flow
- ✓ Professional Practice
- ✓ Leadership

NZ Corrections: Prison Capacity Programme (Phase 2) – to ensure there is sufficient capacity to accommodate prisoners over the next ten years

Health Partnerships: National Infrastructure Platform – delivering clinical and financial benefits for DHBs through national infrastructure approach

Midland Region – eSpace: improving Midland Region patient outcomes by enhancing clinician's access to consistent patient information from primary through to tertiary care.

27. To provide the greatest chance for success a range of principles will be developed for how the programme will work in conjunction with the sector to support and enable transformative change:

- ✓ We will utilise approaches like co-design to make efforts to reach out to all groups enabling them to participate, and will respect their contribution.
- ✓ We will utilise national and international experiences and solutions completed and/or underway so as to use learnings and also reduce rework on problems that may have already been solved.
- ✓ We will explore all options for solutions in the proposed programme business case including those described in the Ministry of Health section 99 inspection (Crawshaw, 2016) and the independent Facilities Infrastructure Review (Fjeldsoe, 2015).

- ✓ We will communicate widely and take account of the communication needs, advice required and journey that needs to be taken hand-in-hand with the sector.

- ✓ We will engage early and consistently with the Ministry of Health to make sure that the key elements of the best interests of people we serve are designed into any potential solution, from the outset.

- ✓ We will work closely with other key transformative projects that are under way at Waikato DHB (e.g. Contact Stat linked to progress note solution, eIMPACT patient journey boards, eData best practice algorithms, eWarehouse Qlik Business Intelligence toolset, SmartHealth and Midland Regional DHB eSpace), to ensure technology is transforming our ability.

- ✓ We will work closely with Central Agencies, through the review process and through regular briefings with updates to key stakeholders and monitoring agencies.

28. Lastly, we believe establishing a mechanism to make sure that working together in pursuit of the broader benefits takes precedence. It will be critical for all key stakeholders to work together building, securing and retaining trust in the process, potential solutions and direction of travel.

Case for Change

MH&AS Model of Care

29. The implementation of a contemporary mental health and addictions Model of Care is and has been challenging, where systemic issues have hindered the implementation of the Integrated Care Pathway. This issue is confounded by increasing demand for mental health and addictions services, in terms of numbers, acuity and complexity of need.

30. Recent evidence based model of care reviews include:

    a. **Section 99 Inspection of Waikato District Health Board Mental Health and Addictions Services**[8] (Crawshaw, 2016). In early 2015, there were a number of very difficult and serious events at Waikato DHB Mental Health and Addictions services. Following these events, Dr Crawshaw, Director of Mental Health, used his statutory powers under section 99 of the Mental Health (Compulsory Assessment and Treatment) Act 1992 to inspect the services to ensure they were providing a good quality of care to people in Waikato.

    b. **Time for Change: evaluation of Health Waikato Adult Mental Health and Addictions Services** (Fjeldsoe, Aimer, Meehan, Clapham-Howard and Kidd, 2009). In 2009, an independent review committee evaluated the standard of acute adult inpatient and community care and provided 74 practical recommendations to improve the care provided. The *A Time for Change* programme was undertaken to reset the service Model of Care 2009 – 2013.

31. Summary of the existing arrangements and business needs:

Investment: Problem One 33%	**Lack of an integrated and holistic model, which is resulting in significant barriers to timely and appropriate care.**
Existing Arrangements	Business Need
Care is often unplanned and reactive. The way the service is able to manage and respond to demand makes it difficult for some people for access timely holistic care. The Key working role – genericised health professional practice has reduced the ability to deliver holistic interventions (in which they trained) and multidisciplinary functioning Variable service approaches exists across the health care system (primary, secondary and specialist) means that is not actively engaging some of the population.	Rebalance the focus on proactive and effective recovery and self-managed wellbeing through system integration. Development of a single shared integrated recovery plan. Improved and more equitable health outcomes, particularly among vulnerable populations, brought about through a greater focus on the *whole person,* where care is fully integrated and wrapped around the service user and family whanau (including mental, physical, social and cultural), aspirations and resources. Stronger focus on strengthening early detection and intervention, ensuring all people receive equitable access to care across the system.

[8] Refer to annex 8 for the Crawshaw et al (2016) full section 99 inspection report.

	Improve whanau mental health and wellbeing; including information/resource to develop required capabilities to support self-managed wellbeing.

32. These issues combined are directly correlated with low staff morale and satisfaction, and have resulted in low staff retention.

MH&AS Acute Inpatient Facilities

33. Despite considerable effort to implement potentially more safe, effective and efficient models of care (and improve space), implementation is being constrained by the need to deliver services within the outdated institutional design of the existing Waikato DHB Henry Rongomau Bennett Centre facility.[9] Essentially, the service has been trying to make the service model fit within environments which cannot support contemporary standards. A number of independent inspections[10] and reviews[11] of the Waikato DHB Henry Rongomau Bennett Centre acute inpatient service found the current facilities do not meet contemporary standards of privacy, security and safety; and provide challenges to staff providing care to acutely unwell service users.

34. Recent evidence based acute inpatient facility reviews include:

    a. **Waikato DHB Mental Health and Addictions HRBC Improvement Plan** (Aitken, 2015). Following incidents at Henry Rongomau Bennett Centre, the service made some alterations to the security and fencing, and reconfigured the acute adult ward to an acuity step down model.

    b. **Waikato DHB Mental Health and Addictions Models of Care and Facility Infrastructure Review[12]** (Fjeldsoe, Meehan and Kingswell, 2015). The primary focus of the independent review was the assessment of the Henry Rongomau Bennett Centre capital infrastructure. The assessment was aimed at determining the facilities suitability for development and its capacity to respond effectively and efficiently to existing and emerging models of service delivery for adults requiring acute inpatient care.

    c. **Waikato DHB Functional HRBC Ward Design: Business Case** (Aitken, 2013). A business case was accepted by the Waikato DHB in principle subject to the ability of the organisation to realise the necessary capital funding.

35. International evidence shows that advances in models of care are commonly impeded through existing out-dated institutionally designed facilities unable to meet current

[9] Refer to annex 4 for the summary of acute inpatient services and capital infrastructure.

[10] In early 2015, there were a number of serious events (SAC1 and SAC2) at the Waikato DHB Mental Health and Addictions service. Dr Crawshaw, alongside colleagues from the Ministry of Health and a consumer leader from Te Kupenga Net Trust, carried out this inspection in August 2015.

[11] In 2015 (and 2009) an independent review of the Henry Rongomau Bennett Centre (HRBC) Models of Care and Facility Infrastructure Review (Fjeldsoe, Meehan and Kingswell, 2015). The review noted a number of serious facility deficiencies.

[12] Refer to annex 9 for the full Fjeldsoe, Meehan and Kingswell (2015) infrastructure report.

purpose. It is almost 20 years since the Henry Rongomau Bennett Centre acute adult inpatient service was designed and built. The characteristics, needs and expectations of those who use the inpatient service have changed significantly since that time.

36. Currently, despite considerable effort to implement potentially more safe, effective and efficient models of care (and improve the space), implementation is being constrained by the need to deliver services within the existing facility footprint. Essentially, the service has been trying to make the service model fit a facility which does not meet contemporary standards for people requiring acute inpatient care.

37. Summary of the existing arrangements and business needs:

Investment: Problem Two 33%	**Currently building, designed to fit an outdated institutional model, does not provide a safe, therapeutic and effective environment for service users and staff.**
Existing Arrangements	Business Need
Footprint is out-dated and is based on institutional design; significant deficiencies include lack of space and privacy, natural lighting, congestion, ventilation. Inappropriate colocation of service users. Institutional layout is inflexible and unable to support holistic and therapeutic interventions Continued and inappropriate ongoing tensions of open and closed wards – while maintaining safety and security.	Improving environments to support holistic care. Appropriate inpatient facilities, with the necessary therapeutic space to manage and deliver holistic care. Spaces are modular and flexible in order to meet changing demand, needs and values now and into the future. Health Professionals have the necessary space to manage clinical risk, safety and de-escalation, and appropriate co-location, freeing up time to enable them to focus on care.

MH&AS Capacity and Capability

38. Models of service delivery that are shown to be most effective and efficient are those that respond to dynamic population values and needs. Emerging issues for Waikato DHB's Mental Health and Addictions service delivery include the increasing relative level of acuity and the complexities associated with co-morbidities / co-existing problems of individuals referred to our service. With these issues come increasing cost and significant expensive resource requirements.

39. The current model for delivery is primarily *Key Working.* A key worker is a registered health professional who has responsibility for coordinating and advocating all care for the service user (but does not necessarily provide all of the care) as discussed by the multidisciplinary team. A number of reviews have found this key working model has genericised clinical practice and roles, and results in the key worker functioning as the [*only*] care provider for the service user. This model has also inhibited multidisciplinary functioning, and resulted in a lack of progressive transition; integration; and, unplanned and reactive responses to care.

40. Demand for services currently exceeds available capacity.[13] Demand for inpatient services is exceeded by approximately 6 - 8 beds; this has resulted in occupancy exceeding 95% compared to the best practice target of 85%. At times of high occupancy rehabilitation leave management is being used as a means of managing the occupancy level.

41. A staff satisfaction survey was conducted (November, 2016). Survey results showed a common sense that staff members were feeling pressured and concerned, specifically in regards to increasing caseload acuity, complexity and numbers; and, low recruitment and retention rates. Of importance, the findings showed that staff members felt a sense of value and reward they got from working within their teams and with services users and their family whanau.

42. Currently the service has limited visibility of a number of factors they need to enable them to more effectively match capacity to service user demand. The service information is gathered across a multitude of systems, which involves time consuming recording of clinical documentation, duplication of information into manual systems, and an inability to plan the end-to-end care journey. There is also a lack of ability to undertake production planning in the short or long term, and no way of determining resource requirements. Over the last 20 years, despite increasing demand and change values and need, there has been no significant change in resource capacity.

43. Summary of the existing arrangements and business needs:

Investment: Problem Three: 33%	**Existing service capacity is not meeting the increasing acuity / complexity and demand which at times results in compromised and unsafe care.**
Existing Arrangements	Business Need
Current fragmented systems present difficulties for adequately monitoring progressive transition, demand and acuity. Increasing demand and constrained resources (e.g. people and funding) threaten the sustainability and affordability of the current mental health and addictions system. The current business model has been 'adapted' over a long period of time and reflects historical demand. It does not address current and future demand. Antiquated information systems that do not readily support forecasting, planning or monitoring of demand or resource provision.	Delivery of care and support is coordinated across the sector. Health Professionals are able to work at the top of their scope of practice. Integrated service delivery across the care continuum, with effective transition and support services. Better health and information systems to improve coordination of work patterns and capacity of resources to deliver care matched to demand. Where clinicians are able to plan and see what is expected of them and when; moving from a reactive response to a proactive and prepared state.

[13] Refer to annex 5 for summary MH&AS service data.

MH&AS Prison Muster Capacity and Facilities

44. In October 2016 the New Zealand prison population exceeded 9,900 for the first time. To meet the demands of this rise in prison numbers, the Department of Corrections has been exploring options to increase capacity at the country's prisons. At Waikeria Prison a proposed new facility to accommodate an additional 2,400 male prisoners is to be built with construction anticipated to start in 2018 and be completed by late 2021. The increase in prison bed numbers will significantly impact on Mental Health and Addictions prison muster; potentially doubling demand for forensic inpatient beds, and both inpatient and community resources.

Substance Addiction (Compulsory Assessment and Treatment) Bill

45. The Substance Addiction (Complusory Assessment and Treatment) Act replaces the Alcoholism and Drug Addiction Act 1966, and provides for the compulsory assessment and treatment of individuals who are considered to have a severe substance addiction and who do not have the capacity to participate in treatment. It is anticipated that the numbers of people requiring this legislation are likely to be few, but for individuals and their family whanau, this is a last resort opportunity to intervent when they no longer have the capacity to do so themselves. While the impact of the Bill for service demand is unknown, it is anaticipated to increase demand for inaptient beds.

Outlining the Need for Investment

46. There is a growing body of evidence demonstrating the benefits associated with improved models of care. Evidence shows that intervening early before a condition reaches a more severe stage, reduces both the impact of mental illness and co-existing problems; and, reduces the system-wide costs associated with the management of long term chronic conditions. Examples of innovative service models describe the opportunities to redesign care delivery in ways that improve and enhance integrated[14] support that takes a *whole person* perspective. Integrated service models can support this by facilitating skills transfer and shifting notions of who is responsible for what and when. The Creating Our Futures programme makes the case for the integration of health and social care; primary and specialist care; and, physical and mental health and addictions.

47. There appears to be consensus for a stronger focus on integrated approaches, which are needed to address the challenges on the horizon:

    - rising levels of co-existing problems (people living with two or more conditions)
    - inequalities in social determinants
    - association of mental health problems and higher risk of physical health conditions
    - emotional and psychological dimensions associated with long term chronic conditions
    - increasing unexplained symptoms that have a psychological component

Model of Care

48. In 2016, a series of workshops where held with key stakeholders to help develop a compelling case for a new Model of Care. The aim was to develop a thorough understanding of the status quo, and to indicate how improved models of care could support the outcomes in the Strategic Plan. The service work with key stakeholders to help frame the gap between these two states (status quo / improved models) which informed the Creating Our Futures objectives.

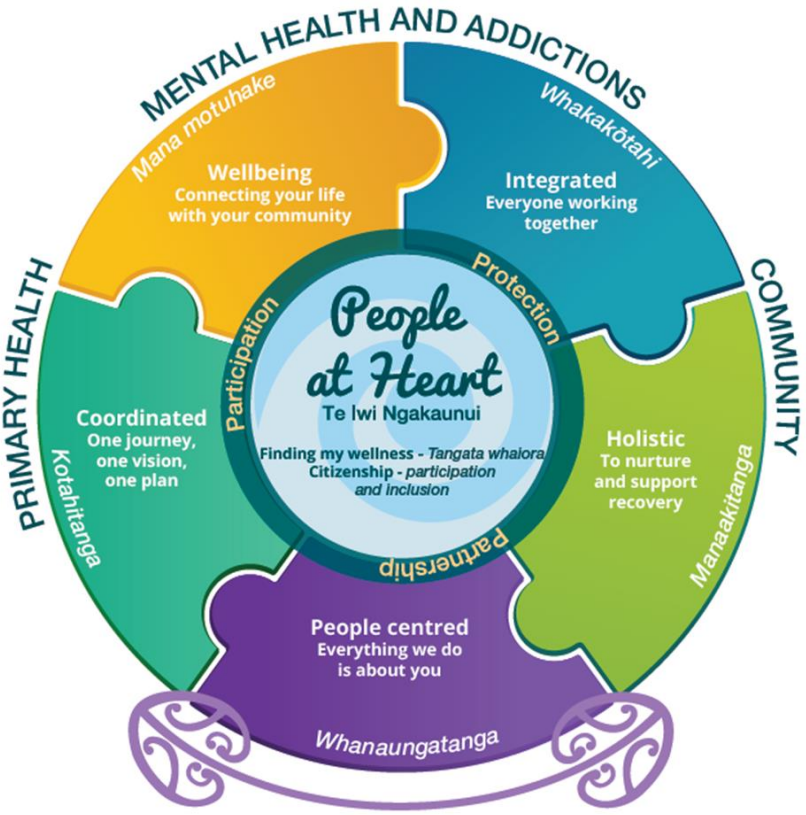
49. The stakeholder workshops themes were:

    - ✓ 03 Oct 2016 – Context for Change
    - ✓ 17 Oct 2016 – Vision
    - ✓ 31 Oct 2016 – Journey of Care
    - ✓ 14 Nov 2016 – Functional Features
    - ✓ 23 Mar 2017 – Model of Care and Strategic Assessment

[14] The term **integrated care** refers to the provision of care in such a way that ensures that the various needs of an individual using these services are met in a co-ordinated way, with medical, social and psychological needs being addressed together. **Holistic care** refers to a perspective in which health is understood within the context of physical, emotional or mental, spiritual and whanau is assessed and managed accordingly.

50. There was strong consensus calling for more integrated approaches towards holistic care from a partners-in-care service user and family whanau perspective. Where there needed to have a stronger focus on the aspects of early, proactive and coordinated care.

51. In response to the challenges and barriers identified by stakeholders, this section provides an illustrative outline of the new model of care possibilities.[15]



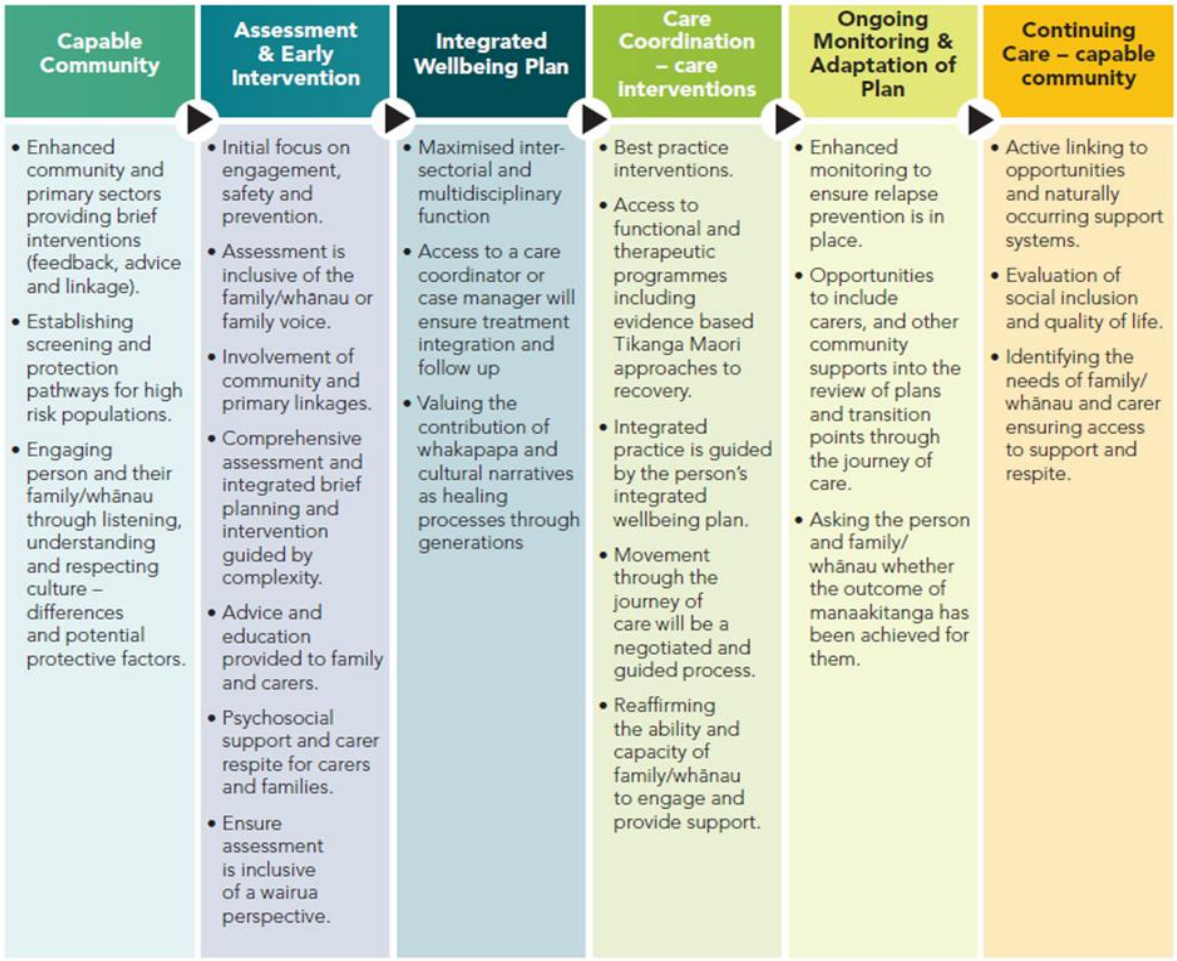
52. If progressed well, the new model will provide an opportunity for Waikato DHB Mental Health and Addictions to actively work as a partner in an integrated health system that provides:

    - ✓ Linkages and wrap around care which primarily focuses on forming therapeutic relationships within community
    - ✓ Citizenship to maximise participation and inclusion within community
    - ✓ An invested and capable community which easily recognises signs and symptoms; can provide early and brief interventions, and has an agenda that is oriented to advancing recovery and anti-stigma
    - ✓ Visible, proactive and engaging care where everyone can play their part.

53. All individuals will experience the same rapid access to quality care. Individuals will receive care at the **right time**, **right order**, **right place**, by the **right person** and in the **right way**. Every individual receiving care from our Waikato DHB Mental Health and Addictions service will have an experienced care coordinator that is responsible for advocating and ensuring the seamless coordination of care through the care journey.

[15] Refer to annex 1 for the proposed Model of Care framework.

54. Proposed mental health and addictions integrated care journey pathway:



55. All key stakeholders who represent an integrated health and social system will need to actively participate to support an individual's care journey through services. The new Model of Care focuses on actions aligned to the New Zealand Health Strategy (MoH, 2016).

Acute Inpatient Facilities

56. It is almost 20 years since the Henry Rongomau Bennett Centre (HRBC) acute adult inpatient service was designed and built. A number of inspections and reviews of the acute inpatient service found the current facilities do not meet contemporary standards of privacy, security and safety; and furthermore they provide challenges to staff providing care to acutely unwell service users. The physical ward layout is confusing, lacks good sight-line and poses potential safety risks to service users and staff.

> *… despite considerable effort to improve the HRBC environment, [the facility] did not meet a significant number of basic contemporary standards. Further, it was the view of the review team that the capacity of the service to develop new and potentially more efficient and effective models of*

> *service was being constrained by the need to deliver services in the existing facility.*
>
> *The review team believes that a contemporary service model involving the construction of new purpose built hospital and community facilities should be considered. This should provide a more efficient use of recurrent funds and provide a greater array of inpatient treatment options for consumers with increasingly complex and diverse needs (Fjeldsoe, 2015).*

57. In early 2015, there were a number of serious incidents/events at Waikato DHB Mental Health and Addictions service. Following these events, Dr John Crawshaw, Director of Mental Health, used his statutory powers under section 99[16] of the Mental Health (Compulsory Assessment and Treatment Act) 1992 to inspect the services to ensure they were providing a good quality of care to people in the Waikato. The purpose of the inspection was to examine how the services were functioning, and enable the Director of Mental Health to determine whether there any systemic issues contributed to those events.

58. A focus of the section 99 inspection was the examination and assessment of the Henry Rongomau Bennett Centre (HRBC) capital infrastructure. Overall, the findings of the Inspection Team were (in line with the Waikato 2013 DHB Business Case) that the current facilities do not meet contemporary standards, and therefore pose challenges to the teams providing care to acutely unwell service users; and, the confusing physical ward layout and lack of good sight-lines posed safety risks. The inspection team also remarked on the difficulty the service would face in effectively addressing these issues, given the physical structure of the unit and the constraint this posed. For instance, the narrowness of the corridors and the placement of bedroom doors presents the real possibility of an effective barricading of corridors, as well as the potential for a service user to harm themselves or another person, out of sight.

59. The Inspection Team did not undertake a detailed analysis of the facilities, because the Waikato DHB had already commissioned a full review of its adult mental health facilities in 2015. The Fjeldsoe (2015) report was completed during the s99 inspection; and, made similar findings.

Delivering better health outcomes

60. Delivering the change required will not be a trivial exercise. Careful planning and consideration will be required to continue to explore and confirm the core components for understanding what it is the service delivers; and, the environment required to support that delivery. Working together with our key stakeholders and those with lived experience will be important as we focus on a system-wide approach to health and recovery related outcomes and aspirations.

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[16] Section 99 of the Mental Health Act reads:

Powers of inspection of Director: In relation to any hospital, or any ward, unit, or other part of a hospital, in which psychiatric treatment is given, the Director shall have all the powers of the Director-General of Health under section 148 of the Hospital Act 1957, and the provisions of that section shall extend and apply accordingly.

61. The Waikato DHB is committed to supporting the delivery of the acute mental health and addictions inpatient capital infrastructure and will work closely with other Ministries and District Health Boards who can assist in the delivery.

62. The timing is right to further develop how the development of the capital infrastructure can benefit the prioritisation of goals for the next investment period through to 2020.

Key Stakeholders

Engagement

63. The development of a Waikato DHB Mental Health and Addictions new Model of Care has the potential to impact on the health system. It will promote a holistic focus, where service users are at the heart of care, potentially changing the way health professionals, care teams and health and social service organisations meet the service user needs. As a core component of this transformational change, is the need for service users and their family whanau, and staff to co-design the new ways of working.

64. Key to the success of this initiative will be continued engagement with all parts of the sector to receive advice; review outputs and work together.

65. To date the Waikato DHB has run a series of workshops to engage stakeholders to develop the new Model of Care framework. These workshops have been well attended and supported by those involved, and have revealed a high degree of awareness, support and engagement from the key stakeholders and captured a wide range of views. As part of the Creating Our Futures programme development of the preferred solution, the Waikato DHB plans to use a range of stakeholder management and engagement techniques, including co-design and co-production, to identify the best possible solution.

Stakeholders

66. The following stakeholder groups have been identified and as part of the ongoing work will be involved in a full stakeholder engagement plan to be developed as part of future tranches of the business case.

67. The groups are as follows (includes, but not limited to; a detailed stakeholder assessment has been undertaken and included within the Communication Plan):

Keep Informed & Monitor Awareness	Keep Satisfied & Engage	Engage Closely & Co-design
✓ **Central Agencies:** State Services Commission, Health Quality & Safety Commission, NZ Corrections, NZ Police, Ministry of Business Innovation & Employment, Health & Disability Commission, Probation ✓ **Associated Government Departments:** Accident Compensation Corporation, Ministry of Social Development, Work & Income, District Courts ✓ **Waikato Community:** Waikato Community Indirectly Affected	✓ **Government Ministers**: Ministry of Health, Ministry of Finance, Investment ministers, Cabinet Committees (e.g. SOC) ✓ **Central Agencies:** NZ Treasury, Ministry of Health ✓ **Waikato DHB:** Waikato DHB Board, Executive Group, Senior Responsible Owner, Building Programme, Strategy & Funding, Patient Safety, Waikato DHB staff indirectly affected ✓ **Health Sector Groups:** District Health Boards, Midland Regional District Health Board, Health Professional Groups, Waikato MH Community Services, Waikato Addictions Community Services, Maori Health Providers ✓ **Suppliers:** Residential and Respite Accommodation providers, AoD residential accommodation	✓ **Waikato Community:** People with lived Experience (inclusive service users, family whanau and significant carers) ✓ **Waikato DHB staff directly affected:** Mental Health and Addictions, Te Puna Oranga, Information Systems ✓ **Non-Government Organisation:** Hauora Waikato, Consumer Advocacy Groups

68. In addition, the Waikato DHB has already established a lived experience reference group to enable service users, family whanau, other organisations and agencies, and staff, to play an even greater role in service co-design, provision, monitoring and governance.

Key Risks

69. This strategic assessment provides a compelling value proposition for a fit for the future Model of Care. Nationally, historical investment in mental health facilities has been problematic with the common factor being a deinstitutionalised Model of Care supported by physical institutional designed facilities. Without fully addressing the new Model of Care and the 'end to end' health system, we will continue to see similar patterns of out-dated facilities.

Waikato is well placed

70. The Waikato DHB and Mental Health and Addictions service is well placed to deliver the Creating Our Futures programme. It is highly apparent that the transformational change will not be a simple initiative to implement. Many risks and issues will need to be managed and mitigated. Waikato is in a better position with a number of other District Health Boards initiating or part way through the business case and/or implementation process (e.g. Counties Manukau, Waitemata, Hawkes Bay and Canterbury District Health Boards). The progress and lessons learned these DHBs have made will be good examples of solutions for the Waikato DHB to draw on.

71. The Waikato DHB has delivered on a number of large capital infrastructure projects, including major refurbishment of facilities and significant changes in the way services are provided, at Waikato and Thames hospitals. Over the past 10 years the Waikato DHB has had successful experience in procuring and managing large projects (over $500 million of construction):

- ✓ Meade Clinical Centre building
- ✓ Older Persons and Rehabilitation (OPR) Building
- ✓ Emergency and Acute Care facility
- ✓ Midland Regional Forensic upgrade
- ✓ Waikato Hospital Carpark and Main Entry Building
- ✓ Waikato Hospital Delivery Suite refurbishment
- ✓ New Born Intensive Care Unit (NICU) extension

72. The common lessons learned from these projects include:

- ✓ Clarifying the Model of Care to understand what it is that the service is delivering, and then describing the environment to support delivery
- ✓ Strong governance and leadership with a clear understanding of the problem(s) the capital infrastructure solutions are solving
- ✓ An implicit focus on stakeholder engagement and management, adoption and the change management that is required to help assist the sector to gain the benefits of the change

- ✓ A staged approach to implementation, taking into account the service-wide new Model of Care implementation; service provision, continuous improvement, and clinical risk monitoring and management.

Applying learnings to key risks

73. Taking the learnings into account and also acknowledging the difference in the delivery of capital infrastructure, we consider that the key risks can be summarised as follows:

    a. The new Model of Care is too ambitious for the sector to innovate and gain value from the new solution

    b. Clinical practices remain the same and clinicians do not take advantage of the potential new model changes

    c. Change management and communication with the sector is underestimated and as a result creates uncertainty and barriers to implementation of a new Model of Care

    d. Internal and external health professionals and agencies resist the need to work as a holistic health system, reducing the effectiveness of the overall solution

    e. Competing investments within the DHB limit the ability to provide resource for the overall project

    f. The intention to work closely together with the sector is not accepted by key sector participants and as a result barriers are created limiting the ability to deliver the benefits identified

    g. Negative community and social media communication causes the public to lose confidence in the solution.

74. Mitigation strategies for each of these risks are under development, as is the process for and to identifying and reporting other risks that may arise throughout the duration of the programme.

75. It is already clear that implementation of the programme and capital infrastructure will require careful attention and management by the Waikato DHB Board/Executive Group and Creating Our Futures Programme Board. Considerable monitoring of changes to practice and workflow; and trust in transformative change will be required. Ensuring the programme is undertaken in a way where risks are transparent and carefully managed, issues quickly identified and resolved and benefits realisation is apparent and readily able to be understood by all, is key.

Next Steps

76. This strategic assessment has undertaken a review of the key Mental Health and Addictions problems and challenges that were identified by a wide range of stakeholders. A review of available evidence has confirmed the key challenges the stakeholders identified remain current and relevant. It is recommended that this overarching strategic assessment is document be accepted and that partners continue to work together to agree and identify the next steps, including the development of the 'Creating Our Futures Programme Business Case'.

77. Potential project business cases will be identified and confirmed following the completion of the Creating Our Futures Programme Business Case.

- ✓ Acute Mental Health and Addictions Inpatient Facilities
- ✓ Anticipated Waikato Increased Prison Muster
- ✓ Mental Health and Addictions Model of Care Implementation

Recommendations

78. It is recommended that:

i. That the Waikato DHB continues to fund the programme related work.

ii. That this Strategic Assessment is present for noting by Investment Ministers, and that this Strategic Assessment is accepted.

iii. That the programme partners continue to work together to agree and identify the next steps, including the development of the 'Creating Our Futures Programme Business Case' which will provide greater details on the *preferred way* forward.

Annexes

Annex 1: MH&AS Model of Care Framework Proposal 2017

Annex 2: MH&AS Investment Logic Map and Contextual Information

Annex 3: MH&AS Alignment with the New Zealand Strategy: Action Plan

Annex 4: Summary of MH&AS Acute Inpatient Services and Capital Infrastructure

Annex 5: Summary MH&AS service data

Annex 6: Facility Design Experience

Annex 7: Waikato DHB MH&AS Strategy 2016 – 2021

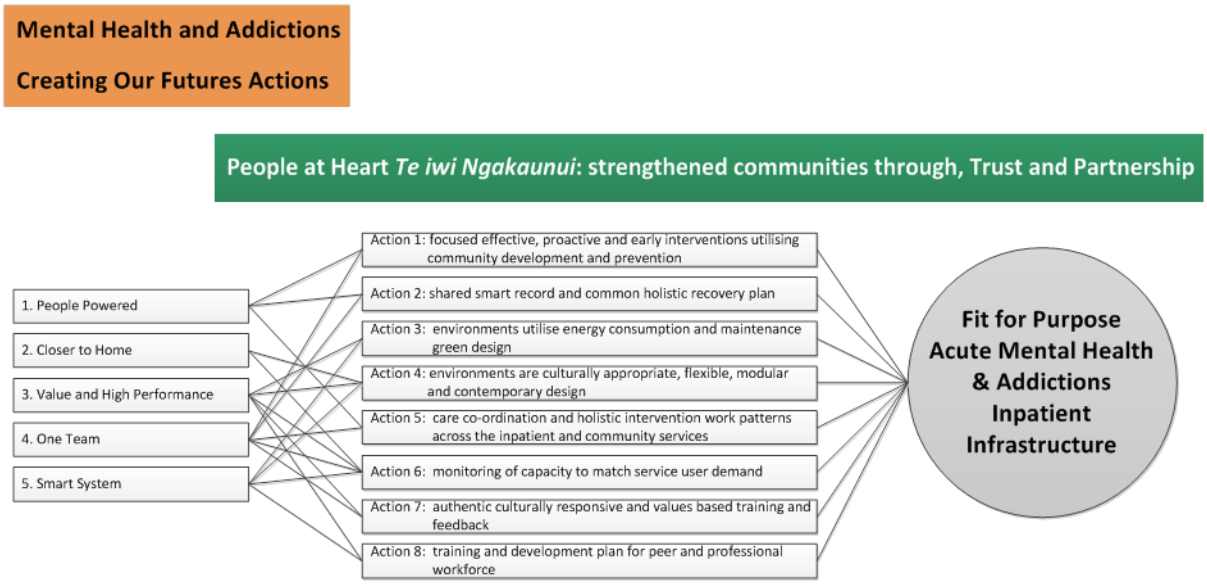
Annex 8: Section 99 Inspection of Waikato DHB Mental Health and Addictions Services (2016)

Annex 9: HRBC Models of Care and Facility Infrastructure Review: planning for the continuing development of adult acute inpatient services (2015)

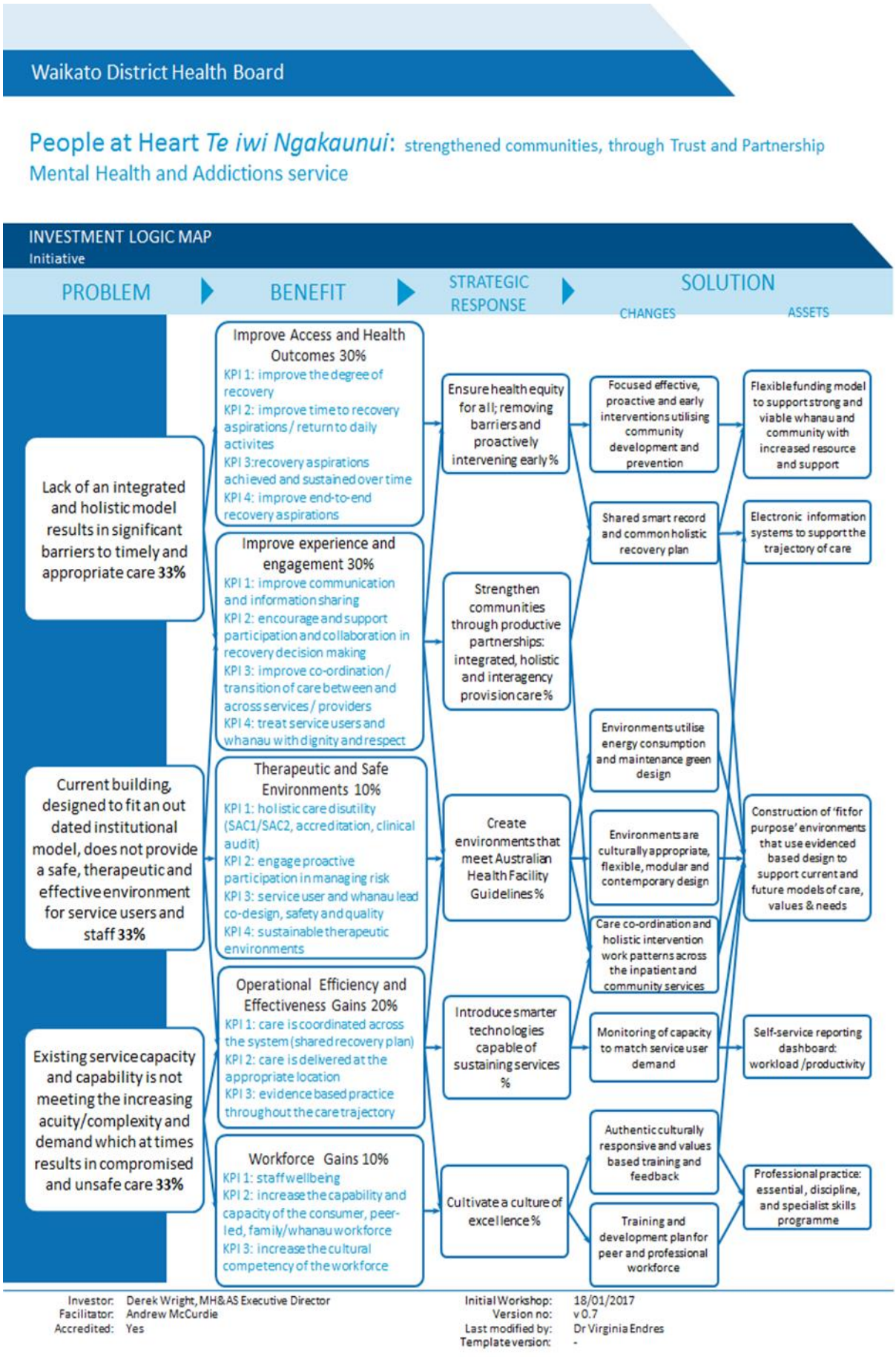
Annex 1: MH&AS Proposed Model of Care Framework 2017

Annex 2: MH&AS Alignment with New Zealand Health Strategy: Action Plan

The following diagram, adapted from the New Zealand Strategy, shows the linkage of the eight key actions in the Creating Our Futures programme to enable the new Mental Health and Addictions Model of Care and the capital infrastructure investment.



Annex 3: MH&AS Investment Logic Map and Contextual Information



Investment Logic Map Contextual Information

Problem 1: 33%

Lack of an integrated and holistic model, which is resulting in significant barriers to timely and appropriate care.

- A number of reviews have found the key working model has genericised clinical practice and roles, where the key worker functions as the [*only*] worker for the service user.
- The model is a barrier to effective multidisciplinary functioning and the ability to plan and schedule care. The current system does not support holistic care.
- The care system is difficult to navigate – inability for service users to know at the start of their care journey what to expect when, and by whom.
- The lack of ability to be fully integrated across the system of care can impact on engagement and sustainable outcomes of recovery aspirations.
- The model is both reactive and clinician driven; and, is a push system of care. The approach to care impacts the ability to deliver end-to-end care inhibiting progressive transition.
- There is a lack of ability to understand acuity and complexity of caseloads. Consequently, service user referrals are placed on the primary key worker clinical caseloads based on numbers.
- Evidence shows increasing caseload and workload demand; confounded by static resourcing capacity
- antiquated information systems that do not support work patterns and progressive transition through services
- inability to manage and monitor capacity, demand, acuity, and progressive flow through services
- key working role - genericising health professional practice reduces the ability to deliver holistic interventions (in which they trained) and multidisciplinary functioning
- increasing caseload and workload demand; confounded by static resourcing capacity
- inability to manage and monitor capacity, demand, acuity, and progressive flow through services

Problem 2: 33%

Current building, designed to fit an outdated institutional model, does not provide a safe, therapeutic and effective environment for service users and staff.

- Environment exposes service users and family whanau to potential risk of emotional and physical harm. The environment has been described as “busy, dark and dingy”.
- The out-dated institutional design of the acute inpatient facility is unable to support contemporary holistic care. The ability to flex the space is limited by the design and the physical footprint.
- The acute inpatient space is fixed (long end-to-end narrow corridors). There is an inability to reconfigure the space to accommodate a range needs and values.
- Potential inpatient safety and risk associated with inappropriate co-location or location of service users.
- Continued and inappropriate ongoing tensions of open and closed wards – while maintaining safety and security.
- Bed occupancy levels are consistently over 95 percent, creating significant work flow pressures, and inappropriate use of rehabilitation leave management. There are occasions where beds have had to be sourced and brought into the ward.
- Inpatient Model of Care is focused on risk and medication management, given the limited therapeutic space. Currently no psychology input into care is provided in the acute inpatient wards.
- Facility is linked to a series of service user and staff safety incidents (includes SAC1 and SAC2).
- Environment does not meet a number of contemporary Australian Health Facility Guidelines and NZ Health and Disability Standards: service user needs for privacy and dignity, access to natural light and outdoor spaces, social interaction, safety and security, and therapeutic and recreational activity.

Problem 3: 33%

Existing service capacity is not meeting the increasing acuity / complexity and demand which at times results in compromised and unsafe care.

- There has been limited change to match resource capacity to demand over the last 10 years. Current service delivery confounds the ability to understand resourcing needs.
- A focus on the essential key working functions compromises the ability to plan and deliver interventions; and, for clinicians to work at the top of their scope of practice. Mental Health and Addictions has a highly professionalised workforce and there is the potential for low morale and low satisfaction arising from the inability to deliver the care in which they are trained.
- Lack of electronic systems to plan, manage and monitor the end-to-end journey, which impacts on wait times and coordinating holistic interventions.
- Inability to maintain oversight of service capacity and to forecast demand for deploying resource and mitigating risk.
- Lack of predictable transfer of care results in the focus on entry processes and clinical risk.

- Lack of consistent processes and complex forms increases administrative workload activity. A time and motion study found clinicians spend approximately 20% of their time completing clinical documentation and 10 – 15% face-to-face time. Currently, it is difficult to explore contact time given the manual process for collecting and entering data on contact activity in a separate administration patient management system (a recent audit of contact activity recording against progress notes showed 40% under-reporting).
- Antiquated information systems increase workload and inhibit operational planning and the ability to forecast demand.

Annex 4: Summary of MH&AS Acute Inpatient Services/Capital infrastructure

Acute Mental Health and Addictions Inpatient Services

Reviewing the problem and investment objectives, there is a preference to develop a solution for the Mental Health and Addictions service Acute Inpatient Capital Infrastructure.

Summary of scope of MH&AS services and current inpatient bed arrangements				
	Current Provider	**Current Facility**	**Current beds**	**Notes**
Acute Adult MH Inpatient	Waikato DHB	HRBC – ward 36, 35, 34 Waikato Hospital	53	Current facilities are not fit for purpose; do not meet a significant number of basic contemporary standards of privacy, safety and security. Current institutional designed facilities constrain contemporary service models and create risk to service users and staff.
Adult Detoxification Inpatient	Waikato DHB	HRBC – ward 38	2	Current beds are co-located with regional forensic. Introduction of the Substance Addiction (Compulsory Treatment) Bill – unknown model of care and impacts for inpatient bed demand.
High and Complex Needs	Waikato DHB	HRBC – Waikato Hospital	4	Current beds are co-located with regional forensic.
Electroconvulsive Therapy (ECT) service	Waikato DHB	HRBC – Waikato Hospital	-	Current service is co-located within Acute Adult MH HRBC wards – appropriateness of co-location with general medical services is required.
Child and Adolescent	Auckland DHB	Starship, Grafton	-	Adolescents are either co-located with adults or transferred to Auckland Starship. Current service model does not meet needs.
Perinatal Mental Health	Waikato DHB	HRBC – Waikato Hospital	-	Mothers are co-located within acute adult inpatient environment – access to baby is limited due to environmental constraints. Current service model does not meet needs.
Eating Disorders	Waikato DHB	HRBC – Waikato Hospital	-	Inappropriately co-located within acute adult inpatient environment
Intellectual Disability (IDDD)	Waikato DHB	HRBC – Waikato Hospital	-	Co-located within acute adult inpatient environment – typically length of stay exceeds estimated date of discharge due to lack of supported accommodation. Current service model does not meet needs.
Regional Prison Muster	NZ Corrections	HRBC – Acute Adult & Forensic Waikato Hospital	-	NZ Corrections Strategy to increase prison bed numbers will impact on Waikato DHB inpatient demand.

Annex 5: Summary MH&AS Service Data

Annex 6: Facility Design & Experience

A number of District Health Boards have completed or started work on contemporary Mental Health and Addictions infrastructure. The learnings (after conducting site visits) from each of the District Health Boards include:

Table 1: National experience (site visits)

	Approach	Learnings
Hawkes Bay DHB	Unsuccessful three/four attempts to refurbish out-dated footprint, resulted in a new purpose built facility (opened 2016).	• Communication is key: an emphasis on interaction with stakeholders within the healthcare system (those with lived experiences and those who provide support within the system). • Not to be impulsive with the design of the environment (number of beds), engagement makes people think about the solution from a range of perspectives. • Inclusion of marking out space to test drive and validate ideas – clinical function and service user centric usability/experience.
Canterbury DHB	Refurbishment/s made to existing out-dated institutional footprint.	• Today's complex problems cannot be solved through environments (created decades ago), it requires multidimensional thinking about the healthcare system. Bringing together of the model of care and the environment to enrich the experience and outcome. • Innovation is key in providing sustainable success and road maps for futurist vision. • Leadership and innovation is dynamic and a continuous process - *leadership does not make sense without innovation, and innovation does not work without leadership*. • The importance of creating successful services and environments through the application of stories that bring together experience and service provision.
Counties Manukau DHB		
Waitemata DHB		

Mental Health & Addictions service has also visited overseas to review international best practice and the learnings from these site visits include:

Table 2: International experience (site visits)

	Approach	Learnings

Annex 7: Waikato DHB MH&AS Strategy 2016 – 2021

Annex 8: Section 99 Inspection of Waikato DHB Mental Health and Addictions Services (2016)

Annex 9: HRBC Models of Care and Facility Infrastructure Review: planning for the continuing development of adult acute inpatient services (2015)

Waikato District Health Board

Waikato DHB Position Statements and Policies

Waikato District Health Board

Presentations

Waikato District Health Board

Papers for Information