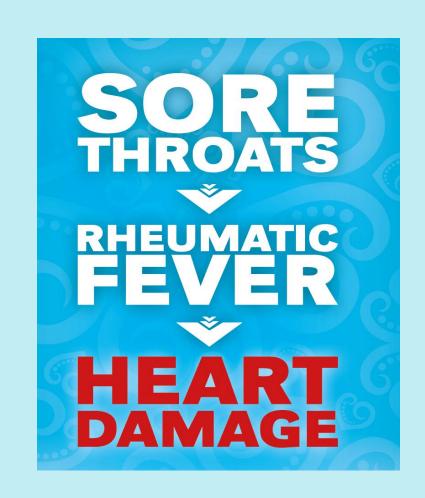
## Rheumatic Fever Prevention in the Waikato

Waikato PHO's

Michelle Morley
Clinical Nurse Specialist
Population Health
Waikato District Health Board







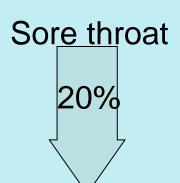
#### **Overview**

- Rheumatic Fever refresher
- Waikato rapid response STM programme
- Overview of the rapid response processes
- Resources and links





#### How does a sore throat cause heart damage?





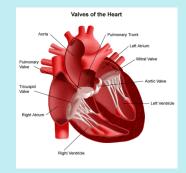
GAS throat infection

#### Acute Rheumatic Fever

- (0.3 3%) ⊗ sore or swollen joints ⊗ a skin rash

  - ⊗ stomach pain

  - jerky movements

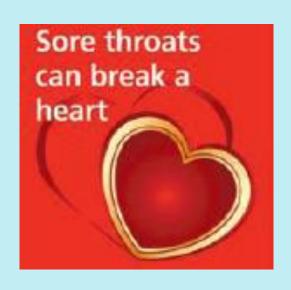


Damaged heart valves/ carditis





#### Rheumatic Fever



- RHF mostly eradicated in developed nations
- NZ still has high rates of RHF, disproportionately affecting Maori and Pacific families
- RHF can result in damaged heart valves, decreased life expectancy and loss of life

RHF is completely preventable by correct detection and treatment of GAS sore throats





#### How does rheumatic fever affect the body?

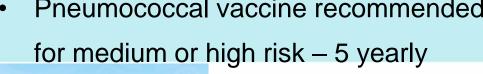
Acute rheumatic fever affects 3 organ systems **Brain** Heart Joints (arthritis)





#### How does Rheumatic Fever affect children's lives?

- Secondary prophylaxis 13 injections (one every 28 days)/year
- Education DN once a month
- Dental Review twice a year
- Authority completed once a year
- Details updated on register once a year
- Clinic reviews
- Echocardiography variable depending upon severity
- Influenza vaccine for medium to high risk
  - annually
- Pneumococcal vaccine recommended





Enrolled with PHO







## **Preventing Rheumatic Fever**



Warm, healthy homes – Whare Ora Programme



Detecting and treating Group A Strep sore throats

Improving access to primary health care services

Improving awareness

























BEDS



FIXED HEATING



BEDDING



OUTLET COVERS



DRAUGHT STOPPERS



DRAUGHT TAPE



INSULATION











# SERVICES











## Eligibility criteria

#### WHARE ORA REFERRAL FORM

For a whanau to be eligible for the Whare Ora Waikato Healthy Homes Programme they must meet all of the criteria in one group. Referrals can be sent to whareora@waikatodhb.health.nz

CIII	id Name:		Child DOB:		mild age:	Child i	NHI:			Child ethnicity:		Child gender 🗆 M 🗆 F
Car	regiver:		Relationship to child:		Co	onsent g	iven:					
Add	dress:		Area:	F	hone:		Mobile:			Whanau Email:		
Тур	e of housing: ☐ Housing New Zeala	nd	□Private rental □ Hom	e owr	er □Whana	u owned	l home		Trust Home	☐ Living with other	er wha	nau
Ref	errer Name :		Referrer Contact:			☐ Hea	Ith Need:					
	GROUP 1 HOSPITAL ADMISSION (0-5 years)		GROUP 2 SOCIAL (0-5 years)		GROUP PREGNANT MOTHER		ORN	RM	GRO IF/HOSPITAL ADMI	UP 4 SSION (0-14 years)		GROUP 5 3 POSITIVE THROAT SWABS
	Does the parent or caregiver have a CSC card, or are they eligible for one?		Does the parent or caregiver have a CSC card, or are they eligible for one?		Does the parent have a CSC care eligible for one?					nt or caregiver ard, or are they e?		Does the parent or caregiver have a CSC card, or are they eligible for one?
	Does the whanau live in Waikato DHB catchment area?		Does the whanau live in Waikato DHB catchment area?		Does the whana Waikato DHB caarea?				Does the wha Waikato DHB	nau live in catchment area?		Does the whanau live in Waikato DHB catchment area?
	Is one member of the household a New Zealand citizen or permanent resident?		Is one member of the household a New Zealand citizen or permanent resident?		Is one member of household a Nev citizen or perman	v Zeala			Is one membe a New Zealan permanent res			Is one member of the household a New Zealand citizen or permanent resident?
	Was a 0 to 5 year old living in the home hospitalised with		Does this whanau have a child 0 to 5 years old and meet at		Does the whana pregnant woman				Is there at least 0-19 living in the	st two people aged he home		Is there at least two people aged 0-19 living in the home
	one of the following:  □Pneumonia		least <u>TWO</u> of the following risk factors:		baby in the home				Is there evider functional crow	nce of structural or wding		Is there evidence of structural or functional crowding
	□Acute bronchiolitis □Acute Bronchitis		☐Caregiver has a corrections history							year old living in pitalised with one g:		Have there been 3x positive Strep throat swabs in the
	□Unspecified acute LRTI □Bronchiectasis □Meningococcal infection □Bacterial meningitis □Viral meningitis □Meningitis □Rheumatic fever □Acute nephritic syndrome □Unspecified nephritic syndrome □Sepsis due to strep, group A		□ Mother with no formal education □ Long term beneficiary □ Child Youth and Family finding abuse or neglect							hitis acute LRTI sis cal infection ningitis itis ever tic syndrome nephritic syndrome o strep group A		whanau in a 3 month period?

## Referral to Whare Ora



From Erana@isawesome.com

To... Whareora@waikatodhb.health.nz

Cc...

Bcc...

Whare Ora Referral Subject:

Child Name: Erana Severne

Child NHI: HNI333

Parent Name: Shelley Campbell Relationship to Child: Mother Child DOB: 3/5/1990

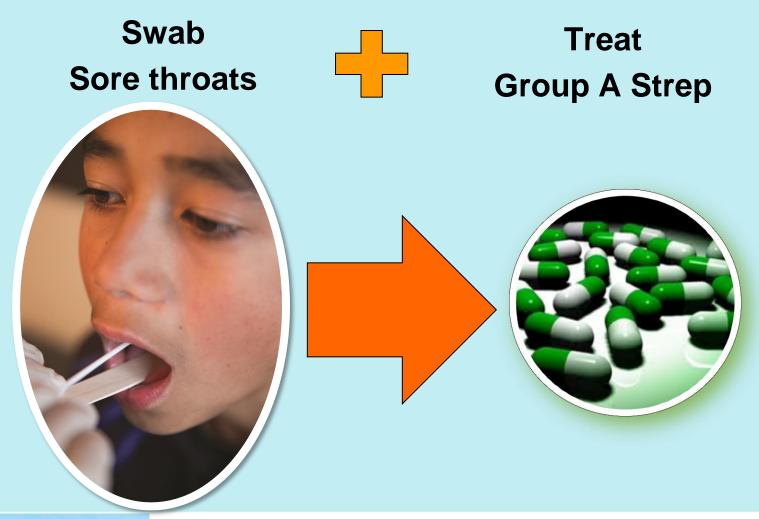
Child illness: RMF child

information about whanau: Whanau have no heating, Mother has CSC card, high

health needs, six children in home, No insulation.

Kind regards, Erana 021 329 084

## Sore throat management







## Background to swabbing programme

Waikato DHB is working with communities to provide free sore throat management services across Waikato

The service is a new funded initiative aimed at reducing the incidence of Rheumatic Fever (RHF) in the Waikato

Ministry funding has been secured from to provide rapid response services. Waikato DHB funds antibiotics under the PSO scheme with the Ministry





## Drop in rapid response services



Eligibility criteria:

FREE to high risk groups with sore throats:

- 4-19 year old Maori and Pacific children
- 4-19 year old non-Maori, non-Pacific children in areas of deprivation

NB If an eligible child has a positive GAS result any symptomatic household members aged 3 – 35 years also become eligible for free throat swabbing and treatment

Map of swabbing services:

https://www.waikatodhb.health.nz/your-health/wellbeing-in-the-waikato/rheumatic-fever





## PHO – rapid

## response services

- Access drop in
  - Enrolled and non-enrolled patients
  - Primarily Nurse-led clinics
  - Opportunistic
- Branding/identification
  - Signposting of swabbing service
  - Regional promotion/advertising
  - Word of mouth/repeat business

Please ensure you have a sticker up





Get a sore throat swabbed for FREE anywhere you see this sticker

#### DO YOU KNOW OF SOMEONE WHO HAS A SORE THROAT?

AGED BETWEEN 4 –19?

They could be suitable to get a

#### FREE SORE THROAT SWAB

Checking Sore Throats help to Prevent Rheumatic Fever.

You can get a FREE sore throat swab done today. Ask your nurse here, or visit your local pharmacy, GP or <u>pathlab</u>

# Get your sore throat check here







## Team approach



#### RECEPTIONIST

The welcoming face of sore throat management

Updating details on file

Accepting enrolled and non enrolled patients

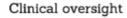
Enabling drop in for sore throats











Management of standing orders/scripts

Management of the unwell child/complicated cases





## Team approach



#### PRACTICE NURSE

Nurse-led sore throat management

Swabbing, education and follow up

Medication management







#### PRACTICE MANAGER

Contractual oversight

Ensures staff are trained and on board with the programme

Ensures systems are in place

Ensures monthly reporting occurs

Endared monthly reporting occur





## Waikato Rapid Response model

Intervention one - swab



**Intervention two - treat:** 

1.Treat positive results only OR

2. Give script/antibiotics with instructions

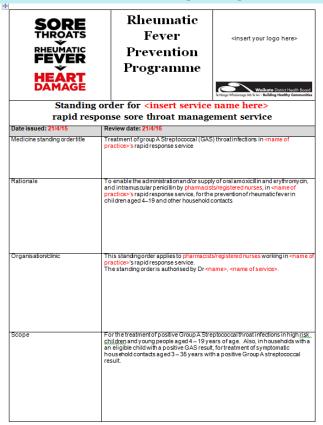


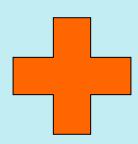




#### **Provision of Antibiotics**

# Script or Standing Order (SO)





# Pharmacy Supply Order (PSO)







#### **Practice reminders**

- Prompt swabbing and treatment RHF can develop in <10 days of sore throat
- A mild sore/hoarse throat can be GAS and can cause RHF.
   All sore throats in high risk groups must be treated with urgency
- Swab with a nurse same day, appointment with GP if needed when available
- If no availability for same day swabbing, refer to pharmacy or pathlab for drop-in swabbing
- After GAS +ve result in child h/hold becomes eligible for free swabbing and treatment
- Simple treatment option of OD amoxicillin for 10 days





## **Promotional opportunities**

- Phone/nurse triage making rapid response accessible and free
- Opportunistic promotion of sore throats messaging and importance of swabbing for high risk children and their families
- Referral to Whare Ora Social criteria, pregnant women/new born in home, x3 GAS in household in x3 months
- Thinking holistically



Get a sore throat swabbed for FREE anywhere you see this sticker

#### DO YOU KNOW OF SOMEONE WHO HAS A SORE THROAT?

AGED BETWEEN 4-19?

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#### FREE SORE THROAT SWAB

Checking Sore Throats help to Prevent Rheumatic Fever.

You can get a FREE sore throat swab done today. Ask your nurse here, or visit your local pharmacy, GP or pathlab



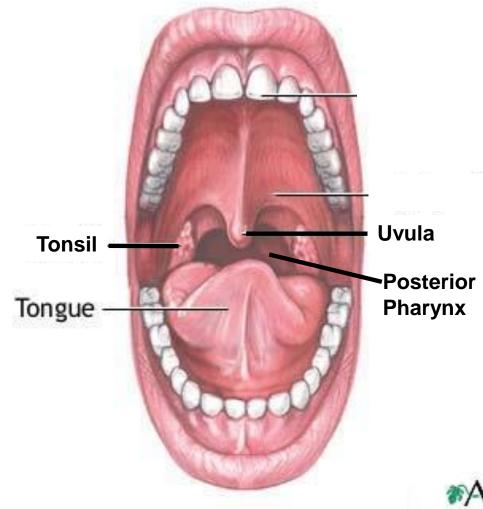






## **Identifying landmarks**









## Taking a swab



- Use bacterial swab and tongue depressor
- 2. Ask patient to open mouth wide and say "Ah"
- 3. Avoid touching the tongue and lips
- 4. Swab from posterior pharynx behind the uvula and between the tonsils
- 5. Also from both tonsils if possible

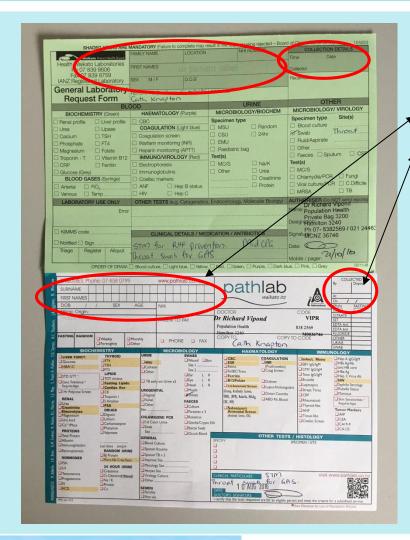
How to swab - watch youtube clip

https://www.youtube.com/watch?v=RozgYeUMMcM





#### **Laboratory forms**



Complete the process of labelling your swab and lab form

- 1. Patient details, NHI, DOB
- 2. Collector details. Depot = service name

Suggest pre-filling in lab form with:

- Swab throat
- Clinical particulars "throat swab for GAS.
   Rapid response service RHF".
- GP name and signature

Then create multiple copies and use the copies

- Green lab form used for pharmacy swabs processed in rural hospitals
- Pathlab form used for pharmacy swabs in all other locations in the Waikato





## How to process the swab



- 1. Carefully put Swab into tube
- 2. Label with patient details
- Place into specimen bag with completed lab form





- Swabs to be picked up with your normal swab processing
- Can stay up to a day if you have missed the pick up time. No need for refrigeration. Out of direct sunlight.
- Results can be expected back in 1-3 days.





## Labelling errors

#### **Error**

- Details on lab form don't match details on swab tube
- More than one patient's swab/form in a bag together
- Swab or form are unlabelled
- Missing information (eg using initial instead of first/last name)

#### How to prevent errors

- Carefully follow the labelling process
- Carefully check spelling and details
- Ask a second person to check your forms and labelling
- Complete labelling while patient is there to help with spelling & to check details
- 1x swab, 1x Pathlab form, 1x bag

http://www.pathlab.co.nz/PicsHotel/PathLab/Brochure/Clinical%20Updates/2016/Specimen%20Labelling%20\_0-%20Pathlab%20-%20Jan%202016.pdf





## Labelling errors

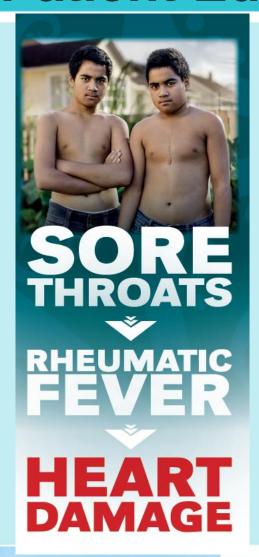
- Swabs may be discarded
- Recalls may be required
- Patient may be given delayed or wrong results
   (ie a negative case may unnecessarily be given a/bs, or a positive case may be missed and not treated)
- Time delays between GAS sore throat & treatment (increased risk of Rheumatic Fever developing)

RHF can develop in less than 10 days from onset of sore throat!





## **Patient Education**



Make it easy for high risk patients to come back

- Praise their attention to sore throats
- Stress importance of not ignoring symptoms
- Educate clients and whanau that 'Sore throats Matter'
- Check for other household members with sore throats
- Contact details for community swabbers





## Support for adherence

All the work that goes into swabbing and following up is wasted if antibiotics are not completed!

#### ABC of health literacy:

- Assess current knowledge
- Build on that knowledge
- Check for understanding





## Support for adherence

- 1. Assess for ability to return for antibiotics
- 2. Assess for ability to complete course?single dose of IM Benzathine penicillin
- Consider reminder devices scratchy charts, phone call/txts
- 4. Consider widening reminders
- 5. Invite wider family groups to attend







## Waikato Rapid Response model

#### **PSO** order of:

- 30 bottles of amoxycillin 500mg caps
- 300ml amoxycillin grans for oral liquid 250mg/5ml
- 20 bottles erythromycin ethyl succinate 400mg tabs
- 300ml erythromycin ethyl succinate grans for oral liquid – 200mg/5ml

Claim dispensing fee as per current Community Pharmacy Services Agreement





## **Providing antibiotics under PSO**

Antibiotics are supplied for free under the MPSO allowances.

Work with pharmacy to ensure adequate and appropriate supply of medication, but not too much resulting in wastage.





# Safe provision of Antiobiotics under standing order

 Single dispense based on patient – right drug, right patient

 Complete a full clinical assessment with patient





#### **Antibiotics for GAS**

First-line treatment	
amoxicillin orally for 10 days	Children < 30 kg: 750 mg once daily
	Children ≥ 30 kg: 1000 mg once daily
benzathine penicillin G (BPG),	Children < 30 kg: 450 mg (600,000 units)
intramuscular, single dose	Children ≥ 30 kg: 900 mg (1,200,000
	units)
Definite or possible anaphylaxis to	penicillin or amoxicillin
erythromycin ethyl succinate	Children and adults: 40 mg/kg/day in 2-3
orally for 10 days	divided doses
	Maximum adult daily dose 1000 mg

http://www.health.govt.nz/publication/using-practitioner-supply-orders-and-standing-orders-rheumatic-fever-prevention-programme





## Intramuscular penicillin

- Given with lidocaine
- Once only
- No risk of forgetting
- Eradicates GAS (for up to 28 days)

- Ministry of health guidance:
- https://www.health.govt.nz/ourwork/diseases-and-conditions/rheumaticfever/rheumatic-feverresources/rheumatic-fever-learningresources







#### Precautions/exclusions

#### Medsafe data sheets:

http://www.medsafe.gov t.nz/index.asp

Amoxycillin

Erythromycin

Benzathine Penicillin

Lidocaine

#### **Patient assessment:**

- Weight
- Allergies
- Medical conditions
- Medications
- History of x3 GAS in past 3 months
- H/hold history of x3
   GAS in past 3 months





## What to do with Group B, C, or G Strep

- Other groups of strep pharyngitis can cause the same symptoms as Group A Strep
- But only Group A Strep can go on to cause the autoimmune response that leads to Rheumatic Fever
- If the result comes back negative for Group A Strep but positive for other groups of Strep, they can still be treated in the same manner, but the claim cannot be made for under the Rapid Response model (as it is specifically for the treatment of Group A Strep in the prevention of Rheumatic Fever)





#### **Documentation**

Rheur	matic Fever Rapid Response Services Monthly Reporting.	Service:
	Reports due on the 15 <sup>th</sup> of each month	Month:
1	Total number of individuals assessed	
2	Total number of eligible (M, P, Q5) 4-19 year olds assessed	Should equal sum 2a–2f below
2a	Number of eligible 4-19 year olds assessed who are Maori	
2b	Number of eligible 4-19 year olds assessed who are Pacific	
2c	Number of eligible 4-19 year olds assessed who are NZE	
2d	Number of eligible 4-19 year olds assessed who are Chinese	
2e	Number of eligible 4-19 year olds assessed who are Indian	
2f	Number of eligible 4-19 year olds assessed who are Other	
3	Total number of 3-35 year old eligible (has a sore throat) household contacts assessed	Should equal sum 3a-3f below
3a	Number of eligible household contacts (3-35 years) assessed who are Maori	
3b	Number of eligible household contacts (3-35 years) assessed who are Pacific	
3c	Number of eligible household contacts (3-35 years) assessed who are NZE	
3d	Number of eligible household contacts (3-35 years) assessed who are Chinese	
3e	Number of eligible household contacts (3-35 years) assessed who are Indian	
3f	Number of eligible household contacts (3-35 years) assessed who are Other	
4	Total number of throat swabs taken (eligible individuals and household members with sore throat)	Should equal sum of 2 & 3 above
5	Number of GAS +ve	
6	Number of eligible 4-19 year olds given antibiotics	Should equal sum of 6a – 6d below
ва	Type of antibiotic given (Amoxicillin)	
вь	Type of antibiotic given (Benzathine Penicillin – IM)	
вс	Type of antibiotic given (Erythromycin)	
6d	Type of antibiotic given (Other – specify)	
7	Number of eligible 3-35 year old household contacts given antibiotics	Should equal sum of 7a – 7d belo
7a	Type of antibiotic given (Amoxicillin)	
7b	Type of antibiotic given (Benzathine penicillin – IM)	
7c	Type of antibiotic given (Erythromycin)	
7d	Type of antibiotic given (Other – specify)	
8	Total number given antibiotics	Should equal sum of 6 & 7 above
9	Number of eligible referrals made to Whare Ora	

- Matches fields from advanced forms
- Collated monthly
- Sent to PHO lead by 10<sup>th</sup> of the month
- PHO lead to Population Health by 15<sup>th</sup> of the month
- Used for surveillance and for allocation of funding





#### Resources











**WE ARE AWAY FROM** 

UNTIL

BUT YOU CAN STILL GET A FREE SORE THROAT SWAB and antiboitics at the following services



FROM ALL THE TEAM HERE WE WISH YOU A HAPPY AND SAFE HOLIDAYS





Te Hanga Whaiaranga Ma'Te Iwi
Building Healthy Communities





Preventing







#### Resources







# Waikato DHB Rheumatic Fever site:

<a href="https://www.waikatodhb.health.nz/for-health-professionals/rheumatic-fever">https://www.waikatodhb.health.nz/for-health-professionals/rheumatic-fever</a>

#### Ministry of Health

- https://www.health.govt.nz/our-work/diseases-andconditions/rheumatic-fever/rheumatic-fever-publications
- https://www.health.govt.nz/our-work/diseases-andconditions/rheumatic-fever/rheumatic-feverresources/rheumatic-fever-resources-health-professionals

#### **National Heart Foundation**

https://www.heartfoundation.org.nz/resources?keywords=rheumatic+fever





## Online learning modules

- Ministry of Health Rheumatic Fever e-learning module: <a href="http://www.waikatodhb.health.nz/public-health-advice/a-z-of-public-health-topics/p-r/rheumatic-fever/ministry-of-health-rheumatic-fever-e-learning-module/">http://www.waikatodhb.health.nz/public-health-advice/a-z-of-public-health-topics/p-r/rheumatic-fever/ministry-of-health-rheumatic-fever-e-learning-module/</a>
- Rheumatic Heart Disease Australia e-learning modules: <a href="http://www.rhdaustralia.org.au/e-learning-discussion-forum">http://www.rhdaustralia.org.au/e-learning-discussion-forum</a>





#### **RHF Contacts and Links**

Michelle Morley, CNS, Population Health Waikato District Health Board (07) 838 2569 <a href="mailto:michelle.morley@waikatodhb.health.nz">michelle.morley@waikatodhb.health.nz</a>

Waikato DHB Rheumatic Fever pages:

- https://www.waikatodhb.health.nz/for-healthprofessionals/rheumatic-fever
- https://www.waikatodhb.health.nz/yourhealth/wellbeing-in-the-waikato/rheumatic-fever
- https://www.waikatodhb.health.nz/yourhealth/wellbeing-in-the-waikato/whare-ora





## Links to further reading & references

#### National Heart Foundation of New Zealand:

- https://www.heartfoundation.org.nz/resources?keywords=rh eumatic+fever
- National Heart Foundation of New Zealand (2014) New Zealand Guidelines for Rheumatic Fever Algorithm 4 Guide for sore throat management. Auckland, National Heart Foundation of New Zealand
- National Heart Foundation of New Zealand (2014) New Zealand Guidelines for Rheumatic Fever 2. Group A Streptococcal Sore Throat Management. Auckland, National Heart Foundation of New Zealand





## Links to further reading & references

- Ministry of Health. 2015. Using Practitioner Supply Orders and Standing Orders in the Rheumatic Fever Prevention Programme: Guidance for sore throat management services. Wellington: Ministry of Health. <a href="http://www.health.govt.nz/publication/using-practitioner-supply-orders-and-standing-orders-rheumatic-fever-prevention-programme">http://www.health.govt.nz/publication/using-practitioner-supply-orders-and-standing-orders-rheumatic-fever-prevention-programme</a>
- PHARMAC increased access to antibiotics for RHF prevention programmes http://www.pharmac.health.nz/assets/notification-2013-11-19-pso-changes-rfpp.pdf
- PHARMAC 2015 Pharmaceutical schedule <a href="http://www.pharmac.govt.nz/">http://www.pharmac.govt.nz/</a>
- Drug Monographs Information for Health Professionals. Medsafe.govt.nz.
- http://www.medsafe.govt.nz/profs/datasheet/DSForm.asp
- Drug Monographs Mims Online © UBM Medica (NZ) Ltd 2007.
- http://mimsgateway.co.nz/
- Oliver, J. R., Pierse, N., Stefanogiannis, N., Jackson, C. and Baker, M. G. (2017), Acute rheumatic fever and exposure to poor housing conditions in New Zealand: A descriptive study. J Paediatr Child Health, 53: 358–364. doi:10.1111/jpc.13421 online link: <a href="http://onlinelibrary.wiley.com/doi/10.1111/jpc.13421/epdf">http://onlinelibrary.wiley.com/doi/10.1111/jpc.13421/epdf</a>
- Ministry of Health online information video: <a href="https://www.health.govt.nz/our-work/diseases-and-conditions/rheumatic-fever/rheumatic-fever-resources/rheumatic-fever-campaign-online-videos#educational">https://www.health.govt.nz/our-work/diseases-and-conditions/rheumatic-fever/rheumatic-fever-resources/rheumatic-fever-campaign-online-videos#educational</a>



