HAWKE'S BAY
District Health Board
Whakawāteatia

Refreshed

Rheumatic Fever Prevention Plan:

1 January 2016 – 30 June 2017

Contents

1. Introduction and background

Rheumatic fever has huge health, social and economic costs for our region's children and young people, their families, the wider community and the health sector. Hawke's Bay DHB has already developed a Rheumatic Fever Prevention Plan (20 October 2013 – 30 June 2017) and this is a refreshed and updated version of that plan, to be known as the Refreshed Rheumatic Fever Prevention Plan (1 January 2016 – 30 June 2017).

1.1 History and progress to date

In 2010, Hawke's Bay DHB began a concerted effort to reduce the incidence of rheumatic fever in Hawke's Bay with its investment in "Say Ahh", a school-based throat swabbing programme based in Flaxmere, and by addressing the primordial factors associated with Group A Streptococcal (GAS) transmission. Say Ahh is now in its sixth year and there has been a significant reduction in the incidence of rheumatic fever in Hawke's Bay during that period.

In 2015, two new programmes commenced as part of Hawke's Bay's overall approach to rheumatic fever prevention: "Primary Care Says Ahh", a throat swabbing and treatment programme aimed at high risk children and youth within the primary care setting, and the "Child Healthy Housing" programme, a social work-led intervention aimed at reducing rheumatic fever by addressing crowding and improving housing suitability/conditions.

In its 2013 Rheumatic Fever Prevention Plan, Hawke's Bay DHB committed to the goal of a two-thirds reduction in acute rheumatic fever initial hospitalisations by 2017, to 1.4 initial hospitalisations per 100,000. A recent letter from the Ministry of Health confirms that Hawke's Bay has met (and exceeded) this target with a 2014/15 rate of 0.6 per 100,000.

1.2 Government funding

In 2012, the Government announced that rheumatic fever prevention would become a priority area as part of the whole-of-government 'Better Public Services' targets, resulting in the development of our Rheumatic Fever Prevention Plan (20 October 2013 – 30 June 2017). At the end of June 2017, the dedicated Ministry-led programme will end and current levels of Government funding for rheumatic fever will cease. After this time, funding will be available for five years to 2021/22 to the "high incidence" DHBs, which includes Hawke's Bay DHB, with a review in 2018/19 to assess whether funding will continue post 2021/22.

1.3 Evaluation

An evaluation of Say Ahh was completed in June 2015 by Dr Janine Stevens, Public Health Medicine Registrar, MidCentral DHB. The primary purpose of the evaluation was to assess the performance of Say Ahh after four years of implementation and to inform future decision making about the value of continued investment in Say Ahh. The evaluation found that Say Ahh is "highly effective" for preventing new cases of rheumatic fever in the target population showing a large and statistically significant reduction in the rheumatic fever incidence rate since implementation. The programme was judged as "somewhat effective" for improving equity of access to throat swabbing.

The key recommendations of the evaluation included (refer Appendix 1 for further detail):

- Continue to invest in Say Ahh as an effective strategy for the prevention of rheumatic fever in children attending the target schools
- Seek opportunities to improve programme cost-effectiveness, and
- Strengthen focus on equity of access to throat swabbing within the Say Ahh programme.

2. Review and update of the plan

2.1 Summary of lessons learnt to date

2.1.1 Most successful activities

- In its recently completed evaluation, Say Ahh was judged to be "highly effective" in preventing new cases of rheumatic fever in the target population
- A defining feature of Say Ahh is the commitment to quality which underpins the programme (focus on training, systems around treatment and compliance, nurses working under standing orders, overall tight operational management, etc)
- Another key feature is that from the very beginning of Say Ahh, the identification and treatment aspects of the programme were linked with primordial prevention strategies, through the automatic referral of children with positive GAS results to the healthy homes programme (social work led)
- Building relationships and gaining support from other sectors has also been a key strength of Hawke's Bay's rheumatic fever prevention work, such as working with WINZ to ensure families are receiving their correct proper entitlements, working with schools to disseminate key messages and working with Housing New Zealand to improve conditions in HNZC houses.

2.1.2 Cost effectiveness

- In the recent evaluation of Say Ahh, the economic value of the programme was judged by examining the annual fiscal investment being made and the estimated cost of averting one case of ARF. At the time of the evaluation, the financial cost of delivering the Say Ahh programme was around $500,000 annually, equating to an average cost per eligible child of about $300 per year. Using the available costings and the results of the health outcome analysis, the cost of preventing one case of ARF was estimated to be approximately $210,000. Relevant literature suggests that this corresponds to a cost per quality adjusted life year (QALY) of approximately $60,000. Consideration of these findings led to the programme investment being judged as offering "good value" in the current context however issues of long-term financial sustainability were highlighted as being potentially problematic
- Use of kaiāwhina to access and support high risk families has worked extremely well and has proved to be a very cost-effective method of service delivery.

2.1.3 What could have been done differently

- With much of the focus on recent years being on the implementation of Say Ahh, efforts to raise awareness about rheumatic fever prevention across the whole Hawke's Bay region have not had as much attention. A key focus of this refreshed plan will be the development of a strategic, coordinated approach to awareness raising and communications across the whole region
- Governance arrangements could have benefited from a broader, intersectoral membership and a stronger focus on strategy
- Whilst the Say Ahh programme has included a healthy homes/social work model from the very beginning, it has been difficult to demonstrate the effectiveness of this aspect as the necessary data was not identified and collected from the outset
- More community consultation at the design stage and during implementation of Say Ahh would have resulted in wider community and stakeholder buy-in.

2.2 Involvement and commitment of local stakeholders

Increasing stakeholder understanding of rheumatic fever prevention and encouraging their active involvement and ownership of local solutions is an important part of this refresh of the Rheumatic Fever Prevention Plan. Section 4 below details how Hawke's Bay DHB has worked with Māori, Pacific and other local stakeholders in the refresh of this plan and outlines strategies to ensure ongoing engagement and two-way communication.

2.3 Scope of refresh

Ministry of Health guidelines on the scope of this review and refresh specifically excluded actions to facilitate the effective follow up of rheumatic fever. Actions relating to follow-up from the DHB's previous Rheumatic Fever Prevention Plan have therefore been included in Appendix 2 of this refreshed Plan for completeness only and have not been reviewed or refreshed.

3. Governance

3.1 Governance group

Over time as Hawke's Bay's current low rheumatic fever rates are sustained, the emphasis around rheumatic fever prevention will shift from identification and treatment of the condition, to an emphasis on the underlying social determinants of rheumatic fever, in particular housing and poverty. To support this shift, a broader governance model will be put in place to ensure collective decision making about priorities and coordinated implementation of this refreshed plan. The proposed new governance group (whether it be an entirely new group, an existing group or the soon to be formed Housing Coalition) will:

- have broad membership, including from organisations and stakeholders outside of the health sector (eg MSD, Housing and non-government organisations etc)
- seek to include members at senior management level who are able to champion rheumatic fever within their spheres of influence
- ensure communication and ideas sharing between all partners and stakeholders, and
- promote the active involvement and buy-in of all stakeholders in finding solutions to rheumatic fever prevention.

The current Say Ahh steering group is likely to remain in existence, providing an important operational level of coordination, planning, information sharing and monitoring of clinical quality.

Governance arrangements will be reviewed annually to ensure appropriate membership and that sustainable change is being delivered.

3.2 Rheumatic fever champion

Our Rheumatic Fever Champion is Dr Caroline McElnay, Director of Population Health/Health Equity Champion and member of the Hawke's Bay DHB's Executive Management Team. Dr McElnay's responsibilities include:

- Acting as the lead contact to ensure information about the programme is shared with all relevant organisations in the DHB's area
- Leading high-level intersectoral relationships on behalf of the DHB
- Providing public health clinical leadership.

From 1 May 2015, a Rheumatic Fever Clinical Champion role has also been established with responsibilities including:

- Oversight of the operational management of “Say Ahh”
- Guidance and support for the “Primary Care Says Ahh” programme
- Training staff involved in both programmes
- Updating GPs and medical staff on rheumatic fever guidelines.

4. Stakeholder engagement

Increasing stakeholder understanding of rheumatic fever prevention and encouraging their active involvement and ownership of local solutions is an important part of this refresh of the Rheumatic Fever Prevention Plan. Key stakeholders include local Māori and Pacific communities, primary and secondary schools in Flaxmere and other high needs communities, Health Hawke’s Bay (PHO) and general practice, Māori health and social service providers, health and social sector providers and government agencies including Housing New Zealand, Te Puni Kokiri, and the Ministry of Social Development.

4.1 Consultation

An initial community engagement process was conducted in August 2015 involving a series of public meetings as well as one meeting with staff and parents at a high risk school. The meetings were attended by, principally, Māori and Pacific whānau. The consultation sought to gather feedback on the strengths and weaknesses of the programme, how communication could be improved and the governance arrangements. A questionnaire posing similar questions was also distributed widely to key stakeholders, including Health Hawke’s Bay (PHO), Māori providers, government agencies (Ministry of Social Development, Housing New Zealand, Te Puni Kōkiri etc) and local non-government partners.

Health literacy and communication were the main themes of feedback about the programme during the consultation period. There was also good support for a governance group to promote collective decision making. Further detail is provided in Appendix 3.

4.2 Oversight by Māori Relationship Board

Oversight of this refreshed plan has been provided by the DHB’s Māori Relationship Board which met in September to consider and review the engagement process to date and provide input into the refreshed plan. The guidance provided, which has helped to inform this plan, is detailed in Appendix 3.

4.3 Feedback on draft, refreshed plan

The draft refreshed plan was circulated to all key stakeholders on 16 September with a two week feedback period (and four weeks before final sign-off by the Māori Relationship Board). Feedback received has been incorporated into the plan as appropriate, and is detailed in Appendix 3.

4.4 Ongoing stakeholder engagement

Ongoing stakeholder and community engagement and communication will be a particularly important feature of Hawke’s Bay’s rheumatic fever prevention programme as the programme’s emphasis shifts from a clinical to a broader social model.

One of the most important pieces of planned work over the next two years is to develop a strategic framework and implementation plan to raise awareness around rheumatic fever prevention in a coordinated and comprehensive way (refer section 5.2). Strategies to promote ongoing stakeholder and community engagement will be a critical feature of this planned strategic framework and are likely to include the following:

- Annual community hui to exchange ideas around the key issues influencing health and possible local solutions (including rheumatic fever and its prevention)
- Opportunistic focus group-style morning teas in communities experiencing economic disadvantage or hardship
- Focus group-style engagement with Pacific families
- Better feedback mechanisms with schools (probably through newsletters)
- Improving communications with GPs, paediatric and ED staff, WINZ, CYFS
- Better communication/ideas exchange with pharmacy and laboratory staff
- Better engagement with nurses and healthcare providers already working within the programme
- An evaluation mechanism to measure progress and identify effective engagement strategies.

5. Achieving the Better Public Service target (1 January 2016-30 June 2017)

5.1 Progress towards the Better Public Service rheumatic fever target for 2017

In the 2013 Rheumatic Fever Prevention Plan, Hawke's Bay DHB committed to the target of a two-thirds reduction in acute rheumatic fever initial hospitalisations by 2017, to 1.4 initial hospitalisations per 100,000. Hawke's Bay DHB has already met, and exceeded, this target, with a 2014/15 rate of 0.6 per 100,000.

Whilst the DHB is pleased with these significantly reduced hospitalisation rates, it remains conscious of the continuing high numbers of positive Group A streptococcal throat swabs in Flaxmere which, combined with housing conditions and high social/economic need continues to place that community at very high risk of increased rheumatic fever rates. Hawke's Bay DHB is also cognisant of the possibility that disease clusters could appear in other high need communities across the region and increased investment is needed to prevent this from occurring.

This refreshed plan therefore proposes to continue current service levels under the Say Ahh throat swabbing programme, but to also increase efforts to raise awareness around rheumatic fever across Hawke's Bay and to continue/bolster efforts to address the underlying social determinants of rheumatic fever (in particular poor quality housing).

5.2 Planned interventions to raise awareness of rheumatic fever and how to prevent it, to June 2017

Consultation on the refresh of this plan highlighted the need to continue efforts to build community awareness of rheumatic fever prevention including the importance of getting sore throats checked and access to sore throat treatment services. To date, efforts to raise awareness have been limited, ad hoc and lacking a strategic framework and coordinated implementation.

Assisted by the refreshed governance arrangements outlined in section 3 above, key actions to raise awareness include:

- Develop a strategic framework and implementation plan to raise awareness of rheumatic fever and how to prevent it amongst high risk communities, in particular high risk children and youth not attending Say Ahh schools (link to national campaign to avoid mixed messages)
- Strategic framework to include health literacy, resources, key messages around housing and sleeping arrangements (to reduce transmission of rheumatic fever), promoting the availability of Primary Care Says Ahh and working with other sectors to promote key messages
- Conduct an engagement project with Pacific communities to inform the strategic framework and include in this an investigation into the possibility of establishing a liaison person for each Pacific community
- Using opportunistic methods such as focus-group style morning teas, engage with other high risk communities to inform the strategic framework
- Support communities to become actively involved in identifying local solutions to rheumatic fever prevention (applying principles of community development)
- Evaluate programmes/initiatives delivered to assess influence on behaviour change.

5.3 Planned interventions to prevent the transmission of Group A streptococcal throat infections within households, to June 2017

A key feature of Hawke's Bay DHB's rheumatic fever prevention work has been ensuring all children returning a positive throat swab have been offered the opportunity to work with a social worker to address the risk factors for rheumatic fever. More recently, with the support of Government funding, the Child Healthy Housing programme has been implemented which aims to reduce rheumatic fever by addressing crowding and improving housing suitability/conditions. The Child Healthy Housing programme entry criteria differs from the previous programme (and the interventions are more comprehensive).

The importance of addressing the underlying determinants of health, in particular housing conditions, was highlighted as a key strategy for rheumatic fever prevention by stakeholders during the development of this refreshed plan, including the DHB's Maori Relationship Board.

Actions proposed to prevent the transmission of Group A streptococcal throat infections within households, to June 2017 include:

- Support the re-forming of Hawke's Bay's Housing Coalition to ensure a strategic and coordinated effort to improve the quality of housing stock and to address issues such as overcrowding and housing affordability
- Establish a fixed term position for a Housing Project Coordinator to seed and develop specific housing projects to reduce the transmission of rheumatic fever (examples may include a heating bank, subsidised heating sources, or a bunk bed programme)
- Continue to co-fund the Child Healthy Housing programme with the Ministry of Health and evaluate both the Child Healthy Housing and if possible, its predecessor, to inform investments post 2017
- Continue to fund insulation for houses identified under the Child Healthy Housing programme and extend funding to also meet other immediate housing needs
- Explore with iwi and hapu opportunities for improving housing quality for whānau
- Explore further opportunities for private philanthropy to provide basic household items for whānau
- Implement training and disseminate resources to support professionals and volunteers working with high needs households to become better equipped to support their clients to achieve a healthy home

- Continue to be aware of research findings in relation to GAS carriage and GAS infection e.g. possible use of probiotics.

5.4 Planned interventions to treat Group A streptococcal throat infections quickly and effectively, to June 2017

The recent evaluation of Say Ahh judged the programme to be "highly effective" for preventing new cases of rheumatic fever in the target population. The key recommendation of the evaluation was therefore to continue to invest in delivery of the Say Ahh programme to the current target population. It also recommended that the DHB not consider extending the programme into other Hawke's Bay schools unless strict target population criteria can be met (including important demographic characteristics and a particularly high burden of disease).

Actions to treat Group A streptococcal throat infections quickly and effectively, to June 2017 include:

5.4.1 Identifying and treating GAS in the school setting

- Continue to invest in Say Ahh – offering throat swabbing and treatment under standing orders for 1800 high risk children attending nine Decile 1 schools in Flaxmere
- Conduct the proposed Youth Pilot (throat swabbing into high risk high schools not included in Say Ahh) and evaluate
- Implement initiatives to raise awareness in all schools around rheumatic fever and how to prevent it (to be incorporated in the strategic framework outlined in section 5.2 above)
- Seek opportunities to improve programme cost-effectiveness including identifying areas for improvement within the school programme
- Strengthen working relationships regarding diagnostic and pharmaceutical service components of the Say Ahh programme to ensure effective delivery
- Strengthen the focus on equity of access to throat swabbing within the Say Ahh programme
- Ongoing workforce development for Say Ahh providers
- Consider scope for adding in a 10 day check at completion of antibiotic course

5.4.2 Identifying and treating GAS in general practice and community settings

- Monitor the implementation of the "Primary Care Says Ahh" programme and develop an evaluation mechanism to assess effectiveness and inform future investment
- Explore other possible community based health providers servicing high need communities that could provide throat swabbing and treatment services.

5.4.3 Other actions to ensure sore throats are treated appropriately and quickly

- Continue to ensure that primary health care professionals likely to see high risk children follow the most up to date sore throat management guidelines
- Provide current information to clinicians concerning rheumatic fever in Hawke's Bay
- Promote access to the Ministry of Health online rheumatic fever training modules for overseas trained staff working in both Hawke's Bay hospital and in general practice
- Identify a rheumatic fever champion in every practice to support these actions
- Extend the role of Rheumatic Fever Clinical Champion to include actions above.

5.5 Planned investment in interventions to June 2017

Planned investment to June 2017 is set out in Appendix 4.

6. Ongoing investment in rheumatic fever prevention (July 2017 onwards)

6.1 Planned activities post 2017

As shown in Appendix 4, the Ministry of Health has indiciated that it will continue funding of $153,364 for a period of 5 years from 2017. In addition, Hawke's Bay DHB has committed at least $305,000 per year of its own funds towards rheumatic fever prevention. The combined total investment in rheumatic fever from 2017 will therefore be $458,364 to be invested as follows (indicative at this stage only):

- Continuation of the Say Ahh throat swabbing programme in Flaxmere, subject to periodic evaluation and review. Note that there is no planned extension of Say Ahh into other schools in Hawke's Bay unless certain strict criteria are met including demographic characteristics and a particularly high burden of disease
- Awareness raising efforts will need to be sustained and resourced post 2017, although it is expected that much of this activity will become business as usual
- Remaining investment decisions post 2017 will be dependent on the outcome of evaluations of the Child Healthy Housing programme, the Rapid Response/Primary Care Says Ahh programme and the Youth Pilot over the next two financial years.

6.2 Planned investment (financial and staffing) post 2017

Refer Appendix 4.

6.3 Other stakeholder investment

No other specific stakeholder investment has been identified at this stage.

Appendix 1 – Recommendations from the Say Ahh Evaluation

On the basis of the findings of the Say Ahh Evaluation the following actions were recommended:

1. Continue to invest in the Say Ahh programme as an effective strategy for the prevention of ARF in children attending the target schools

- Maintain funding for programme delivery to the current target population
- Do not consider extension of the Say Ahh programme into other Hawke's Bay schools unless strict target population criteria can be met (including important demographic characteristics and a particularly high burden of disease)
- Foster strong supportive relationships with primary care health practitioners to ensure effective management of sore throats for the target population outside of school terms, and for high risk children and young people who do not attend Say Ahh schools
- Consider potential risks of both continuation and cessation of programme investment to inform strategies for future risk management as necessary allow

2. Seek opportunities to improve programme cost-effectiveness

- Renegotiate laboratory service provider contracts to achieve lower unit pricing for diagnostic throat swabbing and culture
- Undertake a detailed assessment of current Say Ahh programme workflow and inputs to better understand current human resource use and identify areas for improvement

3. Strengthen the focus on equity of access to throat swabbing within the Say Ahh programme

- Explore ethnic differences in swabbing rates in Say Ahh schools and the possible underlying causes for any identified differences (including a review of data at an individual school level) to inform strategies to ensure the highest swabbing rates are achieved for those at the greatest risk of ARF by ethnicity

4. Continue to evaluate Say Ahh regularly to monitor progress against key programme goals

- Evaluate progress towards health outcome and equity goals of the programme at least annually, in addition to current regular reporting requirements
- Consider exploring the possibility of additional "unintended" health benefits that may be occurring as a result of housing and/or social interventions for target families delivered through the Say Ahh programme

5. Contribute to current knowledge about school-based ARF prevention strategies in New Zealand

- Publish the findings of this evaluation to share key learnings in a national context

Appendix 2 – Actions to Facilitate the Effective Follow-Up of Identified Rheumatic Fever Cases

[Note: these actions derive from the Rheumatic Fever Prevention Plan (20 October 2013 – 30 June 2017) but as this area of activity has been excluded from the scope of this refresh, they have been included for completeness only. Many of the actions have since been completed.]

Ensure patients with a history of rheumatic fever receive monthly antibiotics not more than five days after their due date

- Public health nurse contacts clients monthly and administers bicillin according to the DHB's policy and standing orders
- Kaiāwhina offers support to clients as appropriate
- Quarterly and annual report on the percentage of clients on secondary prophylaxis who received their bicillin injections within five days of the due date

Ensure that all cases of acute rheumatic fever are notified to the Medical Officer of Health within seven days of hospital admission

- Monitor the interval between admission and notification for all notified cases
- Develop a plan to address avoidable exceedances with clinical colleagues
- Validate hospitalisation data with Ministry of Health data to ensure consistency in data

Improve rheumatic fever register and liaison with clinical staff

- A more comprehensive and up-to-date register will be developed, as recommended by the NHF guidelines
- Liaise with clinicians to ensure the register includes up-to-date clinical monitoring information

Identify and follow-up known risk factors and system failure points in cases of rheumatic fever

- Develop a standard questionnaire to review the health "pathway" for each case and implement with relevant health/school services and whānau to identify areas for improvement
- Annual review of recommendations and progress and implementation

Appendix 3 – Consultation and Feedback

Community consultation and stakeholder survey results – August 2015

Key themes of the consultation included:

- Health literacy
  - The nature of the disease, its causes and its impact
  - Treatment and compliance
  - Availability of services

  Many participants identified that due to their lack of knowledge around the cause, diagnosis and treatment of sore throats that prescribed medication had not always been administered correctly, and in some cases not given at all; some whānau believed that there would be a charge for services so had made the decision not to engage.
- Communication
  - Methods and consistency of communication (Facebook, through schools, letterboxes, digital notice boards, GPs)
  - Access to resources in Pacific languages
  - Easier access to resources in Pacific languages
  - Face to face communication upon diagnosis
  - Flaxmere Principals meeting
  - Make statistics available to share with community

  Participants identified the need for face to face meetings with whānau to discuss the cause, diagnosis and treatment of sore throats supported by resources in the appropriate language. Lack of knowledge resulted in families being unaware of the implications of an untreated sore throat. The need for a wider whānau and community hui around the cause, diagnosis and treatment of sore throats was also identified by participants.
- Inconsistent referrals to additional support services
- Support for collective governance (health and social sector)

Māori Relationship Board feedback – September 2015

- Important to continue and increase efforts to improve housing conditions
- Engagement with whānau must be face to face with “Community experts” – Māori staff visiting Māori whānau
- The sharing of positive patient stories to the community

Wide stakeholder feedback – September 2015

- “Very pleased with programme and plan. You provide very good service for our kids at Omahu. Keep up the good work” – Omahu School
- Include description of the leverage gained from working across sectors
- Housing initiatives need to address heating
- Want to see community representation on the governance group
- Include working with other sectors to promote key messages as an important aspect of the awareness raising campaign
- “Awareness is not the only issue cost, limited housing and structural issue with their homes are things that awareness does not address”
- Use evaluation as a tool to measure progress and identify effective strategies for ongoing stakeholder engagement
- Awareness raising campaign needs to link with national messages (DHB Health Promotion)