
Evaluation of the Pacific Trachoma Initiative

The Fred Hollows Foundation

**Evaluation Report
Final**

June 2019

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ACRONYMS

F&E	Facial cleanliness and environmental improvements
GBP	British Pound
GET2020	Alliance for Global Elimination of Trachoma by the year 2020
GSM	Global Scientific Meeting
GTMP	Global Trachoma Mapping Project
HIS	Health Information System
IAPB	International Agency for the Prevention of Blindness
IAPB-WPR	International Agency for the Prevention of Blindness Western Pacific Region
ICTC	International Coalition for Trachoma Control
IEC	Information, Education, Communication materials
ITI	International Trachoma Initiative
KII	Key Informant Interview
LF	Lymphatic Filariasis
LSHTM	London School of Hygiene and Tropical Medicine
MDA	Mass Drug Administration
MoH	Ministry of Health or Ministry of Health and Medical Services. MoH will be used throughout the report to refer to both entity types.
MOU	Memorandum of Understanding
NGO	Non-Government Organisation
NTD	Neglected Tropical Disease
PAC	Program Advisory Committee
PEI	Pacific Eye Institute
PIC	Pacific Island Country
PTI	The Pacific Trachoma Initiative
SAFE	Surgery, Antibiotics, Facial Cleanliness, Environmental Improvements
SDA	Sub Donor Agreement
SGA	Sub Grant Agreement
STH	Soil Transmitted Helminths
STI	Sexually Transmitted Infection
TAP	Trachoma Action Plan
TF	Trachomatous inflammation, follicular
The	The Fred Hollows Foundation
The Trust	The Queen Elizabeth Diamond Jubilee Trust
TOR	Terms of Reference
TRA	Trachoma Rapid Assessment
TT	Trachomatous Trichiasis
WASH	Water, Sanitation and Hygiene
WHO	The World Health Organisation

EXECUTIVE SUMMARY

This document provides a report on the final process evaluation of the Pacific Trachoma Initiative (PTI) 2014-2019.

Program Overview

The **Goal of the PTI** was to achieve the elimination of blinding trachoma as a public health problem by 2019 in four Pacific Island Countries (PICs): Fiji; Solomon Islands; Vanuatu; and Kiribati. The **Objectives of the PTI** were: 1. To clarify the enigmatic clinical presentation of trachoma in the PICs; and 2. To guide the policies and activities of the PIC national governments to support effective and sustainable elimination of trachoma by 2019.

The PTI has been implemented by the Ministries of Health and Ministries of Health and Medical Services (hereafter referred to as MoH) and trachoma coordinators in each of the four PICs. The research components have been led by the London School of Hygiene and Tropical Medicine (LSHTM). The program has been funded by The Queen Elizabeth Diamond Jubilee Trust (The Trust) with Zithromax donations from the International Trachoma Initiative (ITI). The Foundation has provided grant management, program management and technical support. Technical partners have included the WHO, global trachoma experts, the International Agency for the Prevention of Blindness (IAPB), International Coalition for Trachoma Control (ICTC), and ITI.

When the PTI program was proposed in 2014, available data for Fiji, Solomon Islands and Vanuatu found there was a high prevalence of trachomatous inflammation-follicular (TF), but a low prevalence of trachomatous trichiasis (TT) and ocular Chlamydia trachomatis infection. This presentation was inconsistent with the usual progression of the trachoma disease observed elsewhere, such as in trachoma-endemic populations of sub-Saharan Africa. The presentation in Kiribati differed to the other PICs, presenting more consistently with other trachoma endemic areas. In response to these enigmatic findings, the PTI was designed to help clarify the clinical presence of blinding trachoma whilst also supporting the public health needs of the focus countries to achieve trachoma elimination.

Evaluation Approach

As a process evaluation, the methodology used in this evaluation has sought to investigate and analyse which aspects of the PTI intervention were critical to success, which aspects limited or hindered success and based on lessons, make recommendations for future trachoma programming in the Pacific. The evaluation questions focused on: effectiveness of planning and implementation; the PTI's adaptive response to research findings; the efficient use of program resources; the positive and negative impacts on national health systems; the effectiveness of the partnerships; and the extent to which the PTI equitably reached trachoma endemic communities.

The evaluation approach involved the review of documents provided by The Foundation (refer to Annex 2) and key informant interviews (refer to Annex 1). Key informants included: The Foundation's PTI management team and other staff globally; implementing partners in each PIC, including relevant staff from MoH such as trachoma, NTD or eye health coordinators, WASH coordinators, ophthalmologists or medical officers, public health coordinators, heads of pharmacy and laboratories; WHO; The Trust; LSHTM and ITI.

Country Level Achievements

Kiribati: The achievements of the PTI in Kiribati are significant and positive, however Kiribati will not achieve its PTI outcomes within the program timeline. It has achieved most of its research, two of its three MDA rounds and has commenced implementing its F&E activities. Activities in Kiribati have contributed to the PTI's expected outcomes as follows:

Outcomes 1 and 2: Kiribati has completed two rounds of MDA and is in the process of undertaking an early impact survey to determine whether a third round of MDA is required.

Outcome 3: A pre-MDA survey was undertaken prior to the first round of MDA, and an early impact survey is scheduled in 2019.

Outcome 4: Trachoma programming and the appointment of a National Trachoma Coordinator was new for Kiribati, commencing as a direct result of the PTI. A National Eye Coordinator has recently been appointed.

Vanuatu: Amongst the PTI countries, Vanuatu could be recognised as a model for the effective coordination and integration of trachoma elimination programming. It has achieved its research and programmatic components and is implementing its F&E activities. Activities in Vanuatu have contributed to the PTI's expected outcomes as follows:

Outcomes 1 & 2: Vanuatu has completed its single MDA, has undergone its surveillance phase and is currently preparing its dossier for submission to WHO.

Outcome 3: All planned surveys have been implemented. The data have contributed to the broader discourse on trachoma surveillance and elimination protocols.

Outcome 4: The Vanuatu MoH has made NTDs a priority.

Solomon Islands: Despite challenges, Solomon Islands (SI) has achieved its research components and most programmatic components and commenced F&E activities. Activities in SI have contributed to the PTI's expected outcomes as follows:

Outcome 1 & 2: SI has completed its single MDA and is in its surveillance phase. SI has completed its post MDA impact assessments and ancillary surveys contributing to the global discourse. Pre-validation surveys have commenced in Choiseul province. Plans to prepare its dossier in 2020.

Outcome 3: SI has completed its planned research activities contributing to the broader discourse on trachoma surveillance and elimination protocols.

Outcome 4: SI MoH has supported the National Public Health Eye Care Coordinator and the PTI has engaged with other MoH departments such as health promotion. SI Government has not made trachoma elimination or NTDs a priority within its policies and activities.

Fiji: The delays in signing of an agreement with the MoH and then WHO have prevented the implementation of most of the PTI activities in Fiji. Nevertheless, activities in Fiji have contributed to the PTI's expected outcomes as follows:

Outcomes 1 & 2: No MDA or survey activities have been undertaken under the PTI. A repeat national prevalence survey would determine whether MDA is required.

Outcome 3: A new prevalence study has been recommended, as well as an ancillary survey. There is a possibility of Fiji applying for dossier by 2020.

Outcome 4: The trachoma program sits under the MoH NTD Department, which includes embedded health promotion roles. The MoH has maintained a focus on trachoma through the National Trachoma Taskforce and the WASH Group.

Program Level Achievements

Four rounds of MDA have been implemented within the program period although all were delayed compared to initially planned timings. This is still a good achievement given the enormity of implementing population-wide MDA, limited human resources, the complexity

of the program, the challenges faced in individual countries and the unique fact that the program was adapting in real time to emerging data and evolving policy directives. Challenges and risks to timely implementation did not seem to have been adequately identified in the PTI program design. More timely recognition of the unique challenges in the Pacific and increased levels of associated support from The Foundation and ITI may have managed this risk during implementation.

Through the PTI and other Foundation support, the mapping, survey and research activities have included training and certification for national-level graders and recorders for 31 individuals across the Pacific region. These trainees are now equipped to conduct trachoma or other surveys in their respective countries and potentially other important roles involved in ongoing surveillance. It should not be underestimated however, the burden placed on eye health teams and the hidden costs in each country of undertaking mapping activities, of taking staff off line from their normal roles and substantially increasing their workloads. Data have been used at the micro and macro levels including to target F&E activities and inform the global discourse on the WHO protocols and their implementation in the Pacific.

The approach to the F&E component of the PTI changed during the program period in response to the availability of funds. Coordination and integration were correctly identified as critical to the enduring success of F&E activities however they were not adequately planned or resourced and therefore were not fully realised. With implementation of F&E activities only commencing in each country in mid 2018 and 2019, interrupted by efforts with surveys, it is too early to assess whether the inputs will have been effective or tokenistic. It will be important that the investments in F&E continue over the coming years to increase the likelihood of sustained benefits.

The PTI has laid the foundation for the approach to managing trachoma programs across the Pacific through informing policies and practices and capacity development which are also applicable to other NTDs. It will inform other countries in their approach to eliminate trachoma and has influenced global policy. However, the extent to which the PICs are likely to sustain a focus on trachoma is mixed. The sustainability of trachoma management is highly dependent on which part of the public health system is responsible for its management and the degree to which it is linked and integrated with other programs.

High levels of consultation and communications between key stakeholders was a key feature of the PTI and as a dynamic and adaptive program it was vital that these practices worked well. The partnership arrangements while complex, were characterised by honest and open communications, respect and shared objectives.

MDA is designed to reach the entire population, indirectly addressing equity, exclusion or marginalisation. The Pacific's logistical and contextual challenges including distance, islands and remoteness did pose a risk to complete coverage which could disadvantage those from the most isolated and possibly marginalised communities. This was carefully managed in the PTI with high coverage rates and investment in people and costs associated with reaching isolated communities. The equitable reach of the F&E activities will be dependent on the successful integration into broader, existing national health promotion policies and programs.

KEY LEARNINGS AND RECOMMENDATIONS

Key Learnings

- The outputs and outcomes of the PTI that have been achieved within the timeframe are significant and to be commended.
- The support and advocacy role of the Regional Coordinator and work of the National Trachoma Coordinators in each country were critical to the PTI's achievements.
- Capacity development of human resources as a direct result of the PTI will continue to contribute to the health systems in each of the PICs.
- The findings of PTI research have positively contributed to the global discourse and policy level decisions regarding trachoma management.
- The PTI was able to adapt in response to research findings but this also created considerable challenges for implementers.
- The partnership arrangements while complex, were characterised by honest and open communications, respect and shared objectives.
- Trachoma management in the Pacific should be coordinated and integrated within the NTD or public health structure rather than isolating it in the eye health system.
- MDA has supply chain, logistics and human resources management at its core rather than eye health care capacity.
- The complexity, challenges and high costs of working in PICs were not adequately addressed in the PTI program design.
- Coordination and integration were correctly identified as critical to the enduring success of F&E activities however they were not fully realised.
- The approach to F&E was not adequately planned or costed with investments being too limited and too late in the program to lead to broad or enduring results.
- To successfully achieve 'coordination and integration', adequate planning of activities and associated budget is required. Coordination and integration will not happen without this.

Key Recommendations

- Future trachoma programming in the Pacific should be embedded within NTD or other relevant public health structures rather than eye health services.
- Designs for future Pacific trachoma programs should better analyse and address unique complexities and challenges with adequate and timely technical and financial support.
- Trachoma Taskforces or preferably NTD Taskforces should be revitalised or established.
- Efforts to integrate F&E activities and messaging should be increased to ensure integration within existing policies and services and through established WASH actors.
- The Foundation should determine a clear position on its commitment to investing in F&E activities going forward.
- Where F&E activities are supported, they should be better analysed, designed and costed with a clear program logic or theory of change.
- Future programming should include a more responsive program management committee (or equivalent) that can identify and respond with support in a timely manner to new challenges or needs of implementing partners.
- To increase the likelihood of effectiveness of the investments made to date in F&E, The Foundation should continue to support F&E activities in each country.

1. INTRODUCTION

1.1 Document Purpose

This document provides a report on the methodology, findings, learnings and recommendations of the process evaluation of the Pacific Trachoma Initiative (PTI) 2014-2019. The primary audience for this document is The Fred Hollows Foundation Australia (The Foundation) and The Queen Elizabeth Jubilee Trust (The Trust).

As a process evaluation, the methodology has sought to investigate and analyse which aspects of the PTI intervention were critical to success, which aspects limited or hindered success and to identify specific characteristics in different contexts that improved the achievement of the outcomes.

The process evaluation has drawn its data from program documents provided by The Foundation, interviews with key informants in each of Kiribati, Fiji, Vanuatu and Solomon Islands and representatives from The Trust, The Foundation, World Health Organisation (WHO), International Trachoma Initiative (ITI) and London School of Hygiene and Tropical Medicine (LSHTM). The PTI commenced in June 2014 and will be completed by June 2019.

1.2 Program Overview

The **Goal of the PTI** was to achieve the elimination of blinding trachoma as a public health problem in four Pacific Island Countries (PICs): Fiji, Solomon Islands, Vanuatu and Kiribati by 2019.

The **Objectives of the PTI** were:

1. To clarify the enigmatic clinical presentation of trachoma in the PICs
2. To guide the policies and activities of the PIC national governments to support effective and sustainable elimination of trachoma by 2019.

The **expected Outcomes of the PTI** were:

- Fiji, Kiribati, Solomon Islands and Vanuatu achieve the criteria necessary to stop further rounds of Mass Drug Administration (MDA) and enter into a surveillance phase.
- Data is available to support each country's application for validation of elimination and to advocate for global policy changes to elimination criteria where applicable
- Evidence contributes to the broader discourse on trachoma surveillance and elimination validation protocols.
- Trachoma elimination is made a priority in the policies and activities of the national governments in Fiji, Solomon Islands, Vanuatu and Kiribati.

The PTI has been funded by The Trust and managed by The Foundation. It has had a total budget of £1,927,496.

The PTI has been implemented by the Ministries of Health and Ministries of Health and Medical Services (hereafter referred to as MoH) and trachoma coordinators in each of Solomon Islands, Vanuatu, Kiribati and Fiji, with research components led by the LSHTM. The program has been funded by The Trust with Zithromax donations from ITI. The Foundation has provided grant management support and program management through a dedicated

role (Regional Coordinator, based in the region), and range of medical, program, and technical advisors and coordinators throughout the program. The Regional Coordinator was part time (0.6 FTE) until 2018, and apart from this dedicated role, program support from The Foundation has always been an aspect of people's roles rather than dedicated support.

Technical partners have included the WHO, global trachoma experts, the International Agency for the Prevention of Blindness (IAPB), International Coalition for Trachoma Control (ICTC), and ITI.

1.3 Program Background

When the PTI program was proposed in 2014, available data for Fiji, Solomon Islands and Vanuatu found there was a high prevalence of trachomatous inflammation-follicular (TF), but a low prevalence of trachomatous trichiasis (TT) and ocular Chlamydia trachomatis infection. This presentation was inconsistent with the usual progression of the trachoma disease observed elsewhere, such as in trachoma-endemic populations of sub-Saharan Africa. The presentation in Kiribati differed to the other PICs, presenting more consistently with other trachoma endemic areas. In response to these enigmatic findings, the PTI was designed to help clarify the clinical presence of blinding trachoma whilst also supporting the public health needs of the focus countries to achieve trachoma elimination.

The Foundation submitted a proposal to The Trust in 2014 to clarify this enigmatic presentation whilst also supporting each country to achieve elimination of blinding trachoma. The design was subsequently revised in 2015 based on consultations and the evidence available, to take a pragmatic, information-driven approach to MDA in the Pacific. Solomon Islands, Fiji and Vanuatu planned for single rounds of MDA, followed by 6-month impact assessments to inform subsequent decisions. Due to the different presentation of trachoma in Kiribati confirmed by findings from the 2015 survey, its plan included three rounds of MDA, followed by an impact assessment. In 2018, the plan was amended for Kiribati to undertake an early impact survey after the second round of MDA.

Through a Research Partnership with the LSHTM, the PTI included an extensive research component. The purpose of the research was to clarify the enigmatic clinical presentation of trachoma in the Pacific, provide country-specific evidence on the burden of trachoma infection; to inform ongoing interventions and prevalence survey methods, and facilitate the earlier declaration of elimination in the four PTI countries.

Results of the research conducted between 2015-2017 were reviewed at an Expert Consultation on Elimination of Trachoma in the Pacific in January 2018 in Melbourne and again at the 4th Global Scientific Meeting (GSM) on Trachoma, organised by WHO in Geneva in November 2018, to determine whether the findings would change the programming approach in the various PTI countries. Consequently, the Expert Consultation meeting made a number of recommendations regarding immediate and mid-term actions for countries included in the PTI. Ancillary Surveys recommended from the January WHO Meeting and designed by the LSHTM were implemented in July and August 2018 in Solomon Islands and Vanuatu respectively.

2. METHODOLOGY

1.4 Evaluation Purpose

The Terms of Reference (ToR) for the PTI Evaluation define it as a process evaluation. Its main purposes are:

- a) To evaluate the effectiveness of the PTI model in supporting national governments to eliminate trachoma and contribute to the sustainability of trachoma elimination in the program countries. This analysis will inform design and program management arrangements for further work and possible expansion to other PICs– including the Commonwealth Fund program (involving the continuation of trachoma elimination activities in three of the four PTI countries and two new PICs).
- b) To understand to what extent the program engaged with and strengthened the health systems in the focus countries, including whether there are unintended impacts.
- c) To develop a better understanding of the program’s strengths and shortcomings.
- d) To document better practice lessons from the PTI so these can inform and be built upon in future programs related to trachoma in these countries (e.g. Commonwealth Fund), in the region but also more broadly.

This is a formative, process evaluation and its findings will be used to inform ongoing program support. It is not a summative evaluation of the outcomes or results of the PTI – these results have been regularly assessed throughout the program itself through impact assessment surveys and the LSHTM research.

As a process evaluation, the methodology has sought to investigate and analyse which aspects of the PTI intervention were critical to success, which aspects limited or hindered success and to identify specific characteristics in different contexts that improved the achievement of the outcomes.

The geographic scope of this evaluation includes the four PICs: Vanuatu, Kiribati, Fiji and Solomon Islands and will consider the program’s implementation from 2014 until now. The scope of the evaluation excludes primary data collection of trachoma prevalence or program outputs (output Indicators) as these have been measured throughout the program.

1.5 Evaluation Questions

The original Key Evaluation Questions and Sub Questions outlined in the Terms of Reference were both broad and specific, and also numerous. The evaluation parameters allowed for just two days per country for in-country interviews with key informants. The evaluation questions were consequently reduced by The Foundation to ensure the scope was feasible within these time and methodology parameters. The Evaluation Team re-arranged the questions to sit more cohesively within an analysis framework covering the focus areas as outlined in the table below.

Focus Area	Evaluation Questions
Effectiveness	Key Evaluation Question 1: How successfully did the PTI plan for and implement the various components of the trachoma elimination program, examining specifically the AFE components of the SAFE strategy, including mapping?

	<p>Sub Questions:</p> <p>1.1 Antibiotics: conducting population-wide MDA</p> <p>1.2 Facial cleanliness and Environmental Improvements: integration into existing Water, Sanitation and Hygiene (WASH) and Neglected Tropical Disease (NTD) programming; are there any areas that could be improved? Were facial cleanliness and environmental improvements (F&E) activities adequately resourced to implement activities as per country F&E plans?</p> <p>1.3 Mapping trachoma prevalence (through baseline, impact, and surveillance surveys; research and ancillary surveys).</p> <p>Key Evaluation Question 2: How successfully did the PTI program partners integrate research activities into planning and implementation?</p> <p>Sub Question:</p> <p>2.1 Given the uncertainty around the disease presentation and progression for trachoma in the Pacific, did the programme adequately address the uncertainties and was it flexible enough to change focus and direction in light of new research evidence and recommendations?</p>
Efficiency	<p>Key Evaluation Question 3: How efficiently did the program use the resources available including funding, human resources, equipment, drug donations etc.?</p>
Sustainability	<p>Key Evaluation Question 4: What are the negative and positive impacts of trachoma programming on the health systems of these Pacific countries, and their ability to address other health priorities, including NTDs and other eye health conditions?</p>
Partnerships	<p>Key Evaluation Question 5: How effective were the partnerships that were developed for the PTI program?</p> <p>Sub Questions:</p> <p>5.1 What was the time and resources needed from The Foundation to build these relationships (and more formal partnerships) to successfully implement the PTI programme?</p> <p>5.2 To what extent did the various partners have their expectations and needs met?</p> <p>5.3 What lessons are there for future programming relationships?</p>
Equity	<p>Key Evaluation Question 6: To what extent did the initiative equitably reach trachoma endemic communities, in terms of gender, economic disparity, and other measures of equity?</p>

1.6 Evaluation Approach

The evaluation team adopted a practitioner-informed approach to ensure the analysis and recommendations are relevant and practical to The Foundation, the implementing partners and other stakeholders to inform improved future programming.

The primary methods for data collection were qualitative, as follows:

Document reviews: a comprehensive review of key documents produced by the program and relevant literature to identify key issues for further investigation in the field.

Key informant interviews (KII): purposively selected informed individuals provided the main source of data. KIIs were the predominant method of inquiry for the evaluation. They enabled testing of assumptions from document review and probing and triangulation of data acquired from other key informants/stakeholders to answer the evaluation questions.

Observation: general observations during the fieldwork confirmed or challenged preliminary assumptions and conclusions arising from the other methods.

The approach was based on three principles:

Triangulation: the same issues were explored with a range of key stakeholders in order to identify commonalities and differences in perspective, test and triangulate responses and bring rigor to the method.

Complementarities: field work was preceded by a desk review of program and related documentation in order to benefit from the full range of documented information rather than relying entirely on primary data collection through key informant interviews.

Commonality: common evaluative questions were used with key informants to enable consistency of inquiry, comparability of data and transparency with regards to the lines of inquiry.

Sampling

The evaluation team was dependent on The Foundation's PTI team, in particular the Regional Coordinator, to select and arrange interviews with the most relevant stakeholders associated with the program in the PICs. The evaluation team also arranged interviews with a number of other key informants identified by the PTI team. The purposive sampling provided the evaluation team with a meaningful overview of program interventions that were accessible within the time and resource parameters of the field work—requiring a balance between pragmatism and rigour. The purposive sample of interviewees also considered logistical constraints and the importance/relevance of particular stakeholder perspectives to the evaluation questions.

The sample frame included:

- **The Foundation management team, including:**
 - The Foundation's PTI team members including technical advisors, program and grant managers
 - Other key Foundation staff involved in trachoma programming globally.
- **Implementing Partners, including:**
 - Relevant staff from MoH in each PIC such as trachoma, NTD or eye health coordinators, WASH coordinators, ophthalmologists or medical officers, public health coordinators, heads of pharmacy and laboratories (where relevant)
 - relevant officers from WHO
 - Project Heaven NGO in Fiji implementing WASH
- **Other stakeholders, including:**
 - The Trust
 - LSHTM
 - ITI

The evaluation did not include data collection from or opportunities for triangulation of findings with beneficiary communities or individuals.

Analysis

Evaluation team members compiled their own notes of interviews and discussions and discussed and analysed findings as the interviews progressed to identify the emerging trends against the key evaluation questions. Content analysis methods identified common and exceptional themes against the key focus areas and evaluation questions. The question guide was expanded following the document review and used in a semi-structured way to enable consistency of inquiry and triangulation of responses across program stakeholders. The evaluation team formed conclusions in relation to the evaluation questions that synthesised the views of the various stakeholders. A feedback session was held at the end of the field work with The Foundation's PTI team to test findings and recommendations.

Reporting

Reporting of evaluation findings has involved four steps:

- **Preliminary discussion session with PTI team:** at the completion of the fieldwork, the evaluation team discussed its preliminary findings with key The Foundation stakeholders for the purposes of validation and refinement.
- **Draft report:** following the fieldwork phase, the evaluation team synthesised findings from the field and prepared a draft report for review and comment by The Foundation stakeholders.
- **Final report:** feedback on draft report was reviewed and assimilated or addressed before preparing the final publishable version of the report.
- **PTI Workshop in Suva:** the findings and recommendations will be shared with stakeholders in Suva on June 26th.

1.7 Limitations

The following challenges may have a limiting influence on this evaluation:

Range of informants: The qualitative data will be collected predominantly from a small purposive sample of key informants in each capital city of the four PICs. This will provide vital perspectives of direct implementers and users, however the data set will be relatively narrow which could affect the ability of evaluators to test assumptions and triangulate data.

Validity of data: The evaluation is intentionally seeking the perspectives of direct implementers and users in the four PICs through a relatively rapid process involving only a single data collection method of key informant interviews. Assuming a range of recall and personal biases, the validity of the data collected will rely on the evaluators own professional judgements and triangulating where possible with document review and other stakeholder interviews.

Judgements: this evaluation will involve rapid qualitative methods of inquiry, and will rely on the professional judgement of the evaluators to interpret stakeholder perspectives.

Range of geographic areas: Data needs to be collected from four PICs limiting the time available in each country to two days. Other key informants are in the UK and other parts of Australia necessitating remote interviews by skype or phone.

3. COUNTRY LEVEL ANALYSIS

The following section outlines the evaluation team's analysis at the individual country level, of the effectiveness of planning and implementation, the enabling and constraining factors impacting effectiveness, and recommendations for ongoing support for each of Kiribati, Solomon Islands, Vanuatu and Fiji.

3.1 Kiribati

Overview

The achievements of the PTI in Kiribati are positive, despite many challenges and delays. However, Kiribati will not achieve the project outcomes in the PTI timeline. The delays in the completion of the two rounds of MDA have consequently delayed the timing of the early impact survey recommended by the Expert Consultation Meeting in January 2018. This means that the impact of the first two rounds of MDA on trachoma prevalence are not known at the time of the PTI evaluation. If the early impact survey shows that TF prevalence has not fallen below the threshold, a third round of MDA will be required, further extending the timeline for project implementation. Implementing the complete SAFE strategy beyond the funding period will be a challenge without further support from The Foundation, WHO and other partners.

Kiribati has contributed to the PTI's expected outcomes as follows:

Outcomes 1 and 2: Kiribati has completed two rounds of MDA and is in the process of undertaking an early impact survey to determine whether a third round of MDA is required.

Outcome 3: A pre-MDA survey was undertaken prior to the first round of MDA, and an early impact survey is scheduled in 2019.

Outcome 4: Trachoma programming was new for Kiribati, commencing as a direct result of the PTI and the appointment of a National Trachoma Coordinator. Prior to this a trained eye nurse commenced in 2009 and Kiribati's first ophthalmologist commenced training in 2011. A National Eye Coordinator has recently been appointed to the ophthalmic department who will have ongoing responsibility for trachoma management. These have all been positive developments, however trachoma is not well integrated into the broader public health system and has not forged sustainable links with related programs.

Coordination and integration

Coordination of trachoma programming in Kiribati has resulted in the successful implementation of the PTI and contributed to increased recognition of eye health as a primary health care issue. Success towards integration of trachoma into the public health system, however, has been somewhat limited and compromises the likelihood of sustainability. While trachoma is recognised on the national eye health agenda, it has not been well integrated into the broader public health agenda and public health system.

Kiribati has a National Strategic Health and Medical Services Plan as well as a National Eye Health Plan (2015-18). The PTI is coordinated by a National Trachoma Coordinator, who reports directly to the Director of Public Health. It has had a National Eye Committee since 2014, who developed a Trachoma Action Plan (TAP) in 2015. The intention at the beginning of the PTI was that the National Eye Health Plan and the TAP would be formally endorsed by the MoH, but this has not been achieved. Nonetheless, these are operational documents and are recognised by key figures including the Director of Public Health and the Communicable Disease, NTD and Public Health Specialist.

Due to the size of Kiribati and the shortage of eye health human resources, the National Eye Committee also acts as the National Trachoma Taskforce. The National Trachoma Taskforce initially met regularly, but active representation on the working group has reduced over time and is now limited to the National Trachoma Coordinator and the Ophthalmologist working together. This is a pragmatic approach to sustaining momentum on the implementation of the TAP, although it does not facilitate a cross-departmental focus on trachoma. The trachoma program would benefit from more engagement from other government stakeholders in environmental health, health promotion, public health, and education.

The current National Health and Medical Services Strategic Plan includes trachoma with a target of reducing TF <10% by 2019. While this ensures that trachoma is recognised as a public health issue, reporting against the Plan has to date not included trachoma. The National Trachoma Coordinator does participate in the Public Health Services Monitoring and Evaluation Committee on a quarterly basis and in this way, trachoma programming is discussed alongside other health programs. However, it does not feature in overall national public health reporting.

Discussions with stakeholders in Kiribati suggested that this is due to the trachoma program sitting in the ophthalmic department rather than under the Communicable Disease, NTD and Public Health Specialist. It is relevant to note that in 2016 The Foundation tried to move the trachoma program responsibility from the ophthalmology department to the area of the public health system that had oversight of NTDs, so that a more coordinated approach would be taken to SAFE implementation. It's unclear why this transition was not made, but evident that there would have been benefit in the program forming a more formal link to NTD's to sustain a national focus on trachoma prevention as an NTD. This should have included regular progress reporting on the TAP to MoH and inclusion of trachoma progress in overall national public health reporting.

Although integration of trachoma in the broader public health agenda has not been achieved, the resourcing of a National Trachoma Coordinator by the PTI has contributed to an increased awareness of eye health by the Government of Kiribati. The MoH has also recently appointed a National Eye Coordinator, reflecting the high priority it now places on eye health and recognition of the sector. This has broad benefits for eye health care in Kiribati, as well as ensuring that technical capacity is maintained to continue to implement the clinical aspects of trachoma elimination.

Antibiotic Distribution

Kiribati had previously undertaken national MDA for Lymphatic Filariasis (LF), with the support of WHO. The TAP and MDA planning was based on lessons learned from that MDA, and WHO agreed that they would provide ad-hoc technical support throughout the trachoma MDA planning process.

The PTI made provision for a total of three rounds of MDA in Kiribati, followed by an impact survey after the second MDA. This plan was overly ambitious and did not take into account the context of Kiribati or allow for any contingencies. While the exact delays that were experienced in Kiribati may not have been predicted, the project should have considered the risk of limited capacity, the geographical and logistical challenges in Kiribati, and the limitations of the Government's financial system in releasing funds expediently. Additional resourcing by the PTI could have addressed some, but not all, of the challenges experienced.

Implementation of the MDA was coordinated by the National Trachoma Coordinator. Unlike other MoH drugs, the trachoma drugs were stored in the National Eye Department's office and separate from other MoH supplies. This provided higher levels of confidence that the drugs were stored correctly and would be preserved for their intended use.

The distribution of the trachoma MDA was undertaken in coordination with MoH who supplied the antibiotics to health centers around the country, which acted as coordination and distribution points for the MDA. It was originally anticipated that the trachoma MDA would be conducted at the same time as other MDA or other distributions to reduce costs and logistics. However, delays linked to funding disbursements and the arrival of antibiotics meant that this coordination was not achieved.

The first round of MDA for Kiribati was initially scheduled for 2016 but shifted to 2017 due to a series of delays. Unfortunately, the wrong amount of Azithromycin was ordered based on inaccurate population data provided by the government. An urgent order was placed but by the time the drugs arrived three months later, the public health nurses (distributors) were occupied with other scheduled work. As a result, the MDA was completed six months later.

After this first round of delays, additional support was provided to Kiribati through the Regional Coordinator but this could have been supplemented with closer engagement by The Foundation and ITI to address the root causes of some of the delays. Kiribati commenced its second MDA round with training and an awareness campaign. The second Kiribati MDA was originally scheduled for April 2018 but was delayed by over a month. As a result of learning from the previous MDA experience, the second round included more distribution teams and supervisors to achieve greater coverage. However, the second MDA also experienced similar challenges to the first round. The program ran short of azithromycin again, and when the shipment of the next batch of drugs finally arrived, the public health nurses were busy with other public health programs. The MDA resumed and was finally completed in November. This was due to tablets being dispensed to children younger than 5 years of age, as the taste of the syrup was not well tolerated by children; and many younger teens were of significant height and thereby required four tablets, which is greater than required by most teens in other countries.

Prior to each MDA round, Kiribati promoted the trachoma MDA through radio promotions directly prior to the planned MDA period. This did not take into account the unanticipated delays in antibiotic distribution and as such there would have been large numbers of people that did not receive health promotion messages prior to the administration of antibiotics for trachoma.

In response to the challenges experienced in ordering correct quantities of azithromycin in both the first and second MDAs, ITI undertook a country visit to Kiribati for a Supply Chain Assessment and Training Session in January 2019. In addition, the visit trained supervisors on new guidelines which addressed age cut off for population taking tablets. This provided much needed and well received support to the Kiribati team although ideally should have been provided earlier in the PTI's implementation. ITI had tried to undertake this visit earlier in the program, however it was delayed due to a combination of communications challenges, lack of recognition of the capacity relating to MDA in Kiribati and lower prioritisation.

Facial cleanliness and Environmental hygiene

The original PTI design recognised that MoH in Kiribati faced challenges implementing health promotion and environmental sanitation activities. It noted the importance of partnering with both the Ministry of Education and the Ministry of Environmental Land and Agricultural Development to achieve improvements in these areas, who are responsible for environmental health.

Although there have been some efforts under the PTI to forge these linkages, these have been met with poor uptake and overall limited coordination and action. A draft Hand and Face Washing Policy was developed by UNICEF in October 2017 but this has not yet received endorsement from the Ministry of Health. Although local stakeholders see opportunities for face washing to be integrated into existing education and WASH programs, this has not been formalized. The National Trachoma Coordinator has been largely focused on the implementation of the MDA and the coordination of research activities and has not benefited from networks between the public health and WASH sectors. Although the National Trachoma Coordinator has informal linkages with the Water and Sanitation Committee, she is not represented on this committee.

Health promotion of facial cleanliness and environmental improvements in Kiribati has mainly occurred alongside the MDA, with awareness talks at communities and distribution of Information, Education and Communication materials. Kiribati used a radio jingle, newspaper articles and direct communication by distribution teams at the distribution sites.

The recent F&E activities funded through the PTI have resulted in trachoma specific resource materials that can be re-produced. However, they have been undertaken separately to broader WASH programs and therefore are unlikely to be resourced or sustained. The Health Promotion Unit have been involved in delivering F&E activities for trachoma, but this has not yet led to the integration of face washing into broader WASH resources and educational materials.

Mapping and Integration of Research

Trachoma mapping was undertaken in Kiritimati in Kiribati in November 2015 using the GTMP methodology, funded by the DFID GMTP. Kiritimati is the second most populated coral atoll in Kiribati, after Tarawa, but is very remote (closer to Hawaii than to Tarawa), so it is important that this island group was surveyed separately to understand the nature of trachoma in this area.

Prior to the 2016 MDA survey, The Foundation's Regional Coordinator conducted GTMP training, which resulted in the certification of two new iKiribati GTMP graders and two trained recorders. Local health staff were also trained by the LSHTM and the regional Coordinator to collect conjunctival swabs, tarsal conjunctival photography, collection of blood spots and the adequate storage and handling of specimens. Staff were also supervised in implementing the pre-MDA survey.

The Kiribati Pre-MDA surveys undertaken in 2016 showed a different trend from the rest of the PTI countries, and an increase in TF prevalence from the baseline surveys in 2012. On the basis of these results, it was decided that Kiribati would follow the WHO protocol of three MDA rounds before their six month post-MDA Impact Surveys were conducted. Following the Expert Consultation meeting in January 2018, however, this plan was changed. It was recommended that Kiribati undertake an early impact survey six months after the second MDA round to gauge the TF prevalence after two high coverage MDAs. The Expert

Consultation meeting recommended that if this survey shows that TF prevalence falls below 5%, then Kiribati would enter a period of surveillance, otherwise the 3rd MDA round would continue as planned.

Recommendations:

1. The Trachoma Taskforce should to be revitalised to include representation and attendance by key public health and WASH actors and WHO. If attendance at a disease specific taskforce is considered too onerous, consideration should be given to advocating for the establishment of an NTD Taskforce which would include trachoma.
2. The trachoma program should formally report against the TAP, and trachoma reporting should be included in overall annual reports against the National Strategic Health and Medical Services Plan.
3. The Foundation should provide support to the National Coordinator to advocate for and progress Government approval of the draft Hand and Face Washing Policy developed in October 2017 which would provide the necessary mandate for other divisions such as environmental hygiene to advocate for it application.
4. The Foundation should provide support for the National Coordinator to be formally included in the Water and Sanitation Committee. This could commence with further analysis of the functionality of the Water and Sanitation Committee to better understand the current barriers to its effective functioning and increased advocacy at a senior level in the MoH by the Foundation for the inclusion of the National Coordinator.
5. At the conclusion of the PTI, consideration should be given to transferring supervision of trachoma management to the Communicable Disease, NTD and Public Health Specialist or unit to ensure greater integration of trachoma management with the broader public health system and NTD management.

3.2 Vanuatu

Overview

The PTI has been effectively planned and implemented in Vanuatu. It has achieved its research and programmatic components as outlined in the March 2016 updated PTI proposal document and is in the process of implementing the activities outlined in the 2017 F&E Plan for Vanuatu.

Vanuatu has contributed to the PTI's expected outcomes as follows:

Outcomes 1 & 2: Vanuatu has completed its required single round of MDA, reached agreement with WHO that there will be no further MDA at this time, has undergone its surveillance phase and is currently preparing its dossier for submission to WHO.

Outcome 3: All planned surveys have been implemented. These data and Vanuatu's approach to ceasing MDA after a single round, have contributed to the broader discourse on trachoma surveillance and elimination protocols.

Outcome 4: The Vanuatu MoH has made NTDs (including trachoma) a priority with established and budgeted NTD MoH positions having been created at the national and provincial levels. Some of these positions are still to be filled but recruitment has commenced and MoH budget allocated.

Coordination and integration

Amongst the four countries included in the PTI, Vanuatu could be recognised as a model for the effective coordination and integration of trachoma elimination programming. The PTI and trachoma management more generally in Vanuatu is situated within the MoH NTD unit which sits within the MoH public health structure. The program has successfully coordinated and integrated with other key NTD and WASH actors, greatly increasing the likelihood of an enduring focus on trachoma as an NTD within the national government's health system and the sustainability of F&E initiatives. The existing structure of an NTD unit within the MoH was a key enabler of this.

Effective NTD coordination and integration has been possible in Vanuatu due to: the MoH's existing commitment to NTDs since the 2013 WHO World Health Assembly which included the appointment of NTD staff prior to the PTI; close integration within the MoH's broader public health and executive management structure; the commitment of the NTD Coordinator and Officer and their proactive approach to communication, identification of issues and requests for support when required; and the movement of the previous MoH NTD Coordinator to the NTD role within WHO facilitating close coordination between the two entities. While some of these factors are unique to Vanuatu, others could be applied in future trachoma programming settings to increase the likelihood of effective outcomes. In particular, advocating for integration within an NTD unit, coordination with other key public health and WASH actors and proactive program management.

Antibiotic Distribution

Vanuatu implemented its first round of trachoma MDA in August 2016. Vanuatu benefitted from the previous MDA experience of the NTD Coordinator to effectively micro-plan for the trachoma MDA. The WHO or ITI recommendation to implement MDA across the whole of Vanuatu within a short period was taken seriously with 100 teams assembled and supervised by public health officers. The MDA was planned, coordinated and led by the NTD Coordinator, NTD Officer and just one other staff member. Additional human resource support was requested from The Foundation although it was not provided. Greater clarity from ITI and The Foundation on the need (or not) for such rapid MDA in an island nation context where the risk of population movement and re-infection is more limited, may have decreased the intense time pressure on the MDA implementation.

MDA sensitisation and promotional activities were undertaken in the week immediately prior to MDA. Workshops were held with community leaders and also used Radio Vanuatu, and talk back radio sessions. At each community, the team met with the Chief to raise awareness and seek their support. In rural areas, the endorsement by the Chief or other community leaders ensured community members compliance. Even with this investment, it was felt that more was needed in promotion and awareness raising.

The role of the supervisors was considered vitally important to ensuring the disciplined implementation of MDA. The MDA coverage ranged from 89% - 97% across the six provinces. Keeping the teams focused and motivated helped to gain such a high coverage.

The NTD Coordinator identified that the ITI calculations would result in a shortfall of drugs based on their own calculations and with the inclusion of urban areas. Although advised otherwise by ITI, Vanuatu supplemented the ITI donation with azithromycin from WHO Yaws stocks to ensure the smooth and complete implementation of the MDA. The Vanuatu and ITI calculations seem to have been based on different assumptions of coverage – a difference which should have been clarified prior to MDA planning and implementation.

To roll out the MDA consecutively across the whole archipelago was a huge undertaking, costing approximately VT 64,000,000¹ (approx. AUD 800,000 or GBP 445,000) in addition to the hidden costs of health staff being taken off line from their other duties. The high cost and burden of this investment on individuals and the health system and their analysis of the limited benefits as per the data from the post MDA impact assessment², informed the Vanuatu MoH's subsequent decision not to do further rounds of MDA for trachoma despite post MDA TF prevalence >5%. The impact assessment survey undertaken six months after the MDA found TF prevalence of 11.5%, representing a very limited drop from the TF prevalence of 12% prior to MDA.

The MoH's decision did not conform to the standard SAFE/MDA protocol but did reflect a national government's autonomy and pragmatic decision making. Their decision was subsequently supported by the Melbourne Expert Consultation meeting and the Geneva 4th GSM in 2018, which agreed to the cessation of further MDA based on the results of the Ancillary surveys and recommended Vanuatu should complete its surveillance period and prepare its dossier.

Facial cleanliness and Environmental hygiene

As mentioned above, Vanuatu has successfully coordinated with other WASH actors, greatly increasing the likelihood of sustainability of F&E initiatives. This has been possible in Vanuatu due to: the NTD Coordinator and Officer being very proactive and strategic in connecting and coordinating with the WASH Cluster group and its members; seeking opportunities to advocate and integrate trachoma F&E messaging into existing programs such as schools and handwashing initiatives; and engaging, advocating and integrating with other government and NGO WASH actors such as the Departments of Water, Education and Livestock.

Vanuatu has been using evidence from trachoma surveys to target its F&E interventions in higher TF prevalence areas or 'hot spots'. This represents an effective and efficient targeting of funds and human resources. The PTI has provided funding for an additional F&E officer on the NTD team to enable the implementation of the F&E activities however this position will not be sustained following the completion of PTI funding.

Commencing in May 2018, F&E activities commenced in eight communities (each including multiple villages) with higher rates of TF. Working with village health workers, weekly health education sessions were implemented using trachoma as the entry point but then covering all NTDs. Household and community based profiling with the community WASH focal people was undertaken mapping water access, rubbish disposal, sanitation and hygiene behaviours – providing a process to focus and educate communities and the information for planning and action going forward. Creative approaches were used to motivate communities and enhance local ownership such as 'tidy village' competitions and quizzes with soap as prizes. Funds allocated to refreshments for each community could also be used to fund small items such as grass cutters, water tanks or simple pit toilets. The activities were integrated and coordinated with other health and related government services such as livestock

¹ Cost estimate provided by NTD Coordinator

management and environmental health. Anecdotal experience from 2018 suggested that behaviour change was slow in communities and so in 2019, F&E activities have been refocused on 24 schools to change behaviours of children in parallel with their families in communities.

Mapping and Integration of Research

Vanuatu has effectively responded to and utilised research data to inform planning and implementation of PTI activities. In regards to F&E, data from trachoma surveys has been used to target F&E interventions in higher TF prevalence areas or 'hot spots'. The MoH decision not to proceed with further MDA was directly informed by the TF and ocular C trachomatis infection prevalence data, although perhaps not as expected. As outlined above Vanuatu took an autonomous and pragmatic approach to this decision using the data to argue that further MDA was not an effective use of resources in their long term management of trachoma. This decision was subsequently supported and endorsed by the WHO's recommendation following the results of the Ancillary Surveys recommending Vanuatu complete its surveillance period and prepare its dossier.

Recommendations:

6. Ongoing funding to support F&E activities – for continued interventions in TF 'hot spots' and to support further coordination and advocacy efforts with other WASH actors. It is too early to assess the behavioral change from the F&E activities undertaken to date and it would be useful to assess this, perhaps in 2020. It would also be valuable to continue to advocate for the inclusion of handwashing and environmental hygiene messaging and behavioral change in targeted communities and amongst other WASH government and non-government actors.

7. Ongoing surveillance/monitoring: there is a good reporting system in place which provides monthly reports back to provincial and then national levels (Yaws is already included in this reporting), however further training is needed for health workers to identify TF and TT cases. Vanuatu is conscious that ongoing surveillance or monitoring is important in their ongoing management of trachoma.

3.3 Solomon Islands

Overview

The SI started in the strongest position of all the four PICs with an already established TAP, National trachoma coordinator (the public health eye care coordinator), a National Trachoma Taskforce and all the initial mapping completed. The implementation of the program has seen a number of challenges with the TAP to date not being endorsed by the MoH and the taskforce not functioning actively; and delays with the extended MDA implementation and lack of clarity from global experts/The Foundation on MDA and surveys. Despite these challenges, the SI has successfully achieved the research components and most of the programmatic components as outlined in the March 2016 updated PTI proposal document and has commenced implementing the activities outlined in the 2017 SI F&E Plan.

SI has contributed to the PTI's expected outcomes as follows:

Outcome 1 & 2: SI has completed its planned single round of MDA although over an extended period of time and is in its surveillance phase. SI has completed its post MDA impact assessments and its ancillary surveys providing data to support the single MDA

decision and to contribute to the global discourse on elimination criteria. It has recently undertaken its pre-validation survey in Choiseul province due for completion in July/August and is awaiting confirmation to conduct this for Guadalcanal province. It has not commenced preparation of its dossier but has plans to do so in 2020.

Outcome 3: SI has completed its planned research activities contributing to the broader discourse on trachoma surveillance and elimination protocols.

Outcome 4: SI MoH has supported the position of National Public Health Eye Care Coordinator who leads on trachoma, and the PTI has engaged with other MoH departments such as health promotion, however the SIG has not made trachoma elimination or NTDs a priority within its policies and activities more broadly.

Coordination and Integration

The SI MoH has been in the process of a restructure over the past few years which theoretically plans to establish an NTD position/unit within its Health Improvement division however no action has been taken on this to date. As a result SI does not have a dedicated NTD unit or any dedicated NTD budget or human resources. The National Public Health Eye Care Coordinator (trachoma coordinator), while positioned within the eye health coordination team, also oversees other NTDs such as scabies, STH and Yaws. In practice this means the position straddles the eye health space and the NTD space although with no other structural support from the MoH. The lack of clarity regarding the future of this position is challenging.

While the SI was perceived to be starting in a strong position amongst other PICs in regards to the management of trachoma with a TAP and Trachoma Taskforce, the TAP has not been formally endorsed and the taskforce does not function. In reality the trachoma work has been driven by the trachoma coordinator without much other support from the MoH.

The trachoma coordinator has tried to engage with the MoH's Rural WASH department however it has been challenging to gain traction. WASH coordination is weak and coordination doesn't appear to be prioritised. The trachoma coordinator has had more success engaging with the health promotion unit, which has been funded by the PTI to undertake F&E related community profiling and household surveys and develop health promotion IEC materials.

The presence and differing roles of The Foundation NZ and The Foundation Australia in the SI has created some confusion.

Antibiotic Distribution

MDA in the SI was planned and implemented successfully given there had never been an MDA undertaken in the SI before so there was no direct experience of micro planning or implementation of MDA on this scale to draw on. More external support in this regard from either The Foundation or ITI would have been beneficial. Like other PICs, the challenges of planning and implementing MDA across multiple islands were significant and probably underestimated, especially in those islands where populations live in remote inland and mountainous areas.

SI implemented its MDA (and surveys) in 3 phases in a staggered fashion over 2014 and 2015, going province by province. While the risk of population movement and re-infection is lower than in non-island countries, the duration of the MDA was still very long and there is mixed opinion on whether this may have reduced its efficacy. Also adding to the delays, the ITI drug order for the other provinces had already been made prior to the GTMP data on

Choiseul being available which led to the need to process an additional drug order for Choiseul's MDA delaying its implementation. The delays also led to the azithromycin suspension provided by ITI expiring and requiring disposal. Children were instead given crushed tablets with water. These delays were challenging for the trachoma coordinator to manage. This delay in MDA in Choiseul in turn delayed the timing of the pre-validation survey meaning this was being undertaken at the time of the evaluation.

Awareness raising/promotion was undertaken through the churches and community leaders with the churches being especially effective. Similarly to other PICs, the observation as made by team members that more awareness raising would have been beneficial although this was particularly challenging in the SI with the period of MDA being extended over 2014 and 2015. An unintended benefit of the PTI MDA is that valuable experience gained through the trachoma MDA will be used with planning and implementation for Yaws MDA to be supported by WHO.

Reflections from those involved included the need to plan directly in each of the provinces rather than holding a collective planning process in Honiara to ensure planning and implementation was more grounded in the contextual realities of each province.

Facial cleanliness and Environmental hygiene

The F&E plan intended to coordinate with all WASH actors and support the work of the Rural WASH and Health Promotion units. This coordination has been successful with the health promotion unit which has undertaken community profiling and household surveys, developed IEC materials and commenced training of teachers and students. Coordination with the Rural WASH department has however had limited success to date. Coordination amongst government and non-government WASH actors within the MoH seems to be almost nonexistent making it challenging for the trachoma coordinator to engage. There does not appear to be commitment from the Rural WASH leadership or more broadly within the MoH to remedy this limitation. The analysis provided in the PTI proposal and the F&E plan did not adequately take these challenges into account.

Community profiling and detailed KAP surveys were undertaken in Central province by the health promotion unit with 16 villages and 100 households. The results were still being processed at the time of the evaluation and should be available by July 2019. The survey tool was impressive and very comprehensive and has the potential to provide useful data, however there was a lack of clarity amongst potential users as to when the data would be available and how and by whom it would be used going forward.

The development of IEC materials, and training of teachers and students in 5 schools has to date been focused on Honiara. This sensibly builds on previous work commenced in Honiara prior to the PTI however it also seems at odds with the prevalence data which shows Honiara city to have relatively low TF prevalence and no TT.

The trachoma coordinator has invested significant effort into integrating F&E messages including face washing with existing MoH and Rural WASH policies and programs, however this has been challenging with little success.

Mapping and Integration of Research

Data has directly informed planning and implementation however it has also created uncertainty and delays in the SI. Data from the impact assessments and ancillary surveys has informed planning and implementation with only a single MDA being implemented as a

result. However, the shifting position by the global experts/WHO/The Foundation on whether to proceed with MDA in Choiseul and where pre-validation surveys have been/will be required i.e. Guadalcanal and other provinces, has created uncertainty and challenges with planning and has contributed to further delays.

Relevant human resources were well established with the various surveys undertaken with eye health nurses who received training as trachoma graders. Trainees interviewed felt they had been well trained and supported. All eye nurses were trained with 8 or 9 of those being certified and this will undoubtedly contribute to ongoing surveillance and referrals with eye care nurses throughout the provinces being skilled in the detection of trachoma.

As noted above the data does not seem to have informed the targeting of F&E activities with the first phase of F&E support being focused on Honiara where TF rates are relatively low and water and sanitation infrastructure higher than remote rural areas. Population density and poverty in the Honiara area may have influenced this decision.

Recommendations:

8. High level support from The Foundation to advocate for improved WASH coordination amongst government and non-government WASH actors and the inclusion of the trachoma coordinator in this coordination body. This could commence with further analysis of the functionality of WASH coordination in Solomon Islands to better understand the current barriers to its effective functioning and increased advocacy at a senior level in the MoH by the Foundation for the inclusion of the trachoma coordinator.

9. High level support from The Foundation to advocate for the establishment of an NTD unit within MoH with staff position/s and resources.

10. The Trachoma Taskforce should be revitalised to include representation and attendance by key public health and WASH actors and WHO. If attendance at a disease specific taskforce is considered too onerous, consideration should be given to advocating for the establishment of an NTD Taskforce which would include trachoma.

3.4 Fiji

Overview

The failure of negotiations and signing of an agreement with the MoH in Fiji and more recent delays in signing an agreement with the WHO, has directly obstructed the implementation PTI activities in Fiji. These delays however may ultimately be an advantage in terms of efficiencies and potentially unnecessary MDA.

In the period since the PTI commenced, data produced through additional studies has led to a modified approach to the implementation of the WHO MDA protocols with Vanuatu and the SI conducting single rounds of MDA. If agreements in Fiji had been signed sooner, it may have unnecessarily implemented MDA. Results of surveys yet to be conducted in Fiji may mean Fiji can avoid undertaking MDA, saving significant funds and other resources.

Fiji has contributed to the PTI's expected outcomes as follows:

Outcomes 1 & 2: No MDA or survey activities have been undertaken under the PTI. Fiji has been recommended to undertake a repeat national prevalence survey to determine whether MDA is required.

Outcome 3: Existing data on the prevalence of TT is thought to be inaccurate and as such, a new prevalence study has been recommended, as well as an ancillary survey. Given the enigmatic picture of trachoma in Fiji, there is a possibility of them applying for dossier by 2020 despite not completing any MDA.

Outcome 4: In Fiji, the trachoma program sits under the MoH NTD Department, which includes embedded health promotion roles. Despite not receiving any PTI funding, the MoH has maintained a focus on trachoma through the National Trachoma Taskforce.

Coordination and Integration

Despite MoH not signing an agreement with the PTI, the Trachoma Taskforce has continued to meet throughout the PTI period. The Regional Coordinator and Trachoma Coordinator (now working for WHO) managed to drive and sustain a focus on trachoma while negotiations continued. The Regional Coordinator was initially based in Fiji and due to her prior strong linkages and networks in Fiji was able to work with the Fiji MoH to continue to advocate for trachoma management.

The Regional Coordinator's existing linkages with the MoH WASH group also enabled her to discuss their F&E Plan and followed up the new School WASH Policy with the Ministry of Education. Initially only hand washing and teeth brushing were promoted in primary schools, but now face washing has now been included in the Ministry of Education School Health Policy and the associated 'WASH, BRUSH and SPLASH Program'. The inclusion of face washing is an important achievement in helping to reduce the transmission of trachoma.

Antibiotic Distribution

The original PTI design proposed one round of MDA in Fiji, followed by an impact survey. Due to prolonged delays in signing a Memorandum of Understanding (MOU) and Sub Grant Agreement (SGA) with MoH however, no MDA has been conducted in Fiji. The delays in receiving endorsement of the MOU and SGA from Fiji were first reported in mid 2016. It is clear that The Foundation and The Trust were pro-active in advocating to various stakeholders in Fiji the importance of signing the SGA and MOU, including a visit to Fiji by Dr. Astrid Bonfield from The Trust in 2016.

Prolonged delays in the endorsement of the SGA and MOU led to multiple changes in the implementation timeline for Fiji. The Foundation continued to adjust the timeline to ensure that Fiji would still be on target for elimination by 2020, but perhaps did not adapt its approach soon enough to respond to the risk that the SGA may not proceed. The Trust finally sent a letter to MoH providing a deadline of 30 June 2016 to sign the documents. Further negotiations followed but ultimately the clauses in dispute were deemed as non-negotiable.

Following this, The Foundation sought an alternative implementing partner through the WHO sub-regional office in Suva. There have also been significant delays in having this Sub Donor Agreement (SDA) vetted and signed.

This ultimately led to the reallocation of MDA funding with a view to continue assisting Fiji with their F&E activities and possibly another prevalence survey. It was hoped that if the results of another prevalence survey were similar to their pre-MDA survey, Fiji may still be able to be endorsed as trachoma free by 2020.

Facial cleanliness and Environmental hygiene

The non-endorsement of the Fiji SGA meant that the Trachoma Taskforce began to consider alternate partners to implement their F&E Plan in 2017. They identified Project Heaven, a local NGO initially set up to screen for vision and hearing impairments in schools and which had a track record in actively promoting WASH activities in schools through MoH and UNICEF support. In addition to their handwashing campaign, Project Heaven had been informing schools of trachoma and its prevention, the importance of having clean faces and distributed IEC materials on face washing. This was integrated into Project Heaven's existing programs rather than funded separately.

Once Fiji developed an F&E plan and received funding allocation for its F&E activities, The Foundation informally engaged with Project Heaven to implement funded F&E activities in the expectation that they could become a sub-grantee to WHO and be reimbursed retrospectively for F&E activities currently being implemented. Ongoing delays to the signing of an SDA between The Foundation and WHO, however, means that The Foundation may need to find a different way of compensating Project Heaven.

While Project Heaven clearly have track record in conducting WASH activities in schools, they implement their own approach rather than the nationally endorsed Wash, Brush, Splash program. This seems to be at odds with the broader work that the Trachoma Taskforce has done in advocating the integration of face washing into school policy and WASH programs. There does not appear to be an effective coordination of community and school interventions based on evidence or coordination with other government WASH and related entities or program.

Integration of Research

During 2012 and 2013, a population-based prevalence baseline survey was undertaken by the MoH in Fiji. This survey recorded a high number and proportion of TT cases, (7.4%). However, a subsequent survey undertaken in late 2013 using GTMP methodology did not find any cases of trichiasis in the Western Division of Fiji.

The Expert Consultation meeting reviewed Fiji's situation in January 2018 and recommended that Fiji should repeat a national baseline survey. Early trachoma data for Fiji is considered unreliable due to the 2012 survey using an old survey method and vastly different results obtained from the GTMP survey in the Western division soon after. As a result, Fiji's repeat baseline surveys were planned for March/April 2019. Ongoing delay in receiving WHO endorsement for the SDA however, has meant that these baseline surveys will now take place in July and August 2019. Following the results of the repeat baseline survey, plans for trachoma activities will be reviewed.

Recommendations:

11. Consult the Trachoma Taskforce and WHO to determine which partner is best placed to carry forward the research and F&E activities.
12. Ensure Project Heaven is reimbursed for F&E activities undertaken to date and ensure any further work undertaken is aligned with the broader Wash, Brush Splash program of the MoH.
13. Reconsider negotiating a SGA with the MoH directly with The Foundation to cover any ongoing F&E activities.

4. PROGRAM LEVEL FINDINGS

4.1 Effectiveness of Planning and Implementation

The following section outlines the evaluation team's analysis at the program level of the effectiveness of planning and implementation, the enabling and constraining factors, and recommendations for future programming, relating to the MDA, F&E and mapping components of the program

MDA

The PTI program aimed to implement a total of six rounds of MDA. Four of these were achieved within the program period although all were delayed compared to initially planned timings. Put simplistically, the PTI achieved 66% of its intended MDA. This is still an outstanding achievement given the enormity of implementing population-wide MDA, limited human resources, the complexity of the program, the challenges faced in individual countries and the unique fact that the program was adapting in real time to emerging data and evolving policy directives. The aim of completing six rounds of MDA was an unrealistic aim within the program period, considering the significant contextual challenges and with the level of support provided by the Foundation and ITI. These risks did not seem to have been adequately identified in the PTI program design. More timely recognition of the unique challenges in the Pacific and increased levels of associated support from The Foundation and ITI may have managed this risk during implementation.

The collective efforts of the trachoma coordinators, the Regional Coordinator, ITI and other Foundation staff in achieving four rounds of MDA is to be commended. The four rounds of MDA that have been implemented were completed with high coverage rates. While the process put significant pressure on limited local resources in each country, the MDA addressed trachoma and other health issues, contributed to transferable capacity development and contributed to increasing awareness of trachoma and NTDs.

Planning and implementing population-wide MDA is a huge undertaking with supply chain, logistics and human resources management at its core. It was overly ambitious to assume this could be achieved in each country with a single coordinator who may not have had any prior MDA experience of this scale, support from the Regional Coordinator and drawing on other already stretched local human resources. The four rounds of MDA were achieved despite these challenges, however the program design, The Foundation and ITI should have recognised these challenges and limitations and provided more support, earlier in the program.

The complexity of the program, working across four countries, with many stakeholders and influencers at the international and national levels, presented significant challenges in terms of coordination, communication and maintaining the pace of implementation required to achieve intended MDA within the program period.

Some logistical challenges were common to all of the PICs, with each country also facing their own unique challenges. Logistics and implementation of MDA in the Pacific is extremely challenging with scattered islands, dispersed and remote populations, vast distances, and limited and expensive transport. These realities should have been more accurately reflected in a more contextualised program design.

The PTI design was overly ambitious and formulaic in its anticipation of how the MDA would be rolled out in each country. While the WHO strategy provides an excellent framework for

countries to take a consistent approach to trachoma elimination, it needs to be interpreted and applied in different settings with close consideration of the local context, and this includes regional as well individual country contexts. The design did not adequately recognise the common or unique challenges.

The MDA component of the program was also unique in that it was directly linked in real time to data emerging from research and surveys being conducted in parallel, and decisions being made at the global level by external experts. These factors significantly impacted on the ability of Kiribati and Solomon Islands each to plan and implement their MDA within the timeframes envisaged in the initial program design. Many of the same people involved in undertaking the research and surveys were also required for the MDA, creating a double burden on human resources. New data and decisions being made at the global level regarding the need (or not) for additional MDA and additional research and surveys, and a degree of uncertainty and confusion around this, had a negative effect on the planning and implementation of MDA.

Recommendations:

14. Future MDA programming in the Pacific should be more realistic in terms of outcomes that can be achieved within time frames and based on deeper analysis of regional and localised contextual challenges.
15. Future MDA should receive a higher level of support from The Foundation, ITI and other experienced implementers of MDA.
16. Representatives from the countries themselves should be included in discussions relating to MDA protocols for their own country such as at Expert Consultations.
17. To avoid potentially unnecessary time pressures, The Foundation and ITI should make an evidence based recommendation for the optimal time period for MDA implementation in PICs, which differ to trachoma endemic areas in Africa.

Facial cleanliness and Environmental Improvements

The approach to the F&E component of the PTI changed during the program period, apparently in response to the availability of funds. The 2016 design states that the F&E component would be achieved through 'advocacy and coordination led by the MoH'. It specifically states that the PTI would not involve support for direct implementation of F&E activities – a decision which was influenced by the donor and The Foundation's preferred focus on research and MDA. The design makes reference to coordinating and advocating for other WASH actors including the MoH and other NGOs to progress the F&E component of the strategy however there was no detail provided as to how this would happen and initially no budget allocated to activities that could support this process. This represents a flawed and perhaps naïve approach to program design. Effective coordination and advocacy requires an analysis of how change will take place and the investment of associated human resource time and funding inputs.

It was not clear from documents analysed or stakeholder interviews why or how the focus on coordinating with other NGOs such as Live & Learn seemed to disappear from the implementation in every country. It is likely that the realities of doing so were perhaps not adequately analysed or tested at the time of design.

As it became clear that significant funds would not be utilised in Fiji, some of these were reallocated to F&E activities with new plans developed for the F&E components to be implemented in 2018 and 2019. This equipped countries to implement activities under their F&E plans until August 2019. This was a widely welcomed decision across the program, however, was too late to assure that F&E activities will be sustained and scaled into the future. This response could be seen in two ways. Either it contradicts the principle in the original design or it recognises the need to plan and provide funding support for the activities of the MoH and other actors. As noted above, in order to achieve even coordination and advocacy, funding and human resource inputs are necessary so this was a positive change in approach.

The approach adopted in 2018 and 2019 combines a mix of advocating for other actors to implement F&E activities and direct implementation led by the trachoma coordinator in each country. This is a perhaps a pragmatic approach however the program logic or theory of change underpinning the approach still lacks clarity. It is not clear how these relatively limited inputs to health promotion which combine some direct implementation and some coordination and advocacy with other WASH actors, will lead to enduring behavioral change in regards to facial cleanliness and environmental hygiene. With implementation only commencing in each country from around mid 2018 and 2019, interrupted by efforts with surveys, it is too early to assess whether the inputs will have been effective or tokenistic. It will be important that the investments in F&E continue over the coming years to increase the likelihood of sustained benefits.

Recommendations:

18. To increase the likelihood of effectiveness of the investments made to date in F&E, The Foundation should continue to support F&E activities in each country.

19. Coordination and integration were correctly identified as critical to the enduring success of F&E activities however the challenges and differences between countries with achieving this were underestimated or not well enough understood. Ongoing and future F&E activities should continue to coordinate and integrate with established WASH actors based on a deeper analysis of the unique barriers and enablers in each country context and the responsibilities and activities required to achieve this should be carefully designed, planned and budgeted.

20. Failing to work more closely with other WASH NGOs in addition to government as originally planned, has been a missed opportunity. Future F&E investments should re-focus on advocating, coordinating and even funding the efforts of established WASH NGOs and government entities to include trachoma related F&E activities within their existing work.

21. Once planned F&E activities have been fully implemented, each country should be financially and technically supported to reassess their approaches and the results of their investments in F&E. This could take the form a small internal evaluative exercise undertaken by each country team, perhaps with some external health behavioral change expertise.

22. The Foundation should develop a clear position on its support for F&E in any future trachoma programming.

Mapping, Surveys and Research

The response from key informants during the evaluation interviews to the planning and implementation of mapping, surveys and research activities was universally positive. Informants from all countries reflected that the relationships with the LSHTM had been positive with excellent communication and support.

In terms of broader benefits, the mapping activities were supported with significant levels of training and certification for national-level graders and recorders for 31 individuals across the Pacific region. These trainees are now equipped to conduct trachoma or other surveys in their respective countries and potentially other important roles involved in ongoing surveillance.

It should not be underestimated however, the burden placed on eye health teams and the hidden costs in each country of undertaking mapping activities, of taking staff off line from their normal roles and substantially increasing their workloads. Staff reflected that additional per diems provided were inadequate given the demands placed on them and that funds were often not paid until after activities had been completed.

The data produced was used at the micro and macro levels. There were excellent examples where data from mapping was used to directly inform and target F&E activities, focusing their work on areas with higher prevalence of TF. At the macro level, as was one of the key objectives of the PTI, the data generated has directly informed the global discourse on the WHO protocols and their implementation in the Pacific which will have benefits for the other countries in the Pacific, and other regions in time.

The most challenging aspect of the mapping activities for countries has been the uncertainty associated with the evolving data needs and the subsequent need for countries to adapt their plans with such resource intensive activities. This has included the introduction of the ancillary surveys, and uncertainty with the required geographic focus of pre-validation surveys in Solomon Islands. Given the mapping, surveys and research was a central component of the PTI though, and the importance of the data in directly informing global protocols and practices, this uncertainty and need to adapt plans probably couldn't be avoided.

Recommendation:

23. Ensure as much clarity and timeliness as possible with the decisions and planning regarding mapping, survey and research requirements and activities in any future trachoma programming.

Integration of research activities into planning and implementation

The research activities and the data generated were a critical component of the PTI. Unlike other more static programs where research and evidence is considered prior to commencement during the design phase and then the program plan stays largely static, the PTI was designed with research at its core, with data being generated and program plans responding to this in real time. This is quite an unusual approach and undoubtedly presented challenges to planning, implementation and management. Nevertheless, it also endeavored to ensure that programming decisions were dynamic and directly informed by evidence. So, while it was a positive feature of the program it also created challenges for all stakeholders. This was felt most acutely of course by the teams in each country who were trying to plan and implement activities. This challenge was compounded by the introduction of new research components i.e. the ancillary surveys, and the lack of definitive decisions

regarding the WHO criteria and thresholds. The latter led to some uncertainty and confusion amongst in country teams.

A Program Advisory Committee was established at the beginning of the PTI. It included representation from The Foundation, LSHTM, WHO, ICTC, and the relevant MoH and later the ITI and IAPB. This purpose of the Committee was to respond to emerging data and make associated planning decisions. It is worth noting that these meetings did not have representation from the countries themselves.

A Program Advisory Committee Meeting was held in late 2017 to discuss the impact of all results received to date and plan the way forward for the PTI countries. The Committee made the decision on whether further rounds of MDA were needed for the PTI countries. The results from LSHTM surveys were key to this decision.

The WHO Expert Consultation Meeting was then held in Melbourne in January 2018. The recommendations of this Expert Consultation provided clarity on the implementation of activities needed to eliminate trachoma as a public health problem in the Pacific, and informed the approach to dossier development for the Pacific region. The results of upcoming surveys will inform updated planning assumptions for country and region-wide validation based on the best evidence currently available.

The Regional Coordinator then attended the 4th GSM on Trachoma in Geneva in November 2018. The meeting considered whether the prevalence targets for elimination of trachoma as a public health problem are appropriate for the Western Pacific Region. This addressed the situation in Fiji, Solomon Islands and Vanuatu where TT is below intervention thresholds, but TF is not. Final decision making on all trachoma elimination thresholds and dossier preparations was delegated to the regional office of WHO in the Western Pacific (WPRO).

The establishment of the Program Advisory Committee was a sensible approach to have a body with representation of all stakeholders who could consider new data or developments in real time and provide direction to the program countries. However, some uncertainty remained as to whether the Program Advisory Committee, the Expert Consultation group or the WHO had the final say on issues such as whether countries had met the WHO criteria and whether further rounds of MDA were required.

This lack of clarity remains an issue. The WHO has not changed its elimination criteria and yet the WHO WPRO has advised Vanuatu to commence the preparation of its dossier.

Recommendation:

24. Seek confirmation or clarity on decisions regarding interpretation of WHO criteria and thresholds and communicate these to each country.

4.2 Efficiency of Planning and Implementation

The evaluation team have concluded that the PTI design was overly ambitious in its scope and timeframe. This means that the PTI planned and budgeted to do more than it has been able to achieve. The original end date for the PTI was December 2018. Due to delays across all countries, however, the program was extended to August 2019.

The budget for The Pacific Trachoma Initiative was GBP 1,927,496. An analysis of expected expenditure vs budget is shown in the table below:

	Budget	Expected Expenditure	% change (excl. of F&E activities)	Notes
Regional Costs	424,743	441,964	+ 4%	
Solomon Islands	277,088	336,891	+ 9%	*\$35,131 for F&E activities
Fiji	284,675	124,433	- 72%	*All funds planned for 2019, but not incurred at the time of the evaluation *\$45,000 for F&E activities
Kiribati	176,187	262,855	+ 28%	*\$35,656 for F&E activities
Vanuatu	393,790	470,879	+ 6%	*52,163 for F&E activities
Indirect Costs	211,862	147,762	- 30%	
O’head Recovery	159,151	141,712	-11%	

There are a number of observations to be made on the analysis of expenditure vs budget:

- Expenditure in Solomon Islands was within 10% of the original budget.
- Vanuatu was only able to stay close to budget due to the absorption of budgeted survey costs into regional expenditure costs. Its MDA expenditure was much higher than budgeted.
- Expenditure in Fiji was much lower than anticipated due to the problems experienced in finding a partner to sign the SGA. This was unanticipated and reported consistently throughout the PTI.
- The costs of MDA in Kiribati significantly exceeded budget, particularly given that three rounds had been budgeted for and only two rounds were delivered.
- While overall regional costs were close to budget, the regional coordinator costs were more than double budgeted costs suggesting the importance and need for this role was under estimated in initial planning and budgeting.
- The budget for travel costs for the regional coordinator relative to the size and scope of the program was very low at \$16,745. Expenditure was higher at \$21,977 but likely to be warranted.
- The \$200,000 contingency in the original budget proved to be an important buffer to absorb increased costs over the life of the PTI.
- The allocation to F&E activities relative to the size of the broader program was very limited. It is noted that this allocation was made later in the program when it was clear that the Fiji MDA would not proceed.
- The cost for MDA was originally estimated at between GBP£0.35 – GBP£1.31 cents per person per year, based on estimates provided by each country. Based on overall comparisons of MDA expenditure vs budget, these figures are likely to be a major under-estimate in Vanuatu and Kiribati.

Beyond the analysis of expenditure to budget, it is difficult to draw many conclusions about the extent to which funding was used efficiently. Key exclusions to planned activities include the whole of the Fiji program, the third round of MDA in Kiribati, and impact surveys in Kiribati.

While delays and constraints are very typical in the Pacific, there was potentially more that The Foundation could have done to tackle the challenges experienced in Kiribati and Fiji. However, there were constraints on the extent to which The Foundation was able to do this.

For example, the Trust was keen to proceed with the Fiji MoH as an implementing partner, which delayed pro-active exploration of alternate partnering options by The Foundation. Similarly, The Foundation could have sought earlier support from ITI to address the issues faced in Kiribati relating to ordering and administering the Zithromax, but was satisfied that lessons learned were being applied.

Discussion with stakeholders during the evaluation touched on the sensitive issue of whether the PTI has represented value for money. After four years of program implementation and close to 2 million GBP of expenditure, the prevalence of trachoma has reduced by half a percent in Vanuatu, was below the threshold for further MDA in Solomon Islands, and had increased in Kiribati between the first and second rounds of MDA.

Through rigorous research, the PTI has undoubtedly built a better understanding of the presentation of trachoma in the Pacific which will have benefits for other parts of the world. This research and the Pacific experience has informed and pushed the boundaries on existing assumptions with WHO criteria and thresholds for trachoma and protocols for the implementation of MDA. However, these investments have been expensive and have been made in countries where the research indicates that in at least three countries, the presentation of trachoma does not lead to blindness. They have incurred hidden costs such as the burden on already stretched health human resources, and disruption to normal health care services while staff were offline implementing MDA or assisting with surveys.

The ultimate assessment of the efficient use of resources and value for money perhaps depends on the value The Trust and The Foundation place in being able to formally declare Pacific countries as trachoma free; and influence future trachoma programming.

4.3 Sustainability

The PTI has laid the foundation for the approach to managing trachoma programs across the Pacific going forward. The evidence that has been generated through the PTI provides a clearer understanding of the presentation of trachoma in the Pacific. The discussions that have been held at international and regional levels will assist and inform other countries on their approach to eliminate trachoma and will influence global policy. This is particularly relevant for PNG, Nauru, and Torres Straight Islands contexts, where previous trachoma rapid assessments showed high TF prevalence but minimal TT.

One of the most striking contributions that the PTI has made to trachoma programming in the Pacific is the investment it has made to building trachoma management capacity in the Pacific which is transferable to other diseases and NTDs. The program funded three national trachoma coordinators who have benefited from the experience of managing the PTI, the support of regional technical expertise from the Regional Coordinator, and engagement with key trachoma partners and experts including The Foundation, The Trust, WHO, ITI and LSHTM. Alongside the PTI, The Foundation also provided training and certification for national-level graders and recorders for 31 individuals across the Pacific region. These trainees are now equipped to conduct trachoma surveys in their respective countries. Collectively, there is now a network and body of expertise within the Pacific who will be in a position to manage and influence trachoma programs across the Pacific in the future.

However, the extent to which Pacific countries are likely to sustain a focus on trachoma is mixed. Each of the four countries involved in the PTI has taken a different approach to integrating trachoma management into the public health system:

- In Vanuatu, trachoma management is situated within the MoH NTD unit.
- In Fiji, the trachoma program sits under the MoH NTD Department, which includes embedded health promotion roles.
- In Kiribati, trachoma management is located in the national ophthalmic department.
- In Solomon Islands, trachoma management is situated within the eye health coordination team, which also oversees other NTDs such as scabies, STH and Yaws.

The evaluation team observed that the sustainability of trachoma management is highly dependent on which part of the public health system is responsible for its management and the degree to which it is linked and integrated with other programs. For example, in Vanuatu the program successfully coordinated and integrated with other key NTD and WASH actors, greatly increasing the likelihood of an enduring focus on trachoma as an NTD within the national government's health system and the sustainability of F&E initiatives. Similarly, in Fiji, although there has been not been a Trachoma Coordinator, the NTD Department has sustained a focus on trachoma and managed to integrate F&E activities into broader public health programs. In contrast, in Kiribati and Solomon Islands, where the trachoma program has been situated in eye health departments, the trachoma program has been more isolated and had less success in coordinating and integrating trachoma into the broader public health agenda.

There is no doubt that successful implementation of the trachoma program relies on accessing clinical and technical trachoma expertise, and there is a critical role for eye health specialists to play a leading role. However, there are significant aspects of the program that are heavily dependent on microplanning expertise, logistics and supply chain management, and health promotion functions, all of which are located in the broader public health system. The location of a trachoma program in an eye health department isolates the program from the expertise, linkages and networks that it needs in order to be implemented well and sustained.

There are some benefits to the management of the trachoma program alongside the management other NTDs – as was the case in Vanuatu, Fiji and Solomon Islands – although these were not fully realized. The most significant benefit is that units who manage NTDs normally play a role in health promotion activities which often involve engagement with the WASH sector. This provides an easy entry point for existing health promotion activities to accommodate the F&E aspect of trachoma management. This was done really successfully in Vanuatu, and also achieved in Solomon Islands. Fiji also succeeded in including face washing in the Ministry of Education School Health Policy and its associated schools program.

Within the NTD approach, there was an obvious gap in NTD units integrating yaws and trachoma programmes. Both yaws and trachoma are infectious diseases targeted by WHO for elimination as a public health problem, both diseases are found in rural and isolated communities and both can be treated with azithromycin. While recognising that the drug donations and dosage are determined by the ITI, there is an obvious public health system benefit to mapping and treating the two diseases in an integrated way. From a broader public health perspective, there is also potential value in integrating a trachoma MDA with programs seeking to reduce the prevalence of the sexually transmitted genital Chlamydia trachomatis infection. Like yaws and trachoma, chlamydia trachomatis can also be treated with azithromycin. Integrating the programs would potentially increase the benefits of MDA to the public health system through combining health promotion activities and increased treatment uptake and overall coverage rates.

The overall impact of MDA on public health systems has also been mixed. In the case of Solomon Islands, a range of lessons have been learned that will be applied in the planning and implementation for Yaws MDA that will be supported by WHO. Similarly, lessons learned in Kiribati during the first two rounds of MDA will influence the approach to a third round of MDA if it goes ahead. There was no indication in either country however, that this trachoma MDA experience was likely to benefit the broader public health system. These collective observations have led the evaluation team to conclude that rather than focusing on trachoma coordinators and trachoma taskforces – there should have been a focus on NTD coordinators and taskforces. This would have been more likely to get more traction within the relevant MoH and would have contributed more sustainably to the broader public health system.

It is also important to recognize the significant cost that public health systems have incurred in administering drugs to their entire populations. This is particularly significant in the Pacific countries, who face the costs and challenges in planning and implementing MDA across multiple islands and remote communities. In the case of Vanuatu, the total costs and burden on the health system of undertaking the MDA informed their decision not to do further rounds of MDA for trachoma despite post MDA TF prevalence >5%. In Kiribati, multiple delays meant that the trachoma MDA was not undertaken with other planned health activities and required health staff to travel across the country a second time just for trachoma MDA – interrupting other primary health care activities. In the case of Fiji, where MDA was not undertaken and ultimately may not be needed, the public health system has potentially saved on incurring these health resource impacts.

Recommendations:

25. Increase investment in advocating for countries to establish NTD units and embed future trachoma programming activities within these (see related recommendations under each country).

26. Refocus investments into coordinating with and integrating with existing WASH government entities and non-government actors. (see related recommendations under each country).

4.4 Partnerships

High levels of consultation and communications between key stakeholders was a fundamental feature of the PTI and as a dynamic or adaptive program it was vital that these practices worked well. Project reporting and discussions with stakeholders show that project activities and timelines were significantly revised and adapted in order to respond to research data, delays, and technical advice, while still maintaining a focus on the overall goal of elimination of trachoma in the four countries. At the regional level, meetings and discussions were held over the course of the PTI to share information on activities. GTMP surveys, clinical research activities, and reports from clinicians in the field were thoroughly interrogated and discussed with experts, and national, regional and global stakeholders.

Regular and constructive communication was the foundation of a positive and collaborative working relationship between The Foundation and The Trust. The Foundation has consistently communicated progress, constraints and recommendations to The Trust, which has enabled it to support adaptive changes. This has proved vital in ensuring that the project remained relevant and responsive to country contexts. The Foundation found that The Trust

was flexible throughout the program, and responsive to trachoma research and in particular the unusual presentation of trachoma in some of the Pacific countries. While changes in the first years of the program were largely in response to delays and implementation challenges, more significant changes were made to the program following recommendations made at the Expert Consultation Meeting in January 2018 in Melbourne; and the 4th GSM in late 2018 in Geneva. This resulted in revised approaches to SAFE implementation in each of the four countries.

The Trust demonstrated its genuine commitment to and interest in the program in the Pacific from the beginning. This was demonstrated through Dr. Astrid Bonfield's high level meetings in Vanuatu, Solomon Islands and Fiji in 2016 and her role advocating to various stakeholders in Fiji the importance of signing the SGA and MOU. A representative from The Trust to the Pacific in October 2018 further strengthened the relationships between the donor (The Trust), Program Manager (The Foundation) and the Implementing Partners (MoHs). It also provided the opportunity to deepen understanding of the context of programs. The planned visit to the Pacific towards the end of The Trust funding period further demonstrates The Trust's commitment to the program and is an important opportunity for Trachoma Coordinators and key MoH staff to meet, reflect and discuss the way forward for trachoma elimination once funding from The Trust concludes.

The Foundation has also maintained a close working relationship with WHO and in particular the WPRO office throughout the PTI to share findings, seek technical support, and clarify recommendations for each country in the Pacific. The PTI has benefited from ongoing technical support from WHO. In the early phase of the program, the WHO NTD Medical Officer in Suva played an active role in contacting Country Liaison Officers in Kiribati and Vanuatu and advocating for trachoma work at a national level. The WHO NTD Medical Officer also assisted with the facilitation of the Vanuatu MDA Training in 2016 and Kiribati MDA training in 2017. WHO also co-facilitated the PTI Regional F&E Planning workshop in Fiji in 2017. WHO has also maintained a role on the Fiji National Trachoma Taskforce throughout the PTI; and chaired the PTI's Program Advisory Committee. The WHO led Expert Consultation meeting that took place in January 2018 has also played a major role in setting the approach for trachoma management in each of the four PTI countries and the recommendations from this meeting were endorsed by the 4th GSM in November 2018 in Geneva.

The Foundation has also worked closely with each country MoH to support decision making and planning, although there have been some tensions between the recommendations of WHO and the perspectives and decisions of some countries.

A PTI Celebration and Learning Workshop is being planned for 26 June 2019 as a pre-conference meeting to the Pacific Regional Eye Health Conference from 27 -28 June 2019 in Suva, Fiji. This will be a further opportunity for PTI partners to share their reflections and learnings and continue to chart the trachoma journey ahead in the Pacific.

Recommendation:

27. With so many partners involved, the Program Advisory Committee should have taken a more proactive strategic and operational role to (i) identify challenges within each country program and at the program level as they arose (ii) taken responsive and definitive action and provided this advice and additional support to countries where required, and (iii) taken a stronger leadership role in ensuring clear decisions were made and directives given in response to new data etc. to countries in a timely manner.

4.5 Equity

The goal of eliminating trachoma is founded on the notion of equity. From a planning perspective, the intent of MDA is to have complete coverage of the population, indirectly addressing any issues of exclusion or marginalisation. In the Pacific, however, there are a range of logistical and contextual challenges including the vast number of islands in each country and the remoteness of some communities which could have posed a risk to complete coverage, inadvertently disadvantaging those from the most isolated and possibly marginalised communities. In spite of these challenges though, key informants felt that significant efforts had been made and were successful in reaching the most remote communities. Working with local health staff at the village level also meant reducing the risk associated with missing individuals within communities who may be less visible due to disability or other marginalisation, as these people would be known to local staff.

The nature of community/village based MDA in the Pacific is that health teams often visit homes in order to reach the whole population. This means that most community members have access to the MDA – including young children, women attending to household duties, the elderly, and people with a disability. Unfortunately, however, the PTI has not generated data on the extent to which the initiative equitably reached trachoma endemic communities. Reported coverage rates were not disaggregated by age, gender or region and thus conclusions about equity cannot easily be made.

The equitable reach of the F&E component of the trachoma initiative is entirely dependent on the extent to which F&E was successfully integrated into broader, existing national health promotion policies and programs. The limited F&E activities implemented to date in 2018 and 2019 may pose a risk of not equitably reaching communities and individuals simply given its small scale. In Solomon Islands this has meant that to date, activities have been focused in Honiara which obviously doesn't reach those living in rural or remote areas. Similarly in Kiribati, the limited activities undertaken to date were implemented in the communities on Abiang Island which was more readily accessible to Tarawa.

5. LEARNINGS AND RECOMMENDATIONS

The following section outlines the learnings and the recommendations for each of the countries and areas of focus at the overall program level.

5.1 Learnings

1. The outputs and outcomes of the PTI that have been achieved within the timeframe are significant and to be commended. This is particularly so given the enormity of implementing population-wide MDA, limited and already stretched health system human resources, the complexity of the PTI program, the challenges faced in individual countries and the unique fact that the program was adapting in real time to emerging data and evolving policy directives which were sometimes unclear.
2. The support and advocacy role of the Regional Coordinator and work of the National Trachoma Coordinators in each country were critical to the PTI's achievements.
3. Capacity development of human resources through experience gained in conducting MDA, training as graders and recorders and the conduct of surveys and other research will continue to contribute to the health systems in each of the PICs.

4. The implementation of MDA contributed to the management of trachoma and other health issues such as Yaws and STIs, contributed to transferable capacity development and contributed to increasing awareness of trachoma and NTDs in each country.
5. The mapping, survey and research activities were well planned and implemented.
6. The findings of mapping, surveys and research undertaken through the PTI has positively contributed to the global discourse and policy level decisions regarding trachoma management which should influence more effective and cost efficient approaches in other Pacific countries.
7. The PTI was able to adapt in response to research findings but this also created considerable challenges and stress for implementers.
8. The partnership arrangements, when including funding, implementing and technical partners, were very complex. Despite this the partnerships were characterised by honest and open communications, respect and shared objectives. The conduct of regular teleconferences between The Foundation and The Trust facilitated a robust relationship able to address challenges and adapt.
9. Planning and implementing population-wide MDA is a huge undertaking with supply chain, logistics and human resources management, rather than eye health care capacity, at its core.
10. The aim of completing the intended MDA was unrealistic within the program period, considering the significant contextual challenges and with the level of support provided by the Foundation and ITI. These risks and challenges were not adequately addressed in the PTI program design. More timely recognition of the unique challenges in the Pacific and the required increased levels of associated support from The Foundation and ITI may have better managed these risks during implementation.
11. Logistics and implementation of MDA in the Pacific is extremely challenging with, dispersed islands, remote populations, vast distances, and limited and expensive transport.
12. The PTI design was overly ambitious and formulaic in its plan of how the MDA would be rolled out in each country. While the WHO strategy provides an excellent framework for countries to take a consistent approach to trachoma elimination, it needs to be interpreted and applied in different settings with close consideration of the local context, and this includes regional as well individual country contexts. The design did not adequately recognise or address the common or unique challenges.
13. Coordination and integration were correctly identified as critical to the enduring success of F&E activities however the challenges and differences between countries with achieving this were underestimated or not well enough understood.
14. The approach to F&E in the original program design was not adequately analysed, planned or costed.
15. Failing to work more closely with other WASH NGOs, in addition to government, has been a missed opportunity.
16. The investments made in F&E have been too limited and too late in the program to lead to broad or sustained results.

5.2 Recommendations at Country Level

Kiribati

1. The Trachoma Taskforce should to be revitalised to include representation and attendance by key public health and WASH actors and WHO. If attendance at a disease specific taskforce is considered too onerous, consideration should be given to advocating for the establishment of an NTD Taskforce which would include trachoma.
2. The trachoma program should formally report against the TAP, and trachoma reporting should be included in overall annual reports against the National Strategic Health and Medical Services Plan.
3. The Foundation should provide support to the National Coordinator to advocate for and progress Government approval of the draft Hand and Face Washing Policy developed in October 2017 which would provide the necessary mandate for other divisions such as environmental hygiene to advocate for it application.
4. The Foundation should provide support for the National Coordinator to be formally included in the Water and Sanitation Committee. This could commence with further analysis of the functionality of the Water and Sanitation Committee to better understand the current barriers to its effective functioning and increased advocacy at a senior level in the MoH by the Foundation for the inclusion of the National Coordinator.
5. At the conclusion of the PTI, consideration should be given to transferring supervision of trachoma management to the Communicable Disease, NTD and Public Health Specialist or unit to ensure greater integration of trachoma management with the broader public health system and NTD management.

Vanuatu

6. Ongoing funding to support F&E activities – for continued interventions in TF ‘hot spots’ and to support further coordination and advocacy efforts with other WASH actors. It is too early to assess the behavioral change from the F&E activities undertaken to date and it would be useful to assess this, perhaps in 2020. It would also be valuable to continue to advocate for the inclusion of handwashing and environmental hygiene messaging and behavioral change in targeted communities and amongst other WASH government and non-government actors.
7. Ongoing surveillance/monitoring: there is a good reporting system in place which provides monthly reports back to provincial and then national levels (Yaws is already included in this reporting), however further training is needed for health workers to identify TF and TT cases. Vanuatu is conscious that ongoing surveillance or monitoring is important in their ongoing management of trachoma.

Solomon Islands

8. High level support from The Foundation to advocate for improved WASH coordination amongst government and non-government WASH actors and the inclusion of the trachoma coordinator in this coordination body. This could commence with further analysis of the functionality of WASH coordination in Solomon Islands to better understand the current barriers to its effective functioning and increased advocacy at a senior level in the MoH by the Foundation for the inclusion of the trachoma coordinator.
9. High level support from The Foundation to advocate for the establishment of an NTD unit within MoH with staff position/s and resources.
10. The Trachoma Taskforce should be revitalised to include representation and attendance by key public health and WASH actors and WHO. If attendance at a

disease specific taskforce is considered too onerous, consideration should be given to advocating for the establishment of an NTD Taskforce which would include trachoma.

Fiji

11. Consult the Trachoma Taskforce and WHO to determine which partner is best placed to carry forward the research and F&E activities.
12. Ensure Project Heaven is reimbursed for F&E activities undertaken to date and ensure any further work undertaken is aligned with the broader Wash, Brush Splash program of the MoH.
13. Reconsider negotiating a SGA with the MoH directly with The Foundation to cover any ongoing F&E activities.

5.3 Recommendations at Program Level

MDA

14. Future MDA programming in the Pacific should be more realistic in terms of outcomes that can be achieved within time frames and based on deeper analysis of regional and localised contextual challenges.
15. Future MDA should receive a higher level of support from The Foundation, ITI and other experienced implementers of MDA.
16. Representatives from the countries themselves should be included in discussions relating to MDA protocols for their own country such as at Expert Consultations.
17. To avoid potentially unnecessary time pressures, The Foundation and ITI should make an evidence based recommendation for the optimal time period for MDA implementation in PICs, which differ to trachoma endemic areas in Africa.

F&E

18. To increase the likelihood of effectiveness of the investments made to date in F&E, The Foundation should continue to support F&E activities in each country.
19. Coordination and integration were correctly identified as critical to the enduring success of F&E activities however the challenges and differences between countries with achieving this were underestimated or not well enough understood. Ongoing and future F&E activities should continue to coordinate and integrate with established WASH actors based on a deeper analysis of the unique barriers and enablers in each country context and the responsibilities and activities required to achieve this should be carefully designed, planned and budgeted.
20. Failing to work more closely with other WASH NGOs in addition to government as originally planned, has been a missed opportunity. Future F&E investments should re-focus on advocating, coordinating and even funding the efforts of established WASH NGOs and government entities to include trachoma related F&E activities within their existing work.
21. Once planned F&E activities have been fully implemented, each country should be financially and technically supported to reassess their approaches and the results of their investments in F&E. This could take the form a small internal evaluative exercise undertaken by each country team, perhaps with some external health behavioral change expertise.
22. The Foundation should develop a clear position on its support for F&E in any future trachoma programming.

Mapping

23. Ensure as much clarity and timeliness as possible with the decisions and planning regarding mapping, survey and research requirements and activities in any future trachoma programming.

Integration of Research

24. Seek confirmation or clarity on decision regarding interpretation of WHO criteria and thresholds and communicate these to each country.

Sustainability

25. Increase investment in advocating for countries to establish NTD units and embed future trachoma programming activities within these (see related recommendations under each country)
26. Refocus investments into coordinating with and integrating with existing WASH government entities and non-government actors. (see related recommendations under each country).

Partnership

27. With so many partners involved, the Program Advisory Committee should have taken a more proactive strategic and operational role to, (i) identify challenges within each country program and at the program level as they arose (ii) taken responsive and definitive action and provided this advice and additional support to countries where required, and (iii) taken a stronger leadership role in ensuring clear decisions were made and directives given in response to new data etc. to countries in a timely manner.

END