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Evaluation of the New Zealand Medical Treatment Scheme

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Expert peer view

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Acronyms and abbreviations

AUD	Australian dollars
CME	Continuing Medical Education
CPAP	Continuous Positive Airway Pressure
GDP	Gross Domestic Product
HECD	National Health and Disability Ethics Committee
HSL	Health Specialists Limited
MFAT	(New Zealand) Ministry of Foreign Affairs and Trade
MTS	Medical Treatment Scheme
NCD	Non-communicable disease
NZD	New Zealand dollars
NZMTS	New Zealand Medical Treatment Scheme
OECD DAC	Organisation for Economic Co-operation and Development's Development Assistance Committee
ORC	Overseas Referral Committee
ORS	Overseas Referral Scheme
PIP	Pacific Islands Program
PAA	Programme Activity Authority
PS	Permanent Secretary
RACS	Royal Australasian College of Surgeons
SSCSiP	Strengthening Specialised Clinical Service in the Pacific Program
SPC NMDI	Secretariat for the Pacific Community's National Minimum Development Indicators database
SED	Sustainable Economic Development
VMS	Visiting Medical Specialists

Abstract

The New Zealand Medical Treatment Scheme (NZMTS) aims to assist Pacific island countries to provide their citizens with access to specialised medical treatment. The NZMTS comprises two components: the Overseas Referral Scheme (ORS); and Visiting Medical Specialists (VMS). This evaluation looked at the performance of the NZMTS over the period 2011/12 to 2013/14.

The ORS has successfully provided life-saving, tertiary-level clinical services for patients that were unavailable in-country, due to the limited clinical capacity of these local health systems. There is qualitative evidence of the capacity development impacts of VMS teams on local staff, including increased skill levels, and staff confidence. However recording of these outcomes by the Management Services Contractor (MSC) is not yet sufficiently well developed and is one of a number of gaps in current measurement and reporting that should be addressed in any future phase of support. There is potential to expand capacity development support in various ways, to further extend the range of benefits. There is quantitative evidence to suggest that the MSC has become more efficient in its implementation of the NZMTS over the evaluation period. There is scope to better define the parameters around financial management to further enhance efficiency.

Lessons learned from the successful operation of the NZMTS could be promulgated via a refreshed and simplified set of ORS Guidelines and Overseas Referrals Committee criteria. There is scope to improve information flows from the MSC to partner countries. Gaps in information unable to be filled in this evaluation should be addressed in discussion with stakeholders – Tuvalu in particular – to inform planning and design of any future support.

1. Executive summary

The New Zealand Medical Treatment Scheme (NZMTS) aims to assist Pacific island countries to provide their citizens with access to specialised medical treatment. Countries currently participating in the NZMTS are Fiji, Kiribati, Tonga, Tuvalu and Vanuatu. The goal of the NZMTS is that the citizens of these countries are healthy and productive. The long term outcome of the NZMTS is successful clinical outcomes for citizens in participating countries unable to access specialist services. The NZMTS comprises two components: the Overseas Referral Scheme (ORS); and Visiting Medical Specialists (VMS). The Activity is delivered by an Auckland-based Management Services Contractor (MSC) – Health Specialists Limited (HSL). This evaluation looked at the performance of the NZMTS over the period 2011/12 to 2013/14.

Key findings

Relevance

There is quantitative and qualitative evidence that the VMS has responded flexibly to partner country needs and priorities by providing teams in the requested specialties. The ORS has provided tertiary-level clinical services for patients that were unavailable in-country, due to the limited clinical capacity of these health systems. The NZMTS has indirectly contributed to New Zealand's sustainable economic development objectives via the provision of treatments that are often life-saving. The fact that children are well-represented increases the potential for lifelong benefits.

Effectiveness

Patients have been provided with successful clinical treatments, and the Overseas Referral Committee (ORC) approval criteria have been robustly implemented by the MSC ensuring that treatment has been based on clinical need and prognosis. The NZMTS objectives in terms of outputs and performance against targets have largely been met or exceeded for those measures that have been reported. However, there are a number of gaps in terms of reporting by the MSC against the metrics in the results measurement table.

Impact

Information on patients' medium-term health outcomes is scarce, due to the limitations of in-country health information systems, inherent logistical challenges, and on the capacity of partner countries to track patients and ensure they receive follow-up care.

There is qualitative evidence of the capacity development impacts of VMS teams on local staff, including increased skill levels and improved staff confidence. However, the recording of these outcomes by the MSC is not yet sufficiently well developed and is a gap in current measurement and reporting that needs to be addressed in any future phase of support.

Efficiency

With respect to the ORS, the MSC has to manage a considerable a considerable degree of uncertainty around the cost of treatment, due to factors outside their control such as undiagnosed conditions and complications in theatre or immediately after surgery. Over the

evaluation period, the MSC has become adept at managing this volatility, which has reduced the variance between budget and expenditure over time. This can be interpreted as a measure of improved efficiency in programme management – although the MSC has also pointed to improvements in partner country capacity to triage and manage patients as being a factor.

Within the VMS, visiting teams are essentially providing their services through goodwill. If the value of their time was factored in, it would be equivalent to at least 10% of the annual budget of the NZMTS. The pro bono nature of VMS services needs to be borne in mind when considering requests for increased capacity development support.

Sustainability

The full range of tertiary services provided by the ORS is unlikely to ever be provided in-country. Although systems in Fiji and Tonga continue to evolve in the capability and scope of their services, system and resourcing constraints and insufficient caseload mean that some that some services delivered via the ORS will remain unavailable in these partner countries.

There is qualitative evidence that some clinical staff have developed their skills (e.g. new surgical techniques, use of drugs within an oncology service) alongside visiting specialists and that these skills are embedded. More strategic planning of capacity development provided through the VMS could support partner countries' health workforce development plans, thereby improving the sustainability of the benefits from any future phase of support.

Lessons learned

Strengths of the NZMTS, and factors critical to its success, are:

- strong clinical networks and relationships have been developed (e.g. in Tonga and Fiji);
- repeat visits by same VMSs have built trusted relationships over time;
- impartiality of the in-country ORC committee (e.g. in Tonga) contributes to robust application of the NZMTS criteria for patient approval;
- preparatory work by referring ORS clinicians can streamline the ORC process and minimise the decline rate (e.g. in Tonga);
- patient coordinators in-country can play a valuable role in ensuring a timely and smooth arrangements for patients being referred overseas;
- the MSC acts as final filter on ORS decisions, thereby maintaining the integrity of the scheme; and
- preparatory work ahead of VMS visits can maximise capacity development benefits, and is supported by longstanding relationships between visiting teams and local clinicians.

Weaknesses of the NZMTS are:

- there is mixed awareness in-country of the ORS Guidelines and ORC criteria, in part due to high turnover of personnel in some partner countries;
- many of the indicators in the results measurement framework are not particularly well specified or sufficiently meaningful, and data capture is not always possible; and
- the length of VMS visits is considered by some stakeholders to be too short.

Challenges that are external to the NZMTS are:

- late presentation by patients;
- limited diagnostic capacity and capability (this varies among partner countries);
- tracking patients and providing follow-up care to ensure good clinical outcomes (particularly an issue for outer islands);
- in-country recording/tracking of patient outcomes;
- attracting and retaining staff;
- rotation of nursing staff;
- timeliness of visa processing for urgent cases; and
- the potential for political interference in ORC decision-making (this varies among countries and is generally by managed in-country ORC committees and/or the MSC).

We identified the following learnings from the way the ORS and VMS operate in some countries that may be transferable to other countries:

- referral committee composition – Tonga has determined that clinicians who are directly responsible for patient care should not be on the committee so as to avoid advocating for their own patients (instead, clinical membership has included a radiologist, a pathologist, and the medical superintendent);
- preparatory work by referring ORS clinicians – in Tonga the referring clinician is required to liaise directly with their New Zealand counterpart, to secure an appointment time and price estimate. This helps streamline the ORC process. However it is reliant on the local clinicians' networks with their New Zealand counterparts; and
- structured capacity development focus to VMS visits, that builds the skill level and confidence of local staff so that the range of cases able to be treated in-country is increased. The MSC has noted that the role of visiting teams in capacity building tends to increase as their in-country experience and relationships increases over several years.

Conclusions

We found clear qualitative and quantitative evidence that the NZMTS is successfully meeting clinical needs that would otherwise go unmet. While other New Zealand support in these countries' health sectors is geared towards primary and preventative initiatives, the NZMTS focuses on a different set of patients. The NZMTS generally funds life-saving tertiary-level hospital treatments for people that are unable to access these services due the unavailability of these services in-country (and their inability to purchase these services directly). The treatments can be expected to result in direct and long-lasting benefits for these patients, compared to the more indirect population-based interventions provided in other types of interventions such as public health programmes.

The capacity development support provided through the VMS has been helping to improve the quality of care provided in-country, and extend the range of skills and specialties. There is potential to expand capacity development support in various ways, to further extend the range of benefits.

Recommendations

Priority areas for any further assistance and the potential benefits of a further phase of New Zealand Aid Programme support

1. There is a case for on-going funding for the NZMTS – given the evidence of unmet need and the fact that there will always be constraints and limits to the clinical services that are able to be provided in-country.
2. If the NZMTS is to continue, we recommend that MFAT considers consulting with Tuvalu stakeholders before any plans are developed, in order to fill the information gaps unable to be addressed in this evaluation and explore partner country priorities for any future phase of New Zealand support.
3. With respect to requests from Kiribati and Tuvalu for New Zealand support to fund specialist positions, we recommend that MFAT considers discussing these requests in the context of other partner country priorities as part of bilateral budget discussions.

How to revise or reinforce the NZMTS for any future phase of support

Planning and design

4. The role of an independent MSC that is able to provide clinical leadership and act as the final decision maker in the ORS should be continued – to preserve the integrity of the scheme via strict application of referral criteria. This will ensure that funding continues to be well targeted and based on health need and ability to benefit from treatment.
5. Given the vulnerability of the in-country MTSs to political interference, we do not support the suggestion that any future New Zealand support for a scheme such as the NZMTS could evolve into bilateral support for some countries.
6. For any future design, there should be a central document (e.g., an Activity Design Document) that states the rationale, goals and outcomes of the NZMTS and its fit with New Zealand Aid Programme objectives and priorities. All reporting should be consistent with framing of the NZMTS within this document.
 - (a) the MTS Guidelines should be consistent with this document, and within the Guidelines, the ORC criteria should include a requirement for non-surgical representation on committees and protocols for record keeping. A simple, one-page version of the revised criteria should be distributed to assist awareness, understanding and application.
 - (b) any future design should also have clear criteria for VMS visits, and protocols for the coordination of such visits.
7. Any future Management Services Contract should be revised to remove unnecessary detail, emphasise key performance measures and define the parameters around financial management.
8. The results measurement framework should be reviewed to develop more meaningful, robust and better specified indicators – for which data capture is feasible. Specific improvements include:

- (a) better specification, to ensure quantitative indicators have clear numerators and denominators, and qualitative indicators are more specific;
 - (b) ensuring that capacity development outputs (e.g., numbers of local staff trained/strengthened) include the gender and role of staff;
 - (c) investigating improved measures of capacity development impact such as staff retention, self-reported morale and satisfaction, evidence/observed skill level. Such measures would need to be led from in-country, with support from the MSC;
 - (d) more systematic and consistent recording of clinical specialties and treatments; and
 - (e) recording of patients' domicile.
9. There is scope to improve the strategic planning of capacity development provided through the VMS. Any future support should be aligned with partner countries' health workforce development plans, to ensure relevance and effectiveness.

Implementation

10. Information flows from the MSC to stakeholders could be improved by way of dissemination of periodic ORS 'pipeline' reports and providing an annual 'country report' to key stakeholders in each partner country (e.g. Medical Superintendent, ORC Chair, Permanent Secretary) and to MFAT Post, by email and in hard copy.
11. There is no clear evidence that treating overseas referrals patients in India represents better overall value for money compared to providing treatment in New Zealand. We recommend that consideration of this issue in any future phase of support should give careful consideration to the comparative quality of treatment, impact on patient outcomes, comfort and satisfaction and the logistics of travel and accommodation.

Scope and focal areas

12. More ambitious developments for any future phase of New Zealand support for strengthening the health workforce in the Pacific could include:
 - (a) extending capacity development support to explicitly enable the provision of New Zealand-based attachments, further extending the focus beyond surgical roles and expanding support to leadership and management. Tonga and Fiji would be candidates for this shift in emphasis, given the relative maturity of their health systems, and the views expressed in-country regarding potential future support; and
 - (b) introducing a Pacific-based NZMTS liaison role to enable better understanding of and responsiveness to the priorities and needs of partner countries, particularly those who currently have less developed links with New Zealand.
13. We do not support the suggestion of a reduced role for the MSC with respect to overseas referrals from Fiji and Tonga, as in our view the systems in these countries are not sufficiently robust to ensure strict application of the referral criteria.

1. Background

1.1 The Activity

1.1.1 Activity components

The New Zealand Medical Treatment Scheme (NZMTS) aims to assist Pacific island countries to provide their citizens with access to specialised medical treatment. Countries currently participating in the NZMTS are Fiji, Kiribati, Tonga, Tuvalu and Vanuatu. The goal of the NZMTS is that the citizens of these countries are healthy and productive. The long term outcome of the NZMTS is successful clinical outcomes for citizens in participating countries unable to access specialist services.

The NZMTS comprises two components: (1) the Overseas Referral Scheme (ORS); and (2) the Visiting Medical Specialists scheme (VMS).

1.1.2 Activity objectives

The objective of the ORS is to increase opportunities for men, women and children to access secondary and tertiary treatment not normally available in their home country. The objectives are laid out in the NZMTS Guidelines, which include a set of criteria that guide overseas referrals and the functions of in-country Overseas Referral Committees (ORCs).

The Overseas Referrals component provides medical treatment in New Zealand, Australia, Fiji or any other appropriate country in the region, for people from participating countries with a life threatening or seriously debilitating medical condition but with a good prognosis, and who have a prognosis of at least five years of life after their treatment. The programme covers the costs of treatment from arrival until departure in the country where treatment is to be provided. Support costs for accommodation, transport and a small living allowance is available following approval from the in-country ORC.

The objectives of VMS are:

- to assess and, where appropriate, provide health services in participating countries, according to identified need, that are not otherwise available; and
- to maximize opportunities for capability building through activities such as structured training (e.g. seminars for relevant health professionals) and/or on-the-job training of medical, nursing and allied health staff.

The VMS component enables specialists to be sent to countries to provide medical treatment and/or medical assessments. The visits provide opportunities for local medical staff to improve their skills and knowledge.

The NZMTS is managed by a Management Services Contractor (MSC). The current MSC is Health Specialists Ltd (HSL), based in Auckland. Administration of the NZMTS is funded from the regional health programme of the New Zealand Aid Programme which also provides overall Activity management for MFAT. The ORS and VMS are funded from bilateral Overseas Development Assistance allocations from the New Zealand Aid Programme.

The results diagram is presented in Appendix 2.

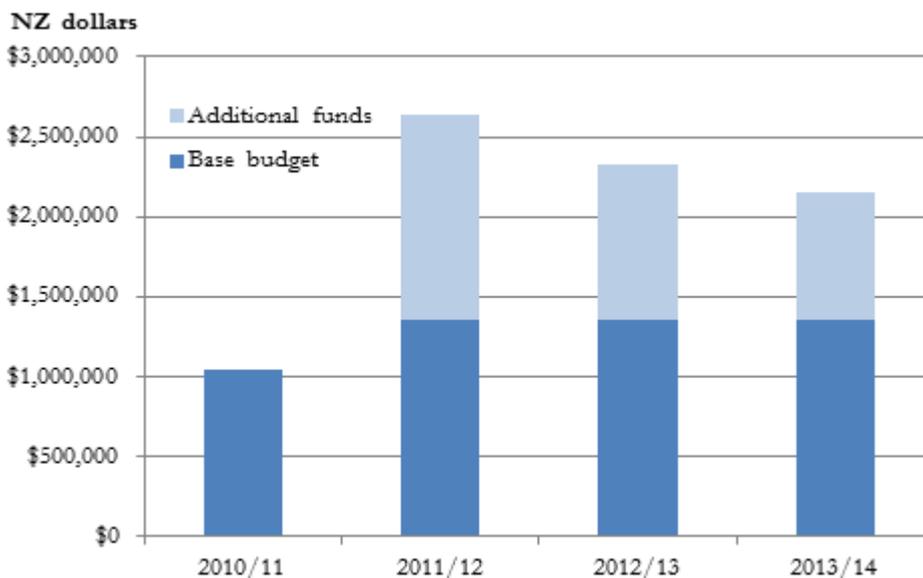
1.1.3 Base budget and additional funds

The annual MTS budget remained at \$1.350 million for each year of the evaluation period of 2011/12 to 2013/14, as Figure 1 shows. This represents an increase of \$300k or 29% from the budget of \$1.050 million in the baseline year of 2010/11. Additional one-off amounts have also been made available in each year of the evaluation period – either at the beginning or during the year in response to identified need. These additional funds comprised \$1.290 million in 2011/12 (almost equivalent to the base budget), \$970k in 2012/13 and \$800k in 2013/14. Together, these amounts represent an additional \$3.060 million over three years.

It should be noted that the MTS budget is a function of the budgets agreed with each of the five partner countries. Therefore the decisions taken at a bilateral level, in the context of bilateral budget priorities, will determine the size of the overall MTS budget.

The budget includes a management service fee for the MSC that comprises a fixed monthly fee, daily fee rates, as well as reasonable expenses and per diems. The management fee was set at \$300k per year. We understand from MFAT that, compared with other Activities, this fee appears high relative to the NZMTS budget – being equivalent to 22% of the annual budget of \$1.350 million. Contributing factors may include the amount of travel required to visit the five partner countries each year, being available 24/7 for clinical consultation, and the senior clinical and health management experience required to manage the programme.

Figure 1: MTS budget and additional funds, 2010/11 - 2013/14

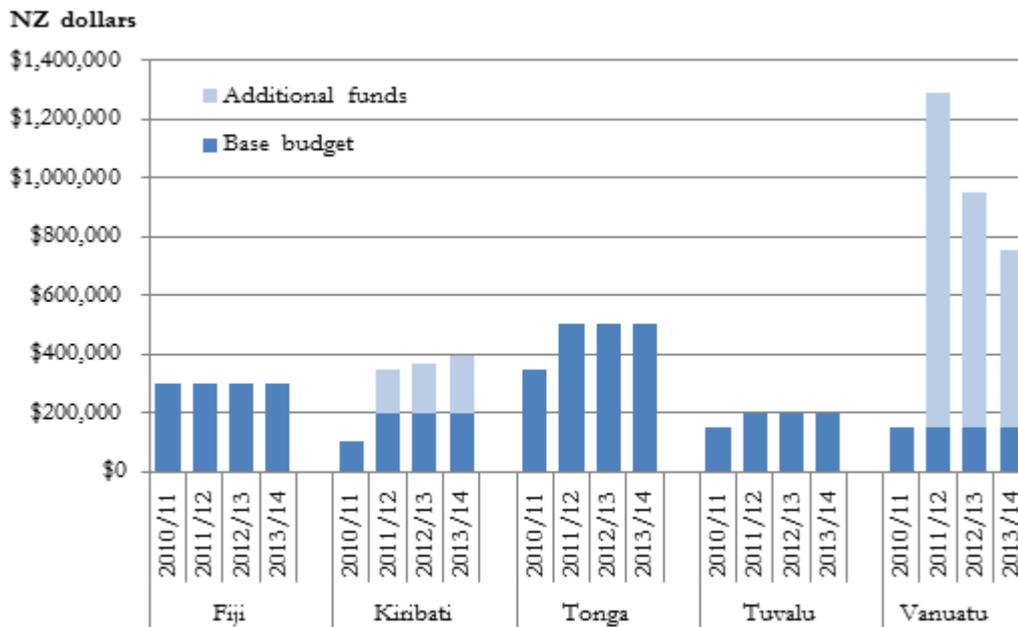


Source: Data provided by Health Specialists Ltd; Sapere analysis

Figure 2 presents the base budget of each partner country between 2010/11 and 2013/14, along with any additional funds approved. Tonga (\$500k) has the largest base budget, followed by Fiji (\$300k), Kiribati (\$200k) and Tuvalu (\$200k) and Vanuatu (\$150k). Two countries had an increase in their base budget since the baseline year of this evaluation, 2010/11, with the Tonga budget increasing by \$150k and the Kiribati budget by \$100k.

Additional one-off amounts were made available in each year of the evaluation period for Kiribati and Vanuatu in response to health need. Kiribati received additional amounts of between \$150k and \$196k per annum. In the case of Vanuatu the additional funds – of between \$601k and \$1.140m – were much larger than the base budgets. We understand that this additional funding was made available to address cases of rheumatic heart disease that had been diagnosed by a visiting medical team from New Zealand.

Figure 2: MTS budget and additional funds by country, 2010/11 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

1.2 The five schemes

The NZMTS is essentially a collection of five of schemes – each of which differs slightly in an operational sense. This reflects the varying issues, needs and priorities of each population, as well as the fact that each health system is at a different stage of development.

The schemes vary in terms of the strength of partner country connections with New Zealand clinicians and, accordingly, the role that HSL plays. For Fiji and Tonga, clinicians have well-established networks with New Zealand counterparts and undertake much of the preparatory work (such as gaining second opinions, and in the case of Tonga, seeking costings and appointment scheduling) directly with New Zealand-based clinicians and HSL. This partly reflects the fact that many have spent time studying and working in New Zealand, and partly the particular breadth and depth of HSL’s own connections.

The other countries – Kiribati, Tuvalu and Vanuatu – appear to have less well-established networks with New Zealand clinicians. They also have a smaller clinical workforce and less clinical infrastructure to support diagnosis and so tend to be more reliant on HSL taking a stronger role in supporting the patient diagnosis and eligibility assessment and the logistics of referral arrangements. As noted earlier, Fiji also plays a role in diagnosis and assessment.

Most of the partner countries run their own overseas referral scheme alongside the ORS, where they also fund their citizens for medical overseas treatment – the exception being Vanuatu. Typically, these partner country schemes make use of the same referral committee and the guidelines as used for the New Zealand ORS.

The countries also differ in how much support they have agreed for patients to be provided through the ORS, for example:

- patient escorts (required for all children) – some countries, for example, Vanuatu and Kiribati, have a policy of providing funds for an escort for patients from outer islands, who may need support for the flights and during their time in New Zealand;

- international air travel – some governments have chosen to pay for flights for referred patients (i.e. Tonga and, in most cases, Fiji) so as to free up ORS funds for more patients, whereas the flights for patients referred from other countries are funded out of their ORS budget; and
- accommodation – Tonga usually requires its referred patients to stay with relatives in Auckland, where patients from other countries are typically accommodated in a hotel, arranged by the MSC and funded out of the ORS budget.

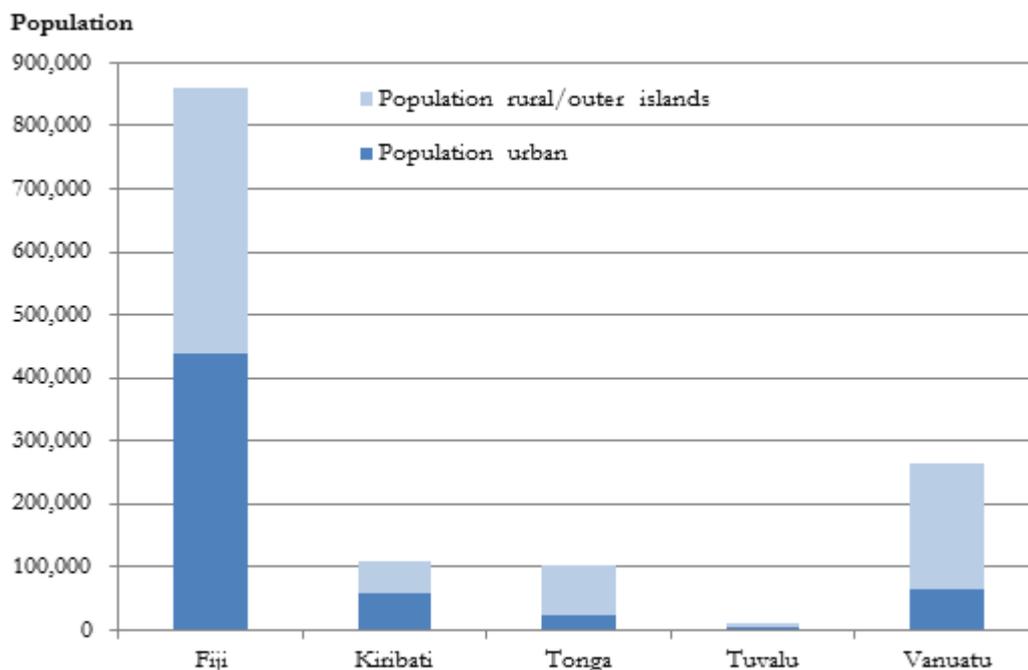
1.3 Context

1.3.1 Varying health needs and priorities...

The five countries participating in the NZMTS vary in size, economic circumstances, health systems capacity and population health outcomes. Figure 3 shows that they range in size from Fiji with a population of almost 860,000 to Tuvalu with just under 11,000 people.

In terms of population distribution, Tonga and Vanuatu have the highest proportions of their population living outside of urban areas – approximately three-quarters of the population in these countries live in rural areas or outer islands. For Fiji, Kiribati and Tuvalu, the proportion is approximately one-half.

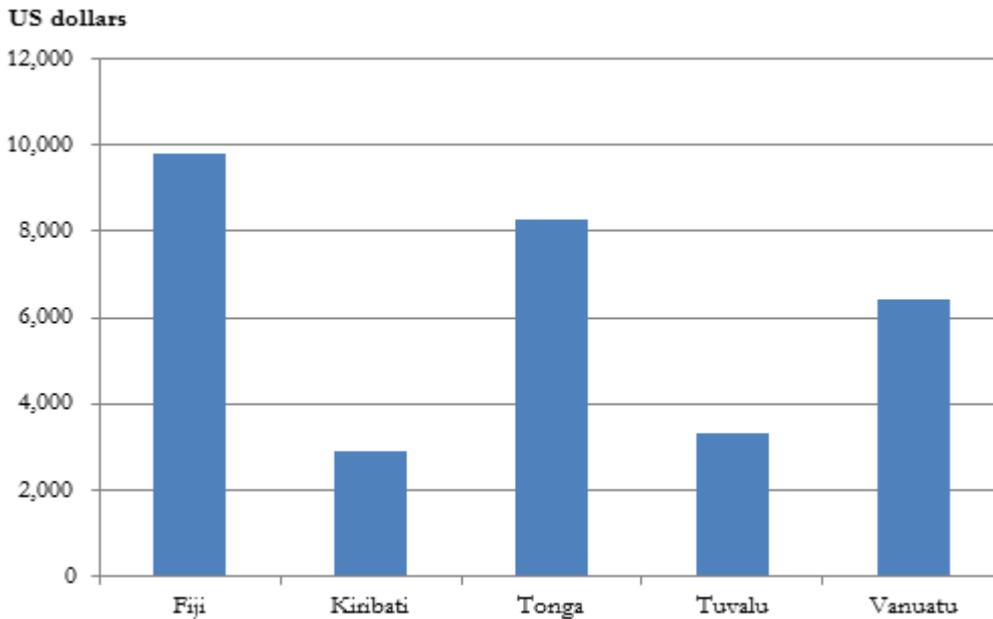
Figure 3: Population, by partner country



Source: Derived from SPC NMDI database

In terms of income, Fiji and Tonga have the highest GDP per employed person, being \$9,800 and \$8,250, respectively, on a US dollar basis – as shown in Figure 4. GDP per employed person is much lower in Tuvalu (\$3,330) and Kiribati (\$2,910).

Figure 4: GDP per employed person, by partner country



Source: SPC NMDI database

In terms of health outcomes, the indicators set out in Table 1 show that Kiribati has the highest rates of mortality for children aged under five years, and the highest maternal mortality rate by an order of magnitude compared with the other partner countries.

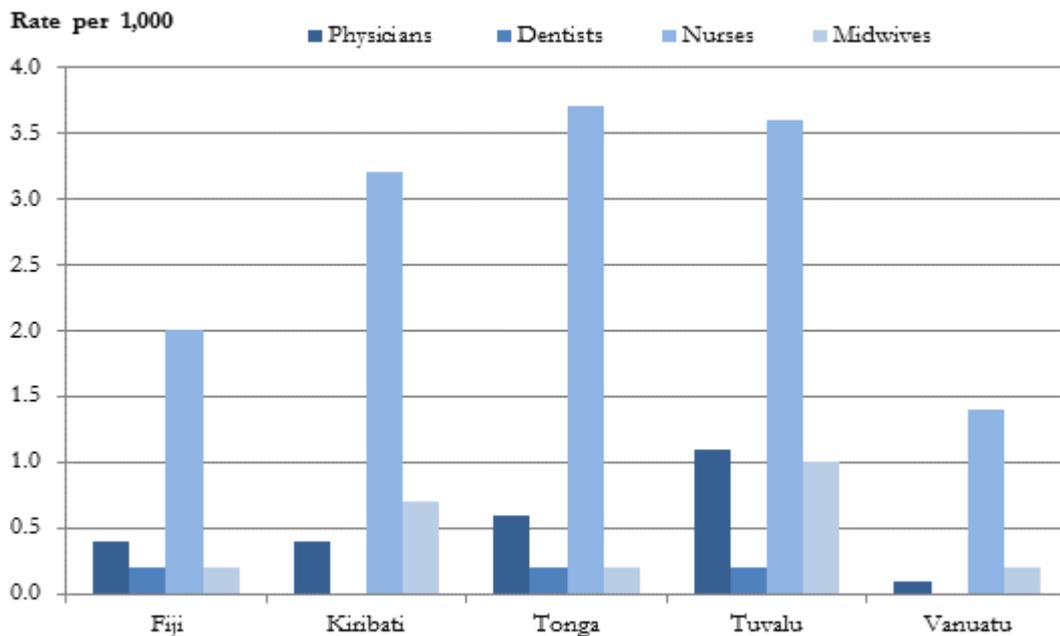
Table 1: Health outcomes, by country

	Fiji	Kiribati	Tonga	Tuvalu	Vanuatu
Under 5 mortality rate (per 1,000 live births)	17.7	47	22.4	10.3	24
Maternal mortality rate (per 100,000 live births)	22.6	215	37.1	No data	86
Prevalence of diabetes (per 1,000 population aged 25-64)	12.9	20	17.5	No data	21

Source: SPC NMDI database

The health systems in these countries vary in their capacity – Figure 5 shows health workers per capita. Vanuatu has the lowest proportion of physicians and nurses.

Figure 5: Health workers per 1,000 of population, by partner country



Source: SPC NMDI database

1.3.2 ...but some shared challenges

The above data suggest that the population health needs and priorities vary across each country, as do priorities for health systems support and capacity development. In addition, the small population base of Tuvalu and the limited health workforce in Vanuatu, suggest that their absorption capacity requires consideration in terms of the size and shape of donor support. Countries with large proportions of people in outer islands also face challenges in delivering health services to their population.

NZMTS partner countries also face some shared challenges with respect to health systems capacity. As with most Pacific island countries, they are constrained in their ability to provide tertiary health care services to their population. This is due to a number of factors:

- their health systems lack the medical infrastructure and human capital to provide specialised health services;
- small populations mean that specialists would lack the necessary caseload (both to retain their skills and to provide sufficient economies of scale to justify the services); and
- there is a lack of hospital facilities, equipment and medical supplies, as well as challenges in maintenance and stock control.

With respect to workforce constraints:

- there is a lack of medical specialists in Pacific Islands, and local medical staff lack adequate qualifications and experience to perform more complex procedures;
- similarly, there is a lack of adequately trained allied health professionals to support complex procedures, as well as diagnosis and post-operative care; and

- skilled staff are highly mobile, internally and internationally, and difficult to retain.¹

1.3.3 Other donor support

New Zealand provides a range of other support for regional health sector initiatives in the Pacific. Much of this support is focused on primary care and preventative health programmes, such as community education and health promotion, child immunisation, and management of non-communicable diseases (NCDs). However, other clinical treatment initiatives are funded in addition to the NZMTS (such as sight restoration treatments), as well as health systems strengthening, including support for laboratory systems.

The other key donor initiatives in tertiary health care are Strengthening Specialised Clinical Services in the Pacific (SSCSiP), and specialist visits provided through the Royal Australasian College of Surgeons (RACS) Pacific Islands Program (PIP). These are both funded by Australian Aid. SSCSiP is based at the Fiji School of Medicine in Suva and is focused on:

- supporting Pacific Island countries to plan for, access, host and evaluate specialised clinical services, and
- strengthening health worker skills, capacity and capability to meet clinical service needs.²

Visiting clinical teams managed by RACS provide services across nine surgical and 10 medical specialties. They also provide capacity building to local medical staff.³

A range of other organisations also provide support for specialist treatment in NZMTS partner countries, such as the Fred Hollows Foundation, and Orthopaedic Outreach (members of the Australian Orthopaedic Association who volunteer their clinical services in the Pacific).⁴ In addition, a number of Australian and New Zealand hospitals provide clinical attachments for clinicians from Pacific island countries.

¹ No author (2004) Report on a review of NZAID's Medical Treatment Scheme to Pacific Island countries; Irava, Wayne; Shyamajanaka Mahalakanda and Ronesh Prased (undated) *A situational analysis and assessment of the Overseas Patient Referral Systems in four Pacific Island countries*. Report funded by the Australian Department of Foreign Affairs and Trade through SSCSiP.

² <http://sscsip.org/about-us/>. Accessed 27.1.15.

³ <http://www.surgeons.org/for-the-public/racs-global-health/pacific-island-countries/>. Accessed 27.1.15.

⁴ <http://www.orthoreach.org.au/>. Accessed 27.1.15.

2. Evaluation purpose and design

2.1 Evaluation purpose

The purpose of this evaluation was to provide an assessment of the NZMTS to inform a new design/implementation phase. The evaluation was intended to:

- assess the current effectiveness of the NZMTS in meeting its intended outcomes; and
- provide recommendations to improve the focus, efficiency, effectiveness and value of the NZMTS in any future phases(s).

2.2 Evaluation objectives

The research objectives were two-fold:

14. Assess the relevance, effectiveness, efficiency (including value for money), impact and sustainability of the NZMTS. The specific research questions against the OECD DAC Evaluation Quality Standards for Development Evaluation (DAC criteria) are outlined in detail in Table 2, below.
15. Based on the findings of Objective 1, provide recommendations on:
 - (a) priority areas for further assistance in this space (if any) and the potential benefits of a further phase of New Zealand Aid Programme support; and
 - (b) whether and how to revise or reinforce programme design, scope, scale, outputs, focal areas, resourcing, duration and programme implementation (taking into account the DAC criteria, cost effectiveness and value for money) for any future phase of support.

2.3 Scope

This evaluation has taken account of the NZMTS across all participating countries since the commencement of the current phase (1 August 2011). It also looked at how this model compares to other models of support used across the Pacific region.

2.4 Detailed evaluation questions

The following table sets out the detailed evaluation questions, from the Terms of Reference for this evaluation, and incorporating subsequent changes and additions.

Table 2: Detailed evaluation questions

Criterion being assessed	Specific questions
<p>Relevance: To assess the extent to which the NZMTS in the participating countries meets a development need in the participating countries and across the region</p>	<ul style="list-style-type: none"> a. To what extent is the Activity aligned with the health priorities and needs of participating countries? b. To what extent is the Activity aligned to the priorities and needs of the New Zealand Aid Programme?
<p>Effectiveness: To assess the extent to which the intended results of the NZMTS are being achieved and identify any unintended consequences/results of the NZMTS</p>	<ul style="list-style-type: none"> a. To what extent have the NZMTS objectives been achieved/are they likely to be achieved? b. To what extent have results been documented and shared? c. What factors are constraining the achievement of the intended objectives/outputs, and how they might be overcome? d. How effective are the Overseas Referral Scheme and the Visiting Medical Specialists services in-country? e. What are the challenges for accessing the services? f. To what extent has the relationship between the MSC and in-country stakeholders been effective /ineffective in terms of the delivery of services (including referral processes, review bodies etc.)?
<p>Efficiency and value for money: To assess how efficiently resources were converted into results</p>	<ul style="list-style-type: none"> a. Analyse and compare the different approaches taken to coordinate the NZMTS in each of the countries involved and identify strengths of these schemes which may be applicable across other country settings now or influence future activity planning. b. How well are the resources being used to achieve results (e.g. value for money)? How efficiently has the Activity been implemented? c. Identify similar schemes and activities occurring within the region and identify strengths and limitations of these schemes which may be used to inform the NZMTS now or in the future. d. Have programmes under this activity been implemented in the most efficient way compared to alternative tertiary care interventions? e. Are there any issues or constraints affecting the efficiency of the NZMTS Activity in the five countries, and how may these be addressed?
<p>Sustainability: To assess the sustainability of the Activity and likelihood of ongoing need in the participating countries</p>	<ul style="list-style-type: none"> a. To what extent are the benefits of the Activity likely to continue in each country should New Zealand Aid Programme funding cease? To what extent does the NZMTS promote sustainability in terms of capacity development (workforce development) and patient health outcomes? b. Are there any issues or constraints affecting the sustainability of the NZMTS Activity in the five countries, and how may these be addressed?
<p>Impact: To assess the long term changes/effects resulting from the NZMTS, both positive and, where relevant negative, intended and unintended consequences. This is in relation to the goal of the Activity in the Results Framework</p>	<ul style="list-style-type: none"> a. To what extent has the Visiting Medical Specialists and the Overseas Referral Scheme impacted the five countries (long/short term positive and negative changes)? b. How has this Activity impacted on the capacity and capability of in-country clinicians, each of the countries health sectors, and the overall access to specialists' services for the citizens?

2.5 Cross-cutting issues

The qualitative analysis sought to address cross-cutting issues by including interview prompts that explored:

- how the participation and needs of women and girls have been considered in the NZMTS design and planning stages;
- the representation of women and people with disabilities or other vulnerable groups in NZMTS governance;
- how the capacity building components of the NZMTS have addressed the needs of female staff within participant country health systems;
- any unintended/adverse social or environmental effects of the NZMTS, and how these were anticipated and mitigated; and
- the extent to which access to medical services under the NZMTS has been based on genuine medical need, and whether priorities have been assessed impartially and equitably against the criteria.

To the extent that data allowed, our quantitative analysis sought to look at access of services by gender, age, location (e.g. patients from remote/rural areas such as outer islands), socio-economic status and by patients with pre-existing disabilities/co-morbidities.

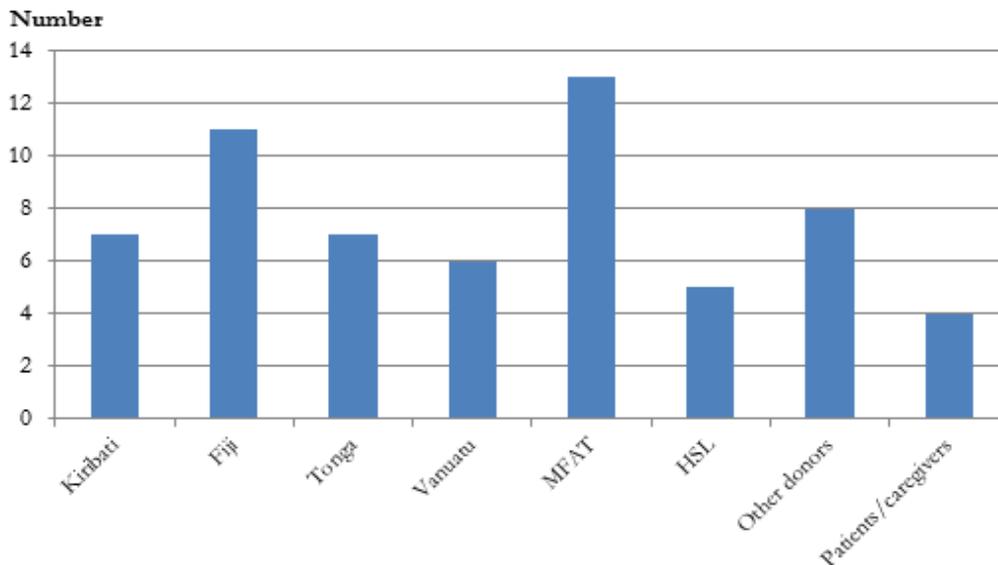
2.6 Evaluation design

Our approach comprised the following elements.

- **Desk-based research**, including a review of relevant programme documents, a sample of visit reports completed by visiting medical specialists, and published literature.
- **Quantitative information gathering and data analysis** that sought to assess performance against the indicators set out in the Management Services Contract, compared to a baseline of data as presented in the 2010 Evaluation.⁵
- **Qualitative information gathering** that included semi-structured interviews with 61 stakeholders in New Zealand and in the participating countries. Our general interview questions are set out in the *Evaluation plan*. We were able to visit four of the five partner countries, and conducted a ‘deep dive’ in two countries to obtain greater depth through larger numbers of interviews. Unfortunately, our planned visit to Tuvalu did not proceed due to a last minute flight cancellation. We instead sought telephone interviews with the stakeholders with whom we had scheduled interviews, though were unable to undertake any of these. The following chart shows the number of interviewees by partner country/organisation. MFAT Posts are categorised under ‘MFAT’.
- **Analysis and recommendations**. This involved triangulating the findings from the qualitative and quantitative information sources, then formulating our analysis and developing our recommendations.

⁵ Dianne Hendey (2010) *A desk review of the New Zealand Medical Treatment Scheme (Overseas Referrals Scheme and Visiting Medical Specialists Scheme) 1 December 2005-31 December 2009*.

Figure 6: Number of interviewees



2.6.1 Expert input and review

Dr Teuila Percival, Consultant Paediatrician and Director Pacific Health at the University of Auckland, provided independent, expert clinical advice to the evaluation team on our draft analysis and recommendations.

2.6.2 Caveats and limitations

There are a number of caveats and limitations to the analysis we were able to undertake:

- baseline data were unavailable for a number of the results indicators;
- data were unavailable for a number of the results indicators. Measures of patient outcomes and capacity development (outputs and impacts) are particular gaps; and
- the gathering of stakeholder views from Tuvalu was hampered by being unable to visit Tuvalu in person or to meet with Tuvalu Post in Suva, and also by a concurrent approach from MFAT (a subset of our interview questions was sent to key in-country stakeholders as a written questionnaire). The written responses provided were not able to be used and may have inhibited our direct engagement with in-country stakeholders. We were unable to conduct interviews with in-country stakeholders.

3. Overarching findings

3.1 Relevance

To what extent is the Activity aligned with the health priorities and needs of participating countries?

The stated health sector priorities of the five partner countries are presented in the following table. Not surprisingly, given the limited tertiary care capacity of these countries, the focus is predominantly on preventative, primary and secondary level health care services.

Table 3: Partner country health priorities

Country	Health priorities
Fiji	<ul style="list-style-type: none"> • Reduced burden of NCDs • Begin to reverse spread of HIV/AIDS and preventing, controlling or eliminating other communicable diseases • Improved family health and reduced maternal morbidity and mortality • Improved child health and reduced child morbidity and mortality • Improved adolescent health and reduced adolescent morbidity and mortality • Improved mental health care • Improved environmental health through safe water and sanitation
Kiribati	<ul style="list-style-type: none"> • Population growth • Maternal morbidity and mortality • Child morbidity and mortality • Communicable diseases • NCDs • Health service delivery • Gender-based violence and youth issues
Tonga	<ul style="list-style-type: none"> • Improved health of the people, by promoting healthy lifestyle choices with particular focus on addressing NCDs and providing quality, effective and sustainable health services
Tuvalu	<ul style="list-style-type: none"> • Ensure legislative and budgetary support for efficient and effective health services for the people of Tuvalu • Provide high quality and cost effective management of health services • Improve the quality and cost effectiveness of secondary health services • Ensure equitable access to appropriate sustainable and quality primary, curative and preventative health services
Vanuatu	<ul style="list-style-type: none"> • Improve the health status of the population • Ensure equitable access to health services at all levels of services • Improve the quality of services delivered at all levels • Promote good management and the effective and efficient use of resources.

Sources: Fiji Ministry of Health *Annual report 2013*; Kiribati *Health strategic plan 2012-2015*; Tonga Strategic development framework 2011-2014; Tuvalu Ministry of Health *Strategic health plan 2009-2018*; Vanuatu *Health sector strategy 2010-2016*.

The quantitative evidence set out in Appendix 3 shows that the NZMTS has met the clinical needs of patients, by successfully providing tertiary-level medical services that cannot be delivered in-country and may not otherwise have been funded.

These findings were supported by the qualitative evidence. We heard from stakeholders in-country that the medical treatment provided by the NZMTS addresses specific clinical needs of patients that are unable to be provided by the partner countries. Eleven interviewees from partner countries stated that the NZMTS (in particular the ORS) meets a gap that cannot be met in-country and three made the point that the partner countries will never have the caseload to justify having some specialties in-country. With respect to the VMS, seven interviewees from partner countries stated that they request the VMS specialties; though one was of the view that they do not get to choose the specialties.

In terms of the VMS, the NZMTS has aligned with partner country needs and priorities by having the flexibility to respond to requests from countries as to which specialties they would like visits from. However, we found evidence of scope for better engagement and communication around needs and priorities, between the MSC and Kiribati, Vanuatu and Tuvalu. The flexibility of the NZMTS has, to date, allowed the MSC to suggest capacity development activities that they think would be of benefit to the participating countries.

To what extent is the Activity aligned to the priorities and needs of the New Zealand Aid Programme?

The New Zealand Aid Programme is driven by a focus on sustainable economic development (SED). The New Zealand Aid Programme considers good health to be an enabler of sustainable economic development. Without healthy men, women and children, a productive workforce and a strong economy are difficult to achieve. Priorities for New Zealand Aid Programme support in health are:

- ensuring health services are the highest quality possible;
- increasing access for all and building demand for health services;
- reducing the impact of global and regional health threats; and
- supporting countries to use their financial and human health resources more effectively.⁶

As noted above, much of New Zealand's support for regional health sector initiatives in the Pacific is focused on primary care and preventative health programmes.

The objective of the ORS is to increase opportunities for men, women and children to access secondary and tertiary treatment not normally available in their home country. Resource allocations or treatment decisions are therefore not driven by SED objectives. But by definition, this will imply a preference for children and those with good prognoses, as the lifetime health and other benefits (such as quality of life) for these people will be higher, three by indirectly contributing to SED benefits. Successful health outcomes will also have an indirect impact on economic development in participating countries, to the extent that patients are enabled to participate in the paid workforce or sustainable livelihood activities,

⁶ MFAT (2012) *New Zealand Aid Programme sector priorities 2012-2015*, p.24.

to an extent that they otherwise would not have. The evidence on long-term patient health outcomes that would inform such an assessment is not available.

MFAT stakeholders were asked for their views on the relevance of the NZMTS within the wider New Zealand Aid Programme, and expressed mixed views. For some of the bilateral programmes, health is not a priority, but the NZMTS was nevertheless seen to contribute positively towards New Zealand's foreign policy objectives and donor visibility.

3.2 Efficiency and value for money

Analyse and compare the different approaches taken to coordinate the NZMTS in each of the countries involved and identify strengths of these schemes which may be applicable across other country settings now or influence future activity planning.

The operation of the ORS is particularly strong in Tonga. Clinicians in Tonga coordinate directly with their counterparts in New Zealand in terms of confirming diagnoses and arranging for a clinician to accept a referred patient – in a way that does not occur in the other countries. This is due to the close relationship between Tonga and New Zealand and the fact that some Tonga clinicians have trained and worked in New Zealand. The benefit of this engagement around diagnosis and treatment contributes to the relatively high rate at which referrals through the Tongan scheme are accepted by the MSC (77% is the highest among partner countries, as can be seen in Table 8 on p.46).

The priorities of the less well-networked countries (Kiribati, Tuvalu and Vanuatu) could better communicated and supported through the introduction of a Pacific-based coordinator as an extension of the MSC's role. This role could be part-time and would require a clinician with sufficient seniority and knowledge of the local systems. This person could provide real-time feedback to the MSC on partner countries priorities and initiatives. However, funding for such a position would need to be traded off against other potential marginal resource uses, and would need to be discussed in partnership with the MSC and partner countries.

Four of the five participating countries have a patient coordinator, some of which were time-limited positions funded by SSCSiP. This is a designated (part-time) role assisting with the logistics of ORS referrals as well as programmes funded by other donors. They undertake the satisfaction surveys when ORS patients return home, and can play a role in tracking patients with respect to follow-up care. Having the patient coordinator brings efficiency benefits to the ORS, as they smooth the way for the patient, and in the case of Tonga, also for the referring clinicians (through the ORC process). Any future phase of the NZMTS would benefit if the countries could find the means to retain these coordinator roles.

**How well are the resources being used to achieve results (e.g. value for money)?
How efficiently has the Activity been implemented?**

With respect to the ORS, the MSC is tasked with managing considerable uncertainty around the cost of treatment. Medical expenses can be higher or lower than the upfront estimates given by tertiary service providers, often due to factors outside MSC control, for example:

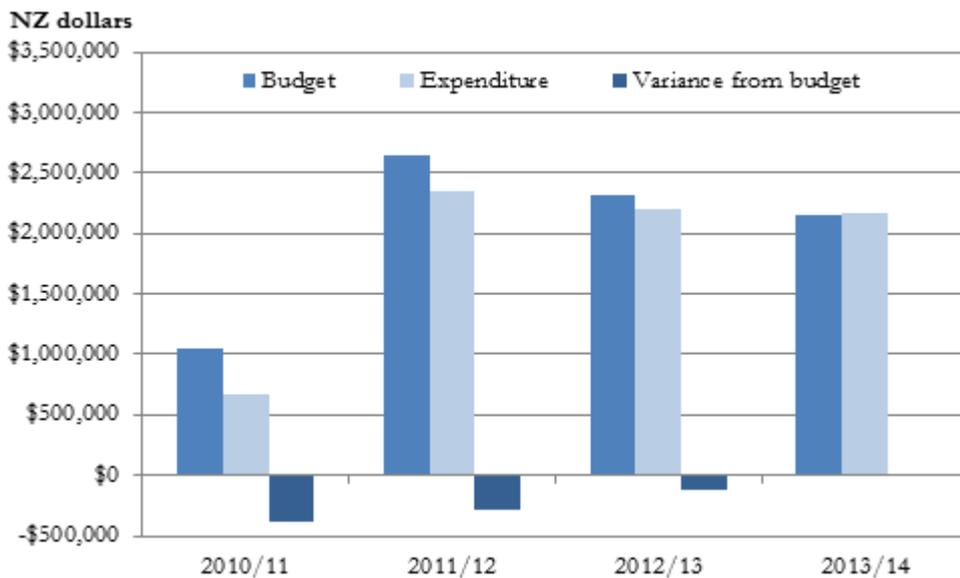
- under spending because the treatment was more successful than expected or a clinical judgment was made to discontinue treatment, or because an invoice for treatment near year-end has, until 2013/14, been required to be charged against the new fiscal year; and
- over spending because of undiagnosed comorbidities that required treatment or because of complications during or after treatment (e.g. post-operative bleeding or infection).

Over the evaluation period, the MSC appears to have had more success in managing this volatility, for example, through building trusted relationships with providers and getting a better feel for the timing and likely cost of treatments. In addition, for the 2013/14 year, MFAT has allowed the MSC to claim funds on the basis of the estimated cost being quoted by the provider in the last financial quarter, rather than charging full treatment cost against the following year. This reduction in the variance between budget and expenditure can be interpreted as a measure of improved efficiency in programme management – although the MSC has pointed to improvements in partner country capacity to triage and manage their patients as being a factor.

A comparison of actual expenditure against budget is shown in Figure 7 below. Of note is the pattern of declining underspends over the evaluation period. In the baseline year of 2010/11, the unspent funds of \$382k were equivalent to 36% of the budget. The level of underspend declined to \$284k in 2011/12 (11% of budget) and to \$128k in 2012/13 (6% of budget). In 2013/14, there was a small overspend of \$17k (0.8% of budget). We estimate that, over the three-year evaluation period, unspent funds have totaled \$395k – an amount sufficient for an additional 16 patients to have received treatment on an average cost basis.

A clear provision, across all five partner country budgets, for unspent funds to be carried over (within reason) to the new financial year will help to reduce the risk of unspent funds. The guiding principle should be that total expenses incurred are within the overall multi-year budget envelope for the NZMTS.

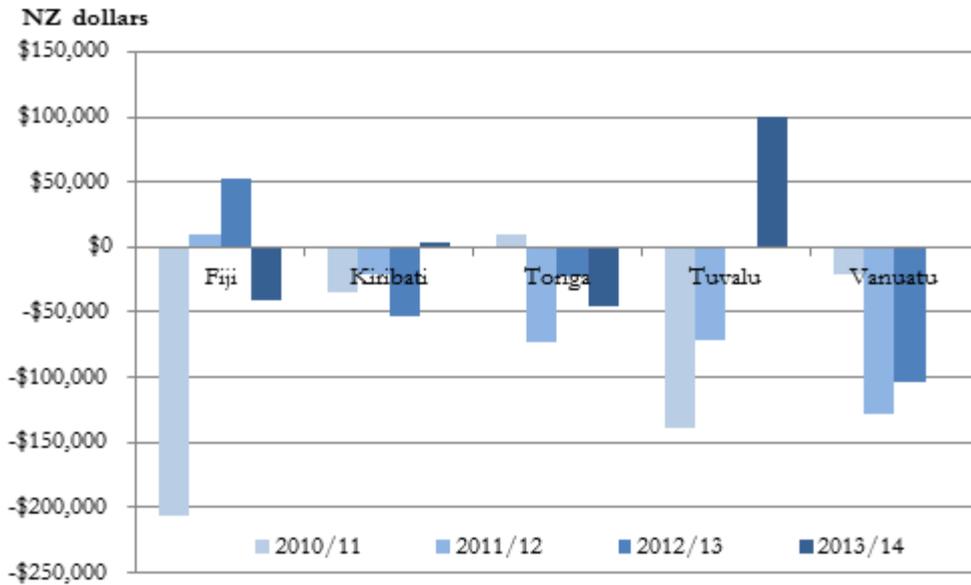
Figure 7: MTS expenditure against budget, 2010/11 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

Figure 8 shows that variance against budget at a country level. The largest unspent amounts tend to be earlier, in 2010/11 (\$206k for Fiji, \$138k for Tuvalu) and in 2011/12 (\$126k for Vanuatu). The unspent funds tend to be lower in the 2013/14 year, with expenditure being essentially on budget for Kiribati and Vanuatu and the underspends for Fiji (\$41k) and Tonga (\$45k) approximating the average cost of a referral (\$29k). It should be noted that Tuvalu had a large overspend in 2013/14 that was due to a high-cost accident case, where the additional expenditure was approved by the funder.

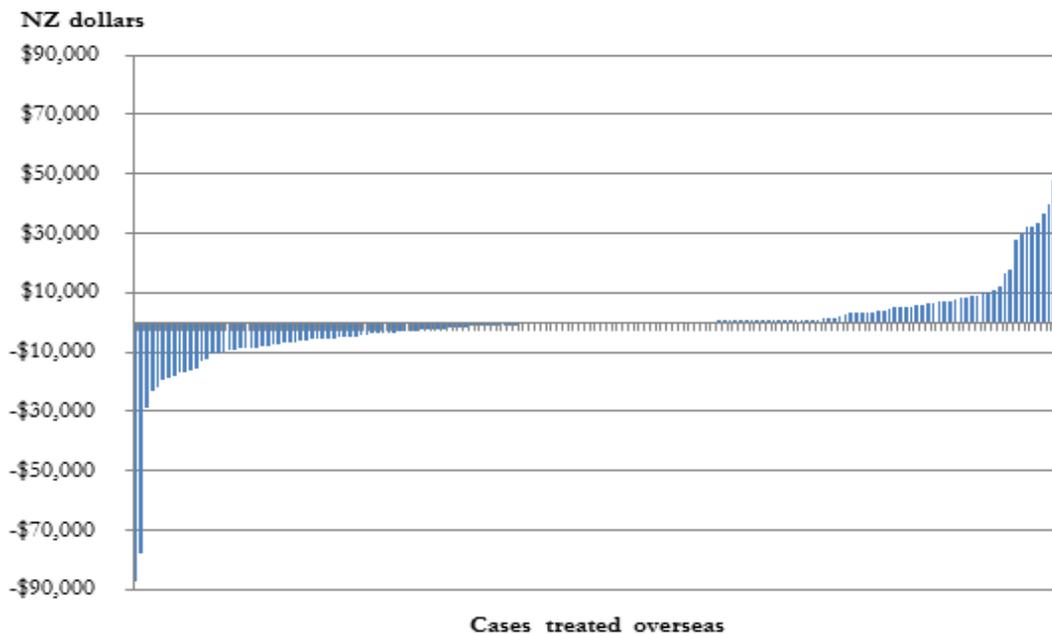
Figure 8: MTS variance from budget by country, 2010/11 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

Figure 9 presents the difference between medical expenses and the estimate for referred patients across 2011/12 to 2013/14. The probability of expenses being materially higher or lower than estimated is fairly high. Half (51%) of all cases had medical expenses that were at least +/- \$3,000 higher/lower than the estimate, with 22% being higher and 29% lower. On a proportionate basis, expenses in half (51%) of all cases were at least +/-16% relative to the prior estimate. This variance illustrates the challenge of managing risk across five separate schemes, and points some roll-over of minor under/over-spending as being sensible.

Figure 9: ORS medical expenses – variance from estimate, 2011/12 - 2013/14



In order to assess value for money, it is also important to consider the full economic costs of the NZMTS, not just the direct financial costs, but wider costs borne by other stakeholders, such as the visiting specialist teams and health systems in partner countries.

Within the VMS, visiting teams are essentially providing their services through goodwill. Clinical staff forming the visiting teams typically take annual leave, and receive an allowance – a per diem that covers in-country expenses but does not reflect the opportunity cost of their time. In considering the economic cost of this time, we note the following points:

- factoring in the likely average salary for experienced clinical staff, and the typical number of visits (solo and team) per year, we estimate that the value of the time spent by visiting clinical staff would be worth at least \$136k per annum to the NZMTS;
- this estimate is equivalent to 10% of the annual budget of the NZMTS; and
- this estimate would represent a minimum additional cost to the NZMTS if the services provided by the visiting team were instead contracted for on a commercial basis (in reality the cost of securing such locum type services is likely to be much higher due to the relatively scarcity of clinical staff with these skills).⁷

The essentially pro bono nature of the VMS services is important to bear in mind when considering potential changes to the NZMTS. For example, although there is some desire from partner countries for VMS visits to be longer in duration – so as to enable fuller capacity development benefits – taking an additional week of annual leave may be beyond what can be expected from members of the visiting medical teams. Similarly, responding to the requests for more attachments requires consideration of the additional time and effort that would be required on the part of New Zealand clinicians.

There are also costs borne by partner country health systems. Two of our interviewees commented on the need to provide translation services for VMSs. There is also the need for partner countries to schedule patients/clinics (for VMSs) and undertake logistical arrangements for ORS patients. In the case of Tonga in particular, local clinicians undertake much of the preparatory ground work for referrals, which reduces the cost burden that would otherwise fall on HSL.

As noted in a recent SSCSiP report, caretakers who accompany ORS patients may forego earnings (if in paid employment) and potentially their role as household breadwinner (whether in paid employment or in subsistence activities). Similarly there is an opportunity cost of medical escort time, as this person is temporarily taken out of active duty in-country.

Identify similar schemes and activities occurring within the region and identify strengths and limitations of these schemes which may be used to inform the NZMTS now or in the future.

There are useful lessons from the Samoa Institutional Linkage Programme (ILP), a peer-to-peer partnership arrangement between Counties Manukau District Health Board (CMDHB) and the Samoan National Health Service (NHS), funded by the New Zealand Aid Programme. The ILP has a strong focus on capacity development support, at the

⁷ We assume 30 visits per year of five working days with a senior medical officer being present for the duration of each visit. We conservatively assume that a registered nurse would be present for 17 of those visits. We use pay scales for senior roles derived from the Multi-Employer Collective Agreements in place for senior medical officers and registered nurses.

governance, management and clinical levels. There is scope for the NZMTS to take a more structured approach to capacity development, and to expand this beyond the largely clinical focus it has had to date – to non-surgical staff and also potentially management support. Tonga and Fiji would be candidates for this shift in emphasis, given the relative maturity of their health systems, and the views expressed in-country regarding potential future support.

SSCSiP plays a co-ordination role in the region, such as assisting partner countries with scheduling VMS visits across donors and providing funding for ORS patient coordinators. The programme also supports the development of health workforce development planning. NZMTS planning needs to be aware of these activities to avoid duplication of effort and minimise the effort required by countries to coordinate VMS visits. We recommend that capacity development delivered through the NZMTS be aligned with workforce plans of partner countries, to maximise the efficiency and relevance of these activities.

Four of the five partner countries have their own in-country MTS for overseas referrals. We found qualitative evidence that the NZMTS has provided demonstration effects, in terms of the use and application of clinical criteria and the ORC process. Vanuatu has no local MTS, but as a result of the networks build up by the NZMTS, local clinicians have seen how to refer patients into Fiji.

As discussed below in 4.3, the in-country ORC procedures (for both the NZMTS and the in-country MTSs) are vulnerable to political interference. A 2011 evaluation of the Cook Islands MTS found that the visiting specialists scheme in that country was also subject to such pressures.⁸ And our evaluation of the Samoa ILP found that the referral criteria and decision-making processes for both the ORS under the New Zealand scheme and the local MTS were unclear.⁹

Given the susceptibility of local overseas referrals decision-making processes to political interference, we recommend that the role of an independent MSC that is able to provide clinical leadership and act as the final decision maker in the ORS should be continued. This will preserve the integrity of the scheme via strict and consistent application of referral criteria. This will ensure that funding continues to be well targeted and based on health need and ability to benefit from treatment. We heard from in-country stakeholders that the clinical leadership of the current MSC has also provided benefits by way of diagnostic support for clinicians in partner countries.

Have programmes under this activity been implemented in the most efficient way compared to alternative tertiary care interventions?

Fiji operates as a regional hub for diagnosis and in some cases treatment from the ‘feeder’ countries of Kiribati, Tuvalu and Vanuatu. This has cost efficiency benefits for the NZMTS, including keeping travel costs down, particularly for the northern countries. This arrangement should continue to be fostered, both from the perspective of efficiency and for the continued development of the regional health system.

⁸ Sonia Easterbook-Smith and Vaine Wichman (2011) *Report of the evaluation of the Cook Islands Medical/Health Specialist Visits Schemes* (MFAT: Wellington, New Zealand), p.14.

⁹ Gary Blick, Joanna Smith and Julie Artus (2014) *Evaluation of the Samoa Institutional Linkage Programme* (MFAT: Wellington, New Zealand), p.35.

Are there any issues or constraints affecting the efficiency of the NZMTS Activity in the five countries, and how may these be addressed?

Efficiency is hampered by the contractual design, in two ways.

- The MSC had been unable to roll over underspends from one year into the next, although as noted earlier, for the 2013/14 year, MFAT has accepted the cost estimates in the last financial quarter ahead of invoices. As providers will not generate invoices until the treatment is completed and the MSC has not been able to claim treatment expenses where they overlap two fiscal years – setting up an incentive to underspend. This inflexibility does not account for the reality of the operating environment, where the timing and cost of treatment can suddenly change. Efficiency could be enhanced in any future phase of support by making provision within the contract for an MSC to carry over funds as long as total expenditure is within the approved budget over the multi-year contractual period.
- The management services contract requires the MSC to obtain three quotations for any referral that is not standard. This does not recognise there is a limited number of providers in New Zealand (Starship being the only tertiary paediatric provider) or (with respect to the current MSC) the working relationships that they have developed with the providers over time, that enable them to negotiate on price in exchange for volume guarantees. We therefore recommend that dropping this requirement from the contract for any future phase of support.

Another factor impacting on the efficiency of the NZMTS is the limited diagnostic capacity of some of the partner countries. This can mean that diagnosis is incomplete at the point the patient arrives in Fiji or New Zealand, and can necessitate further diagnostic procedures (at additional cost and time). This factor is systemic to these countries' health systems and outside the direct control of the MSC.

As noted above, clinical networks are more established in Tonga and Fiji compared to the participant countries. Our recommendation for improving these collegial relationships is covered in our suggestion regarding a Pacific-based MSC liaison role (see 5.3.2).

3.3 Effectiveness

To what extent have the NZMTS objectives been achieved/are they likely to be achieved?

The NZMTS objectives in terms of outputs and performance against targets have largely been met or exceeded. A total of 205 patients were treated under the ORS over the evaluation period. Annual numbers were either close or above the target number of 65 per annum and substantially higher than in the baseline year (24). The proportion of ORS patients who were female was slightly under target (48% compared to a target of 51%), with large variations by country. The proportion of ORS patients who were children aged 0-19 was 54% overall, compared to a target of 30%. Overall, 6,177 patients were seen in-country by visiting teams, over the evaluation period. The proportion of these patients who were female was 52% (compared to a target of 51%) and 39% were children aged 0-19 (compared to a target of 30%).

Performance against the quantitative targets in the results measurement table are presented in the following table.

Table 4: Results measurement - summary table for the NZMTS

Indicator	Target	Results
Long-term outcome: <i>Successful clinical outcomes for citizens unable to access specialist services</i>		
<ul style="list-style-type: none"> Survival rate at 5 years New innovative treatment programme 	<ul style="list-style-type: none"> 80% After 1 year evidence of innovative treatment programme implemented 	No data provided to the review
Medium-term outcome (ORS): <i>Successful specialist treatment for citizens unable to access treatment in New Zealand, Australia and Fiji</i>		
<ul style="list-style-type: none"> Cost per patient per year 	<ul style="list-style-type: none"> \$25,000 	<ul style="list-style-type: none"> Baseline: \$26,400 2011/12: \$25,700 2012/13: \$29,500 2013/14: \$29,500 Evaluation period: \$28,000
<ul style="list-style-type: none"> % of referred patients complete appropriate treatment overseas 	<ul style="list-style-type: none"> 95% 	No data provided to the review; MSC has cited 100%
<ul style="list-style-type: none"> Number of patients treated by treatment type 	<ul style="list-style-type: none"> 65 patients minimum 	<ul style="list-style-type: none"> Baseline: 24 2011/12: 78 2012/13: 63 2013/14: 64
<ul style="list-style-type: none"> Discharge summaries show successful treatment 	<ul style="list-style-type: none"> Discharge summaries show success in 95% of cases 	No data provided to the review
<ul style="list-style-type: none"> Patient satisfaction with treatment 	<ul style="list-style-type: none"> 80% patient satisfaction with treatment 	Patients reporting themselves as being “extremely satisfied” with the care they received overseas: <ul style="list-style-type: none"> Feb 2012 - Aug 2012: 80% Sept 2012 - Jun 2014: 82%
Short-term outcome (ORS): <i>Patients accepted or declined</i>		
<ul style="list-style-type: none"> 100% of patients referred are provided with advice or treatment 	<ul style="list-style-type: none"> 100% of referrals have plan 	No data provided to the review
Output (ORS): <i>Referrals</i>		
<ul style="list-style-type: none"> Numbers of referral by country (disaggregated) per year and by treatment 	<ul style="list-style-type: none"> 49% male 51% female 30% children 10% outer islands 	Over evaluation period: <ul style="list-style-type: none"> 51% male 49% female 45% children (0-19 years) No data on outer islands
Medium-term outcomes (VMS): <i>Successful specialist clinical treatment in-country; and Increased capacity and capability of in-country clinicians (technical and clinical management)</i>		
<ul style="list-style-type: none"> Cost per team 	<ul style="list-style-type: none"> \$10,000 per team 	<ul style="list-style-type: none"> Baseline: \$4,200

Indicator	Target	Results
		<ul style="list-style-type: none"> • 2011/12: \$12,100 • 2012/13: \$11,100 • 2013/14: \$10,400
<ul style="list-style-type: none"> • Cost per patient 	<ul style="list-style-type: none"> • \$75 per patient 	<ul style="list-style-type: none"> • Baseline: \$178 • 2011/12: \$247 • 2012/13: \$124 • 2013/14: \$135
<ul style="list-style-type: none"> • Number of patients that complete assessment and treatment in-country per year (disaggregated, treatment type) 	<ul style="list-style-type: none"> • As many as can be accommodated during visit; 49% male, 51% female, 30% children, 10% outer islands 	Over evaluation period: <ul style="list-style-type: none"> • 48% male • 52% female • 39% children (0-19 years) • No data on outer islands
<ul style="list-style-type: none"> • Committee satisfaction with patient outcome 	<ul style="list-style-type: none"> • Country committee satisfaction survey 	No data provided to the review
<ul style="list-style-type: none"> • New technical skills can be implemented by in-country clinicians following visit • New clinical management protocols • Training pathways for identified clinicians • Satisfactory non-patient advice provided by HSL 	<ul style="list-style-type: none"> • 100% of planned new skills (confidence in in-country clinicians before and after) • 100% of planned new protocols and training pathways in place • 100% of advice requests satisfied 	No data provided to the review
Short-term outcome (VMS)		
<ul style="list-style-type: none"> • % of planned visits that occur • Quality of visits • Patient outcomes as planned • % of referrals successfully managed • % of Committee members participate in annual review 	<ul style="list-style-type: none"> • 100% • 100% reviewed as high quality • 100% • 100% • 100% 	No data provided to the review
Output (VMS)		
<ul style="list-style-type: none"> • # of Clinicians trained; # of training/teaching sessions; mentoring undertaken • VCS Plan (3 year and annual) • SCMS Development Plan • NZMTS Guidelines Finalised 	<ul style="list-style-type: none"> • As per SCMS Development Plan • Plans and Guidelines prepared and Published 	No data provided to the review

To what extent have results been documented and shared?

Many of the inputs and outputs have been well documented, but (as indicated in the above table) there are a number of gaps against the reporting requirements set out in the Management Services Contract. We recommend reviewing the indicators themselves before enhancements to measurement and reporting are discussed. In our view, the measures could be improved by:

- better specification, to ensure quantitative indicators have clear numerators and denominators, and qualitative indicators are more specific;
- ensuring that capacity development outputs (e.g. numbers of local staff trained/strengthened) include the gender and role of staff;
- investigating improved measures of capacity development impact such as staff retention, self-reported morale and satisfaction, evidence/observed skill level (e.g. via questionnaires on VMS training, and potentially longitudinal tracking of staff). These measures would need to be led from in-country, with support from the MSC; and
- more systematic and consistent recording of specialties and treatments.

We received requests for more country-specific reporting, which could be done by sending the relevant section of the Annual Report to each country. We also heard a request for cumulative and well as marginal reporting of results. We understand that the MSC has been sending monthly updates on spending, patient progress and visiting team plans, with a cumulative analysis being presented during annual visits. This suggests there is scope for these results to be more widely disseminated in-country and that the MSC could facilitate this by sending reports to the Permanent Secretary, Medical Superintendent, Chair of the ORC and MFAT Post; and taking additional hard copies for distribution when they visit.

What factors are constraining the achievement of the intended objectives/outputs, and how they might be overcome?

Achievement of successful patient outcomes in the medium-term is dependent on the provision of follow up care. This is more an issue for some procedures, where the risk of complications is higher (such as oncology and cardiac surgery). The provision of follow up care is outside the reach and mandate of the MSC and the scope of the NZMTS, but needs to be taken in to consideration in the assessment of whether or not the investment in treatment is worthwhile.

There are limited data on patient outcomes, which casts uncertainty on the medium-term effectiveness of treatments provided under the NZMTS. Attempts are being made in-country to better track patients. But given the inherent logistical challenges, the ability of partner countries to track the outcomes of patients, particularly those in outer islands, is not easily resolved and is largely beyond the scope of the NZMTS.

If MFAT wished to support such efforts, we suggest that work should focus on where the potential is greatest. A suggested starting point would be Tonga and Fiji, where capacity is higher, and possibly on local/urban patients in the first instance (moving to the outer islands over time), and leveraging off the patient coordinator roles. We note that SSCSiP is undertaking work on this issue, so if New Zealand was to consider providing support in this area, coordinated discussions with other donors, as well as partner countries, would be required.

How effective are the Overseas Referral Scheme and the Visiting Medical Specialists services in-country?

As noted above, the ORS and VMS components of the NZMTS have largely met or exceeded their stated targets, for which there are reported data. More detailed analysis of the outputs and impacts of the ORS and VMS is presented in Appendix 3. The ORS has provided unintended benefits by way of demonstration effects for local MTSs, and capacity development benefits for referring clinicians, which are noted below.

What are the challenges for accessing the services?

Patients face some challenges in accessing ORS services: distance to travel; the cost of visas, passports and birth certificates; and language and knowledge barriers once in New Zealand. The cost of travel, as well as availability of accommodation in New Zealand, is a particular issue for patients from the outer islands.

However, these issues do not present barriers to eligibility as the criteria are based on and applied according to clinical need. Access to the NZMTS is facilitated by support provided in-country (via financial assistance with in-country travel and the cost of visas etc) – we found no evidence that people are missing out on treatment under the NZMTS due to inability to pay. Patients are also provided support once they arrive in New Zealand, including escorts and New Zealand-based translators/coordinators. The success of these measures is borne out in the results of the patient satisfaction surveys (refer detailed survey results in Appendix 4).

To what extent has the relationship between the MSC and in-country stakeholders been effective /ineffective in terms of the delivery of services (including referral processes, review bodies etc.)?

The MSC is widely held in high respect by in-country stakeholders. They have deeper clinically-based linkages in some countries (Tonga and Fiji). Their linkages in others such as Vanuatu and Kiribati are more at the health leader level (as required by the country visits within the contract). This may mean that they could be better attuned to system/training needs in some countries (this was evidenced in some interviews).

The MSC acts as a critical second ‘filter’ in the ORS approvals process. The qualitative evidence was unanimous that they rigorously apply the criteria. We found no evidence of patients being accepted for treatment under the NZMTS who did not meet the criteria.

As noted above, there is some room to improve the sharing of results with partner countries.

3.4 Impact

To what extent has the Visiting Medical Specialists and the Overseas Referral Scheme impacted the five countries (long/short term positive and negative changes)?

There are no data on whether the five-year survival rate for patients is being met. ORS patients have been provided with successful clinical treatment, though data on their medium- and long-term outcomes are scarce due to the limitations of in-country health information systems.

ORS patient satisfaction was high, with between 98% and 100% reporting that they were moderately or extremely satisfied (compared to a target of 80%). More detailed results from the ORS patient satisfaction surveys are provided in Appendix 4.

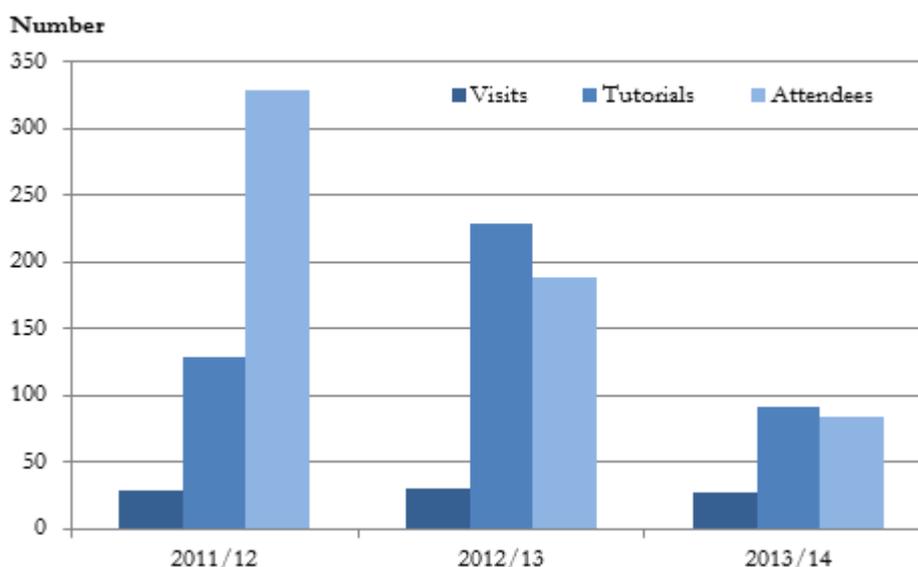
How has this Activity impacted on the capacity and capability of in-country clinicians, each of the countries health sectors, and the overall access to specialists' services for the citizens?

Visiting teams typically make time for capacity development activities in the form of tutorials and workshops, often held as part of the local Continuing Medical Education schedule. The number of training/teaching sessions and the number of clinicians trained are indicators in the results measurement framework, although no targets are specified in the Management Services Contract.

Figure 10 compares the number of tutorials across the NZMTS (i.e. teaching sessions or workshops) and attendees with the number of visits in each year of the evaluation period. It is notable that although the number of visits remained fairly constant, at between 27 and 30 teams per year, the number of tutorials and attendees tend to fluctuate. For example, there were 328 attendees in 2011/12 when 129 tutorials were delivered whereas there were 84 attendees in 2013/14 when 91 tutorials were delivered. This may mean that the number of attendees is partly determined by the target audience and type of tutorial, for example, events targeted at nurses may attract more participants, given they tend to be more numerous; similarly, larger seminar-type tutorials may attract more attendees than small-group tutorials. This means that data on tutorials and attendees should be considered alongside each other.

No data on the gender of attendees were available; this is a gap in the measurement of capacity building outputs that should be addressed in any future phase of the NZMTS.

Figure 10: Number of visiting teams, tutorial and attendees



Source: Data provided by Health Specialists Ltd; Sapere analysis

In-country, we heard a lot more about the types of capacity development provided by visiting teams and the impacts this has had on local staff. We were told by in-country stakeholders that capacity development has been provided in the following ways:

- access to networks of clinicians in New Zealand, who can be contacted for second opinions on diagnosis, and advice on treatment. These networks were described by one interviewee as being stronger for Tonga and Fiji – with other partner countries being more isolated;
- provision of locums;
- ward rounds;
- seminars/lectures;
- side-by-side working with clinicians, with
 - VMS leading (and counterpart watching)
 - counterpart leading (supervised by VMS)
 - VMS and counterpart working together;
- sponsoring the biannual Pacific surgeons’ conference; and
- attachments.

The impacts on staff reported by in-country stakeholders include:

- learning new skills and techniques, including procedures they couldn’t do before;
- improving/refreshing existing skill/procedures;
- building confidence, motivation and morale;
- expanding the range of specialties in-country;
- modifying systems; and
- building up skill levels in-country, allowing them to do more complex cases.

The criteria for whether the VMSs bring teams, and when and how clinical training should be provided are not documented. We understand these decisions are based on discussions between the MSC and partner countries. Ten interviewees stated that the VMSs sometimes bring teams with them, who may train clinical support staff such as nurses, anaesthetists and also registrars. Two interviewees stated that these capacity development benefits will continue, as they can now train up their own new or junior staff with the new skills.

There are some costs to local health systems associated with the VMS:

- three partner country interviewees noted that they undertake planning and organising for the VMS visits, including screening patients, scheduling cases (saving the most complex cases for the VMSs) and arranging clinics; and
- two interviewees mentioned that they need to translate for some visiting specialists but noted this was not a problem.

In our view, there is clear qualitative evidence of the capacity development impacts of VMS teams on local staff, including increased skill levels and staff confidence. There are clear examples of surgeons benefitting learning new techniques, in Tonga, Vanuatu and Fiji. There is some emerging evidence of nurses benefitting, such as neonatal nursing in Tonga, gynaecology in Kiribati and paediatrics and urology in Fiji. There is also a sense that there is more that could be done in this space, as surgeons need nursing support, otherwise the package of care can be undermined. There is also some qualitative evidence that the ORS process can also provide capacity development benefits around diagnosis. However, we note that measurement and recording of these outcomes by the MSC is not yet well developed.

In focus: capacity development by visiting teams

Emergency department

An emergency department (ED) team comprising registrars and consultants from Auckland Hospital came to Tonga to work with the emergency team. They reviewed and reorganized the triage system and provided training for doctors and nursing staff, including in the Intensive Care Unit (ICU). They developed divisional responsibilities and a set of standard procedures, which have been written down. The impacts for staff included:

- increased skill levels – non-medical staff are now handling high-level triage such as securing airway, monitoring breathing and controlling blood loss. Some nurses are now able to do intubation;
- the workplace is more organised and staff are more confident. And having more confident nurses helps relieve the pressure on doctors; and
- staff are able to pass on their new skills by training other new and junior staff.

In terms of the impacts on patients, we were told that *‘it’s still a long queue but it’s better than it used to be’*. There are broader challenges, such as late presentation and poor access to primary care which continue to place pressure on hospital emergency and outpatient services.

Oncology nurse

A VMS nurse provided training and helped arrange a week-long attachment to a New Zealand hospital for an oncology nurse. Prior to this training, the local nurse had limited understanding of pain management techniques, and was too scared to administer more than 20ml of morphine to patients. Through the training, she learnt how to administer opiates and chemotherapy drugs, and about palliative care. As a result, she is more confident in her role, and sees value in extending this training to the other nurses on the ward.

3.5 Sustainability

To what extent are the benefits of the Activity likely to continue in each country should New Zealand Aid Programme funding cease?

In terms of overseas referrals – by definition this is unlikely to lead to sustainability, as most of the countries are unlikely to ever develop these most of the tertiary services. This is due to resource constraints and insufficient caseload volumes.

It should be noted that several countries now fund their own schemes have a model to follow in the NZMTS (e.g. referrals committees, prioritisation criteria). These schemes often operate as a ‘release valve’ to fund politically-driven referrals that do not meet the NZMTS criteria. In this regard, they exist as a complement rather than a substitute for the NZMTS funding, which can be considered as ameliorating concerns that New Zealand support may be crowding out in-country funding. We also found both qualitative and quantitative evidence of significant unmet need, suggesting that if additional funding were to be provided through the NZMTS that it would continue to have a large positive impact.

In terms of the qualitative evidence, our interviews with in-country stakeholders revealed:

- a clear need for the diagnostic and treatment services provided in-country and in New Zealand – services that are not able to be provided in-country and which address health needs that may not otherwise be met; and
- a consensus among clinical staff in partner countries that unmet need exists for these services and that if more funds were to be available then cases with equivalent need could be treated (i.e. patients similar conditions and prognosis for health outcome).

In terms of the quantitative evidence, while some countries have had budget under-spends in some years, this is largely due to the inherent uncertainty around treatment costs, the timing of treatments, and the need to manage the financial risks within five country-specific budgets. We found no evidence that under spends are related to over-funding.

To what extent does the NZMTS promote sustainability in terms of capacity development (workforce development) and patient health outcomes?

There is qualitative evidence that surgeons have developed new techniques alongside visiting specialist and that these skills are embedded. More team-based approaches would help; as would expanding the focus on non-surgical specialties (e.g. medical and nursing) and, potentially, supporting health management skills. The advantages and disadvantages of this approach are discussed further in 5.3.2.

Are there any issues or constraints affecting the sustainability of the NZMTS Activity in the five countries, and how may these be addressed?

In Tuvalu – the latest annual report notes the VMS on hold for 2013/14 because of ongoing issues with MFAT and possibly the MSC. We were unable to get to the bottom of this story due to the cancellation of the country visit and a lack of engagement with Post. We recommend that if the NZMTS were to continue, MFAT considers consulting with Tuvalu stakeholders before any plans are developed, in order to fill the information gaps unable to be addressed in this evaluation and explore partner country priorities for any future phase of New Zealand support.

In Kiribati – health system leaders have considered their needs and requested for certainty over the funding of permanent roles clinician roles to assist with workforce development (e.g. overseeing a group of newly trained interns). This is discussed below, in 5.3.2.

3.6 Cross-cutting issues

3.6.1 Activity planning and governance

Women are represented in some countries' ORCs, but this appears to be a function of their existing role rather than deliberate strategies to represent the needs of women in the governance of the schemes. Women are well represented in governance and planning within the MSC.

Patient presentation drives participation, which is on basis of clinical need. The data show an equal gender balance for ORS and VMS patient. No data were available for VMS teams. ORC representation is by virtue of role but still see women represented in Tonga, Vanuatu and Tuvalu. Children are well represented in the ORS and VMS data.

3.6.2 Access to treatment services under the NZMTS

In terms of affordability, the NZMTS pays for visas and passports for ORS patients where countries deem it appropriate.

There is qualitative evidence of outer islands patients being represented in the ORS, but patients' domicile is not systematically recorded at present. This is a gap that could be addressed through a review of the results measurement framework.

Political interference does happen in ORS decisions, but in terms of the NZMTS this is well-filtered out by HSL. The ORCs try to be rigorous; their decision may be overturned but such referrals tend to be picked up by local funds (e.g. in Tonga, Kiribati, and Fiji).

3.6.3 The participation of women in capacity development

The proportion of women participating in capacity development is not being systematically recorded at present. The MSC was able to provide us with a list of women who had participated but not what proportion they comprised, and how this has changed year to year. This is a gap that should be rectified in any future phase of support.

Qualitative evidence shows that the participation of women in capacity development is driven by the workforce gender composition – that is, to the extent that VMS teams work with nurses and other non-surgical staff, more women will be reached due to the gender composition of these roles.

3.6.4 Unintended effects

We found no evidence of negative unintended effects of the NZMTS. We did hear of social disharmony in Kiribati due to the ORS per diem (allowance) being higher in Fiji. However we were also told that the decisions on whether to fund an allowance and what level the rate is set at, are taken by the partner countries themselves (not the NZMTS/MS).

We also heard of a sense of preferential treatment for those patients from Kiribati being sent to New Zealand relative to those referred to India. However, these decisions are also outside the scope of the MSC. Appendix 5 considers some of the issues raised by interviewees with respect to the referral of patients for overseas treatment in India.

4. Lessons learned

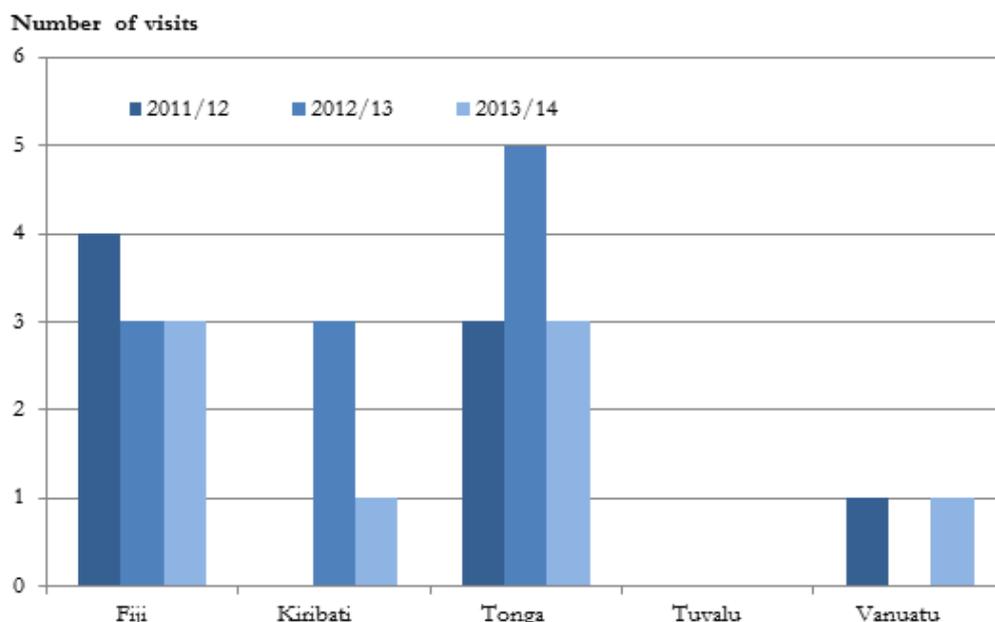
4.1 What’s worked well

In Tonga, we heard about the ORS referrals process and the work that has gone into making this process work efficiently and effectively. Critical success factors are:

- the composition of the ORC – membership excludes clinicians who have patients on the ward to guard against conflicts of interest;
- the ORC has clear processes, and uses the same criteria for both the NZMTS and the Tongan MTS;
- referring clinicians do ‘groundwork’ to support their applications (as discussed above), which means the referral received by the ORC has the supporting information; and
- the ORC is an institution that has been successfully maintained throughout several changes in leadership.

Four interviewees remarked on the importance of the same specialists returning in each visit, so the specialist can get to know the local context and local resource constraints and so trusted relationships can be built up over time. Visiting team data shows that approximately one-third of teams involve a specialist on a repeat visit, with 8 out of 29 visits (28%) being a repeat visit in 2011/12, 11 out of 30 (37%) in 2012/13, and 8 out of 27 (30%) in 2013/14. Figure 21 shows that Fiji and Tonga were most likely to have a visiting specialist on a repeat visit, with these countries generally hosting 3-5 returning specialists per year.

Figure 11: Number of specialists on a repeat visit by country, 2011/12 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

4.2 What's worked not so well, and why

Funding limitations was the main constraint on the achievement of NZMTS objectives expressed by in-country stakeholders, with eight partner country interviewees expressing the desire for additional funding for unmet clinical need. Three interviewees stated that the NZMTS budget has been static in nominal terms (therefore declining in real terms), which is placing pressure on the volume of services able to be funded. The rationales for the level of funding allocated to each country were not documented in the material made available to us, and the reasons suggested by MFAT stakeholders varied by country, reflecting the fact that these decisions are made within the bilateral funding allocations.

Follow up care was raised as an issue by seven interviewees. Partner countries described the challenges they face in tracking patients and ensuring they receive the necessary care following their treatment (such as continuing their medication and presenting for follow up treatments). This is particularly an issue for the ORS, and more specifically for patients from the outer islands, and the point was made that without the necessary follow up care, then patient outcomes cannot be assured. One interviewee referred to two recent cases where ORS patients had died after their return home, remarking that this undermines the effectiveness and value for money of the NZMTS. Interviewees explained that this problem is a systemic issue with the capacity and degree of development of health systems in-country.

One interviewee stated that follow up care is not a problem and one said that it has been an issue but is now improving. One explained that their desire to establish a central patient register has been hampered by a government IT decree regarding the collection/storage of personal data.

Six interviewees raised the issue of staff retention, in particular the difficulties attracting and retaining staff with local salaries. Ideas for ameliorating this problem included funding overseas attachments and funding a specialist position in-country. This is discussed in 5.3.2.

Five interviewees referred to the challenge of coordinating VMS visits across donors. A solution offered by SSCSIP is the compilation of an annual list of all VMS visits (across donors and countries). We were told that this has identified a scheduling clash which was subsequently resolved, but that there are practical difficulties in acquiring complete information from New Zealand.

The other key challenges that were mentioned in interviews are follows.

- Late presentation – three interviewees noted that patients in the Pacific typically present a lot later than would be the case in New Zealand. The implications for the NZMTS are that the conditions are more difficult and costly to treat, and the outcomes less certain.
- The capacity and quality of in-country diagnostics – two interviewees referred to limited diagnostic capacity in countries, particular those that refer to Fiji. This affects whether the patient can be treated under the NZMTS, and may be a factor driving the rate of referrals that are ultimately declined by the MSC. Poor diagnosis, or delayed preparations for international travel, can place pressure on the receiving system, as well as increase the time spent away from home (and thereby costs). However, one interviewee stated that the diagnostics from the sending country for their specialty has been '*spot on*'.

- Time is too short – one interviewee said that the time spent by VMSs in-country is too short for them to benefit from the capacity development opportunity; another made this point in reference to attachments, explaining that they need to be between six and 24 months (depending on clinical role) in order for skills transfer to be effective. One interviewee expressed frustration that they are not able to apply the new skills they have learned from VMSs due to the system constraints in-country.

4.3 Strengths and weaknesses

The following table summarises the critical success factors, and the challenges, identified in the preceding chapters.

Table 5: Strengths and weakness of the NZMTS

Systemic issues outside the direct control of the NZMTS are indicated with an asterisk (*).

Strengths and critical success factors	Challenges and weaknesses
<ul style="list-style-type: none"> • Strong clinical networks and relationships (particularly Tonga, Fiji) • Repeat visits by same VMS builds trusted relationships over time • VMS specialties provided has responded flexibly to partner country requests • Impartiality of ORC committee (no patients on the ward – Tonga) • Preparatory work by referring ORS clinicians streamlines ORC process and minimises decline rate (Tonga) • Patient-coordinator can play valuable role in ensuring timely and smooth process (e.g. Tonga) • Demonstration effect of NZMTS for local MTSs – application of criteria (Tonga, Kiribati) • MSC as final filter guards against politically-motivated referrals • Preparatory work ahead of VMS visits, with a focus on capacity development (Fiji) 	<ul style="list-style-type: none"> • Mixed awareness of ORS Guidelines and criteria • In-country co-ordination of VMS visits across donors • Length of VMS visits considered by some to be too short • Many of the indicators in the results measurement framework are not well specified or sufficiently meaningful, and data capture is not always possible; relatedly, reporting by the MSC is incomplete <hr/> <ul style="list-style-type: none"> • Late presentation* • Limited diagnostic capacity and capability (particularly Kiribati)* • Tracking patients and providing follow-up care to ensure good clinical outcomes (particularly an issue for outer islands)* • Recording/tracking of patient outcomes* • Attracting and retaining staff* • Rotation of nursing staff* • Timeliness of visa processing for urgent cases* • Political interference in ORC decision-making*

4.4 Transferable learnings

We identified the following learnings from the way the ORS and VMS operate in some countries that may be transferable to other countries.

- Referral committee composition – Tonga has determined that clinicians who are directly responsible for patient care should not be on the committee so as to avoid advocating for their own patients. Instead, the three-member committee has typically comprised the Medical Superintendent, as well as a pathologist and a radiologist.
- Preparatory work by referring ORS clinicians – in Tonga the referring clinician is required to liaise directly with their New Zealand counterpart, to secure an appointment time and pricing estimate. This helps streamline the ORC process. However it is reliant on the local clinicians' networks with their New Zealand counterparts; other partner countries with less well developed networks may not be readily able to adopt this approach at this point in time.
- Structured capacity development focus to VMS visits – for example some surgeons in Fiji collect up cases that are at the margin of their surgical ability and work on these with the visiting surgeon as a way to gain experience in a setting with the mentor and with experienced oversight; it is therefore not as much about throughput as skills development, so that these cases can be handled in-country in the future. Similarly, an emergency medicine team visiting Tonga focused on reviewing and improving the system of triage and patient flow within the emergency department. This led to nursing staff with increasing their skill levels to handle high-level triage (e.g. securing the airway, monitoring breathing, controlling blood loss) with some nurses handling intubation.

5. Conclusions

5.1 The case for future support

We found clear qualitative and quantitative evidence that the NZMTS is successfully meeting clinical needs that would otherwise go unmet. While other New Zealand support in these countries' health sectors is geared towards primary and preventative initiatives, the NZMTS focuses on a different set of patients. The NZMTS generally funds life-saving tertiary-level treatment for people that are unable to access these services due to the unavailability of these treatments in-country (and their inability to purchase the services directly). It results in direct and long-lasting benefits for these patients, compared to the more indirect population-based interventions provided in other types of interventions such as public health programmes.

The full range of tertiary services provided by the ORS will never be able to be provided in-country, due to system constraints and insufficient caseload to justify and maintain the suite of specialties required. The capacity development support provided through the VMS has been helping to improve the quality of care provided in-country, and extend the range of skills and specialties. There is potential to extend capacity development support in various ways, which are discussed below. We see scope to improve the strategic planning of capacity development, and recommend that any future support be aligned with partner countries' health workforce development plans, to ensure relevance and effectiveness.

5.2 The level of funding for any future phase

Considering the level of any future support requires arguments for and against to be weighed up. The case for increasing the level of support comprises the following elements:

- for several countries the base budgets have been held constant for several years several years. The purchasing power in the face of increases in the price of health care, with stakeholders in two countries commenting that funds do not stretch as far as before;
- it is not unusual for ORS funds to be fully used or allocated the third quarter of the financial year. This suggests unmet need and the ability to refer more patients under the referral Guidelines and criteria;
- two countries (Kiribati and Vanuatu) have recently received additional (top-up) funding to help respond to their levels of unmet health need; and
- based on the qualitative evidence, we would have some confidence that any additional funds allocated to ORS would be used in accordance with the objectives and eligibility Guidelines of the NZMTS.

As a counter view, a first-order consideration is that NZMTS funds are part of bilateral budgets; health is not a stated priority area in some arrangements and so consideration of prioritising unmet health need would need to be assessed against other priorities at the margin of the bilateral budget. Furthermore it must be recognised that some countries that have their own referral schemes and funds (Tonga, Fiji, Kiribati, and Tuvalu) and so consideration would need to be given as to whether there is a risk of substituting for partner country expenditure. However, as discussed above, we see a relatively low risk of crowding out, given the level of unmet need and the use of the in-country MTSs as a 'release valve' for funding politically-driven referrals.

5.3 Potential shape of any future support

5.3.1 Suggested refinements to the current NZMTS

Should a future phase of support be provided, we recommend the following refinements to assist more efficient and effective use of resources, and improve information flows to partner countries and to the funder to assist with real time decision making.

Refresh and promulgate MTS Guidelines and referral criteria

The rationale, objectives, goals and desired outcomes for the NZMTS are phrased differently among different key documents, for example, the MTS Guidelines, the MSC contract preamble, and the Programme Activity Authorities (PAAs). This can lead to different understandings (including within MFAT) of why the programme was established, what it is trying to achieve and how it fits with the overall goals and priorities of the New Zealand Aid Programme. It therefore makes sense to have one primary source (e.g. an Activity Design Document) and base all other documentation on that centrally-agreed logic and goals.

Given the patchy awareness in-country of the MTS guidelines and ORC criteria (in part due to in-country changes in roles and personnel), we recommend updating the guidelines to include advice on committee composition and record keeping. The MSC could keep working to raise awareness of the guidelines and criteria. We suggest that a simple, one-page version of the revised Guidelines, as well as the ORC criteria, should be promulgated to assist awareness, understanding and application.¹⁰

Improve results measurement and reporting

The number of areas where no data were available suggests that the reporting of results can be substantially improved. Some indicators could be made more relevant and some targets could be revised to be more realistic (e.g. average cost per patient seen in-country).

We recommend a review of the results measurement table to make it more fit for purpose for both practical data collection by the MSC, and accountability purposes (meeting the information needs of MFAT and partner countries). A particular area for development is the reporting on capacity development. We recommend that data are collected on capacity development activities (outputs) by gender and role/designation of in-country staff.¹¹ We also suggest investigating measures of capacity development impact such as staff retention, self-reported morale and satisfaction, observed skill level (e.g. via questionnaires on VMS training, with longitudinal tracking of staff, or annual self-report/supervisor surveys).

Other scope for improvement includes:

- better specification, to ensure quantitative indicators have clear numerators and denominators, and qualitative indicators are more specific; and
- more systematic and consistent recording of specialties and treatments.

¹⁰ We note that a similar recommendation was included in the 2004 review of the NZMTS.

¹¹ We note that a similar recommendation was included in the 2004 review of the NZMTS.

Enhance information sharing and Activity planning

Given the feedback from interviewees, there appears to be scope to improve the dissemination of results by the MSC to partner countries. As a low cost way of facilitating more widespread dissemination in-country, we suggest that the country-specific chapters of the annual report are provided both by email (to a wider distribution list, including the Permanent Secretary, the Medical Superintendent, the Chair of the ORC and MFAT Post), and also in hard copy at the time of the annual country visits by the MSC.

In addition, the MSC could look at in-year information flows to partner countries, such as periodic ORS 'pipeline' reports, and ensure they are made available to multiple key stakeholders – similar to the roles listed immediately above.

With respect to donor coordination, we suggest formalising the current information sharing arrangements with the RACS Pacific Island Program around the visiting specialists schedule and sharing these combined schedules with the funder and partner countries; also explaining this coordination story in annual reports.

Our report has highlighted significant gaps in information about the operation of the Tuvalu MTS. We recommend that a roundtable discussion between the partner country, the MSC and MFAT (Wellington and Post) be held, to address these information gaps and discuss the priorities for any future phase of support for Tuvalu.

Improve Activity management

On the MFAT side, the Activity is managed centrally from the regional health programme, but the country-level allocations are each determined within the bilateral teams. This spread of responsibilities means that the Activity Manager does not always have a clear 'line of sight' of the individual programmes of their financial management, and that the bilateral teams do not have direct engagement with the MSC.

The organisational structure within MFAT appears to have resulted in five different approaches to budget management – for example one bilateral team was comfortable with quarterly spending variances, provided the three-year total was not exceeded, whereas another team was anxious about quarterly budget variances. In addition, during the course of our financial analysis, we found that PAAs did not appear to be current for all partner countries (i.e. Fiji and Tuvalu).¹² We understand that retrospective approvals were being organised during the time of our evaluation.

In terms of assisting budgeting, MFAT could: (1) consistently confirm each country budgets at start of year; (2) confirm the ability to roll over unspent funds from a single year within each three-year funding period, and (3) make provision to allow some roll over of minor over-spending incurred in the final month a financial year. These latter two roll-over provisions address the fact that diagnosis and treatment costs are not always predictable and that treatment and invoicing can be delayed for legitimate reasons. These provisions could be set within limits, e.g. up to 10% of the annual budget or roughly equivalent to one month.

In terms of the MSC contract, some parts appear to be over-specified in terms of the number of objectives (7) and management outputs (approximately 44). Some management

¹² Our memo dated 1 August 2014 lays out these issues in some detail.

outputs could be merged or even removed, e.g. the requirement on the MSC to obtain three quotations for non-standard cases. Instead, given the limited choice of available tertiary providers, the contract should recognise that (a) in some cases there is only one provided in NZ (e.g. Starship Hospital) and (b) long-run relationships with treating clinicians matter (especially for complex or risky cases that the MTS tends to refer). The throughput offered by the MTS also informs MSC-provider discussions about price. Ideally, the objectives and management outputs should link to the refreshed results measurement table.

5.3.2 Being bolder – more ambitious enhancements

Ideas and requests from in-country stakeholders

In addition to requests for more funding, a common theme in interviews, expressed by eight interviewees, was the desire to expand VMS capacity development support beyond surgeons, to support staff – in particular nurses but also diagnostic staff (such as radiologists) and anaesthetists. Two partner country interviewees were of the view that capacity development should be the focus of future support, and two interviewees also suggested capacity development support at the administration/management level.

One interviewee stated that the key to sustainability is the strengthening of health systems, and one mentioned the need for on-going support in order to maintain the standard of professional ethics. Six partner country interviewees requested more overseas attachments for their staff.

The following ideas for different models of support were raised by interviewees in-country:

- three interviewees raised the concept of supporting Fiji evolving into more of a regional hub – over time taking more of the responsibility for treatment, training and clinical networking across the region, and also doing outreach/screening clinics in sending countries such as Tuvalu;
- one interviewee suggested that the NZMTS support a Pacific-based liaison person, to better represent the countries that are less well networked (i.e. Kiribati, Vanuatu and Tuvalu) and help ensure that the support that is delivered meets the needs and priorities of these countries; and
- one interviewee suggested that the Tongan and Fijian systems are now sufficiently mature that funding could evolve into direct bilateral funding to their health Ministries. This interviewee stressed that support should be co-funded, to encourage partner country commitment to health systems development and facilitate donor exit from capacity development in the longer term.

Subsequent to our field work, we received notification (via Post) of a formal request from the Government Kiribati to re-focus the NZMTS towards instead funding specialist positions in-country. The requested positions, which we were told would each cost \$87,000 per year, are:

- Obstetric and Gynecologist;
- Anesthetist;
- Internal Medicine;
- Paediatrician; and
- Radiologist.

A written request was received (via the bilateral team) from Tuvalu, for NZMTS funding for an anaesthesiologist (\$100k per year).

Analysis and recommendations

Fiji as a regional hub

As noted above, the current use of Fiji as a regional hub for diagnosis has cost efficiency benefits for the NZMTS. We recommend that this arrangement should continue to be fostered, both from the perspective of efficiency and for the continued development of the regional health system, in any future phase of support.

Evolution to budget support

We do not support the suggestion of direct budget support/reduced role for MSC with respect to overseas referrals from Fiji and Tonga, as in our view (based on the evidence discussed in earlier chapters), the systems in these countries are not sufficiently robust. We recommend that the role of an independent MSC, with clinical leadership, as final decision maker in the ORS should be continued – to preserve integrity of scheme via strict application of referral criteria. This will ensure that funding continues to be well targeted (based on need) and that these benefits continue.

Requests for funded specialist positions

In our view, while the requested specialist roles may bring benefits to the local health systems that might not otherwise occur, *prima facie*, funding in-country roles would not seem to be a natural fit with current NZMTS approach of (a) referring patients overseas for tertiary-level treatment and (b) sending New Zealand clinical staff to offer assessment, treatment and capacity building in-country. Nevertheless, these roles would represent a different channel for providing health system strengthening if they are focused on supporting the training of medical interns. We suggest these requests are discussed in depth as part of bilateral budget discussions.

Extending capacity development support

Capacity development support could be extended in a number of ways:

- explicitly enabling the provision of New Zealand-based capacity development support (principally by way of short-term attachments);
- further extending the focus beyond surgical roles; and
- expanding capacity development support to leadership and management.

Existing support for capacity development is focused on activities in-country. However, clinical networks between New Zealand and the partner countries could be strengthened by designating some resources for New Zealand-based capacity development – principally by enabling short-term attachments for partner country clinicians. These attachments could be facilitated and supported by VMS teams and coordinated through the MSC as part of a capacity development plan developed with the partner country.

As an example, rheumatic fever is a priority for Vanuatu, with cardiologists visiting each year. This support could be extended with a six-month placement for a Vanuatu physician in New Zealand with the goal of learning to undertake echocardiograms, followed by further training

under the supervision of the visiting specialists in subsequent years. This would require support from in-country system (e.g. provision of an echocardiogram machine) but would allow the local physician to undertake their own cardiological work while identifying complex cases for a second opinion. Another example might be oncology nurse training in Tonga and Fiji being supported by short-term placements to oncology units in New Zealand hospitals.

Any such attachments would not involve formal training through the specialist colleges, as the aim is not to secure registration to practice in New Zealand but to build capacity in Pacific partner countries. Pursuing this approach via the NZMTS could contribute towards building workforce capacity and should therefore be aligned with any partner country health workforce development plans, as well as regional approaches workforce development being developed by Australia as part of the next phase of SSCSiP.

The resourcing impost on New Zealand clinicians from these attachments would bear some consideration. It may be appropriate to consider some form of honoraria or per diem payments for the clinician or their employer. Given the limited funding available within the NZMTS, this may require additional funding and so would need to be considered against alternative uses of any marginal funding increase.

Feedback from a number of interviewees emphasised the value of capacity development support for non-surgical specialties, and also ensuring opportunities for nurses to benefit. While there are instances of this already occurring under the NZMTS, we see a case for continuing to expand capacity development support beyond surgical roles, via VMS teams and potentially via New Zealand-based support as well (as discussed above).

This can be done within the existing structure of the NZMTS, through in-country priority setting, and planning between the partner countries and the MSC. It would involve more team visits (including nurses and allied health professionals as well as surgeons) and potentially more repeat visits. A benefit of repeat visits is that trusted relationships can be built between clinical peers, which can be drawn on in-between visits, and which can benefit both parties. Drawback include the potential for skills transfer to stagnate over time (due to diminishing returns), and for inertia to develop in the range of specialties being supported. Should this option be pursued, we recommend that relevant indicators be incorporated into the results measurement framework.

It is important that capacity development contributes to building health workforce capability, and that support delivered through the NZMTS is aligned with the partner country's workforce development plan and ambitions. We note that a constraint to achieving the desired impact of capacity development is the turnover/rotation of staff, which has been an issue for nursing staff in some countries (e.g. Kiribati).

It was also suggested to us that capacity development support could be expanded to include management capacity support. Health sector management and administration is integral to the quality and delivery of health services, and capacity development and support in this area is a current gap. Some countries, such as Tonga and Fiji, already have relatively well-run management, administration and information systems. Others may benefit from targeted medium-term management capacity support along the lines of the management support that has been provided under the Samoa ILP.

The MSC could, over time, focus on fostering institutional linkages between clinical staff in partner countries and New Zealand hospital departments; this would involve enabling and empowering both parties to take more of a role in planning VMS capacity development activities. Ideally these peer-to-peer relationships would mature sufficiently to allow partner

country and New Zealand-based clinicians to decide details of visiting schedule (dates, activities and personnel) with post-visit reporting back to MSC. The MSC would still agree priorities with the partner country and take a governance role to ensure things run smoothly.

This evolution has the potential to enable for greater innovation in terms of what support is delivered and the way it is provided. In practical terms, it would involve the MSC contract providing permission for the MSC to indicate to clinicians in New Zealand and partner countries that innovative ideas for capacity development support can be proposed, and setting out broad parameters within which the MSC can approve funding being disbursed.

Suitable indicators would need to be included in the results measurement framework, so that the activities and impacts of such innovations are monitored and assessed. Indicators could cover the incidence of proposals submitted to the MSC, proportion approved/declined and potentially tailored measures of success. Contribution to the generic capacity development measures should also be assessed, via qualitative methods.

Consideration would need to be given as to whether New Zealand clinicians, who volunteer for the VMS, would be able to intensify their activities, or whether some funding would be required to cover the additional time commitment. We understand that, currently, emails, telephone calls and videoconferencing activity it is undertaken an informal way – often considered part of clinician responsibility /professional behaviour. If the move to greater self-coordination (along with reporting requirements) is not too onerous, then clinical teams may be able to continue to undertake these activities on a voluntary basis, but nevertheless, time commitments and per diem allowances should be looked at closely.

As with any other potential addition or expansion to the NZMTS, activity in this area may require additional funding. Given the competing medical priorities of the NZMTS, this element would need to be discussed with the leadership in partner countries, and potentially, ring-fenced to ensure it is directed towards the intended activities (i.e. not crowded out). If it is pursued, we suggest it is enabled by way of a variation to the MSC contract, to provide flexibility to the MSC to undertake a wider range of capacity development activities, depending on partner country priorities

Introducing a Pacific-based NZMTS liaison role

The links between New Zealand and countries such as Vanuatu and Kiribati have not been as strong as those with Fiji and Tonga, historically. This means there could be a case for local representatives being contracted to work with the MSC to support NZMTS activities in those countries. Ideally, this role would be filled by a person with a clinical background who is sufficiently experienced (e.g. a recently retired or part-time clinician), and able to identify health system needs in those countries and then link with the MSC to best meet those needs.

The advantages of this 'bridging role' would include: the MSC receiving real-time feedback on VMS visits and capacity development activities; and the partner-country health system having someone with institutional knowledge about referral processes and capacity development activities (valuable if there are frequent changes in health system leadership). The arrangement would be dependent on finding a suitable representative, but could be trialled on a short-term contract basis, to test its effectiveness and ensure the additional benefits are outweighed by the costs. The representative may need to visit New Zealand to meet with the MSC and to gain a New Zealand / donor perspective on the NZMTS.

The potential benefits and drawbacks of the two potential changes we proposed are summarised in the following table.

Table 6 Assessing potential future directions

	Benefits	Risks and drawbacks
Extending capacity development support	<ul style="list-style-type: none"> • Build capacity of wider range of staff and skills • Potential for greater innovation • Potential to contribute to wider health workforce development goals (if aligned with partner countries' plans and priorities) 	<ul style="list-style-type: none"> • Could displace other activities (primarily provision of clinical services) • May require additional funding, e.g. per diem payments for NZ-based clinicians to recognise pro bono contributions • Increased flexibility to MSC would need to be accompanied by clear accountabilities • Needs to be considered in context of other training support including support from other organisations (such as RACS), regional organisations (such as training institutions), donors and NGOs
Pacific-based NZMTS liaison role	<ul style="list-style-type: none"> • Improve understanding of and responsiveness to partner country needs and priorities • Potential for MSC to receive real time feedback on VMS and capacity development activities 	<ul style="list-style-type: none"> • May require additional funding • Pilot/monitoring required to ensure benefits justify the increased administrative costs

6. Recommendations

Priority areas for any further assistance and the potential benefits of a further phase of New Zealand Aid Programme support

1. There is a case for on-going funding for the NZMTS – given the evidence of unmet need and the fact that there will always be constraints and limits to the clinical services that are able to be provided in-country.
2. If the NZMTS is to continue, we recommend that MFAT considers consulting with Tuvalu stakeholders before any plans are developed, in order to fill the information gaps unable to be addressed in this evaluation and explore partner country priorities for any future phase of New Zealand support.
3. With respect to requests from Kiribati and Tuvalu for New Zealand support to fund specialist positions, we recommend that MFAT considers discussing these requests in the context of other partner country priorities as part of bilateral budget discussions.

How to revise or reinforce the NZMTS for any future phase of support

Planning and design

4. The role of an independent MSC that is able to provide clinical leadership and act as the final decision maker in the ORS should be continued – to preserve the integrity of the scheme via strict application of referral criteria. This will ensure that funding continues to be well targeted and based on health need and ability to benefit from treatment.
5. Given the vulnerability of the in-country MTSs to political interference, we do not support the suggestion that any future New Zealand support for a scheme such as the NZMTS could evolve into bilateral support for some countries.
6. For any future design, there should be a central document (e.g., an Activity Design Document) that states the rationale, goals and outcomes of the NZMTS and its fit with New Zealand Aid Programme objectives and priorities. All reporting should be consistent with framing of the NZMTS within this document.
 - (a) the MTS Guidelines should be consistent with this document, and within the Guidelines, the ORC criteria should include a requirement for non-surgical representation on committees and protocols for record keeping. A simple, one-page version of the revised criteria should be distributed to assist awareness, understanding and application.
 - (b) any future design should also have clear criteria for VMS visits, and protocols for the coordination of such visits.
7. Any future Management Services Contract should be revised to remove unnecessary detail, emphasise key performance measures and define the parameters around financial management.
8. The results measurement framework should be reviewed to develop more meaningful, robust and better specified indicators – for which data capture is feasible. Specific improvements include:

- (a) better specification, to ensure quantitative indicators have clear numerators and denominators, and qualitative indicators are more specific;
 - (b) ensuring that capacity development outputs (e.g., numbers of local staff trained/strengthened) include the gender and role of staff;
 - (c) investigating improved measures of capacity development impact such as staff retention, self-reported morale and satisfaction, evidence/observed skill level. Such measures would need to be led from in-country, with support from the MSC;
 - (d) more systematic and consistent recording of clinical specialties and treatments; and
 - (e) recording of patients' domicile.
9. There is scope to improve the strategic planning of capacity development provided through the VMS. Any future support should be aligned with partner countries' health workforce development plans, to ensure relevance and effectiveness.

Implementation

10. Information flows from the MSC to stakeholders could be improved by way of dissemination of periodic ORS 'pipeline' reports and providing an annual 'country report' to key stakeholders in each partner country (e.g. Medical Superintendent, ORC Chair, Permanent Secretary) and to MFAT Post, by email and in hard copy.
11. There is no clear evidence that treating overseas referrals patients in India represents better overall value for money compared to providing treatment in New Zealand. We recommend that consideration of this issue in any future phase of support should give careful consideration to the comparative quality of treatment, impact on patient outcomes, comfort and satisfaction and the logistics of travel and accommodation.

Scope and focal areas

12. More ambitious developments for any future phase of New Zealand support for strengthening the health workforce in the Pacific could include:
 - (a) extending capacity development support to explicitly enable the provision of New Zealand-based attachments, further extending the focus beyond surgical roles and expanding support to leadership and management. Tonga and Fiji would be candidates for this shift in emphasis, given the relative maturity of their health systems, and the views expressed in-country regarding potential future support; and
 - (b) introducing a Pacific-based NZMTS liaison role to enable better understanding of and responsiveness to the priorities and needs of partner countries, particularly those who currently have less developed links with New Zealand.
13. We do not support the suggestion of a reduced role for the MSC with respect to overseas referrals from Fiji and Tonga, as in our view the systems in these countries are not sufficiently robust to ensure strict application of the referral criteria.

Appendix 1: References

Blick, Gary, Joanna Smith and Julie Artus (2014) *Evaluation of the Samoa ILP* (MFAT: Wellington, New Zealand).

Doyle, Jennifer, Augustine Asante and Graham Roberts (2011) *Human resources for health: issues and challenges in 13 Pacific Islands Countries* (University of New South Wales, Human Resources for Health Knowledge Hub: Australia)

Easterbrook-Smith, Sonya and Vaine Wichman (2011) *Report of the evaluation of the Cook Islands Medical/Health Specialists Visits Schemes*. Report to MFAT, February 2011.

Fiji Ministry of Health *Annual report 2013*.

Health Specialists Limited (2012) *New Zealand Medical Treatment Scheme Annual Report 1 July 2011 - 31st June 2012*. Dated 31st July 2012

Health Specialists Limited (2013) *New Zealand Medical Treatment Scheme Annual Report Jul 2012 - Jun 2013*

Health Specialists Limited (2014) *New Zealand Medical Treatment Scheme Annual Report Jul 2013 - Jun 2014*

Hendey, Dianne (2010) *A desk review of the New Zealand Medical Treatment Scheme (Overseas Referrals Scheme and the Visiting Medical Specialists Scheme) 1 December 2005 – 31 December 2009*. Report to MFAT, December 2010.

Irava, Wayne; Shyamajanaka Mahalakanda and Ronesh Prased (undated) *A situational analysis and assessment of the Overseas Patient Referral Systems in four Pacific Island countries*. Report funded by DFAT through SSCSiP.

Kiribati *Health strategic plan 2012-2015*.

MFAT (2012) *New Zealand Aid Programme sector priorities 2012-2015* (MFAT: Wellington, New Zealand).

MFAT (2012) *Strategic plan 2012-2015: International Development Group* (MFAT: Wellington, New Zealand).

MFAT (2011) *International development policy statement: supporting sustainable development* (MFAT: Wellington, New Zealand).

Tonga Strategic development framework 2011-2014.

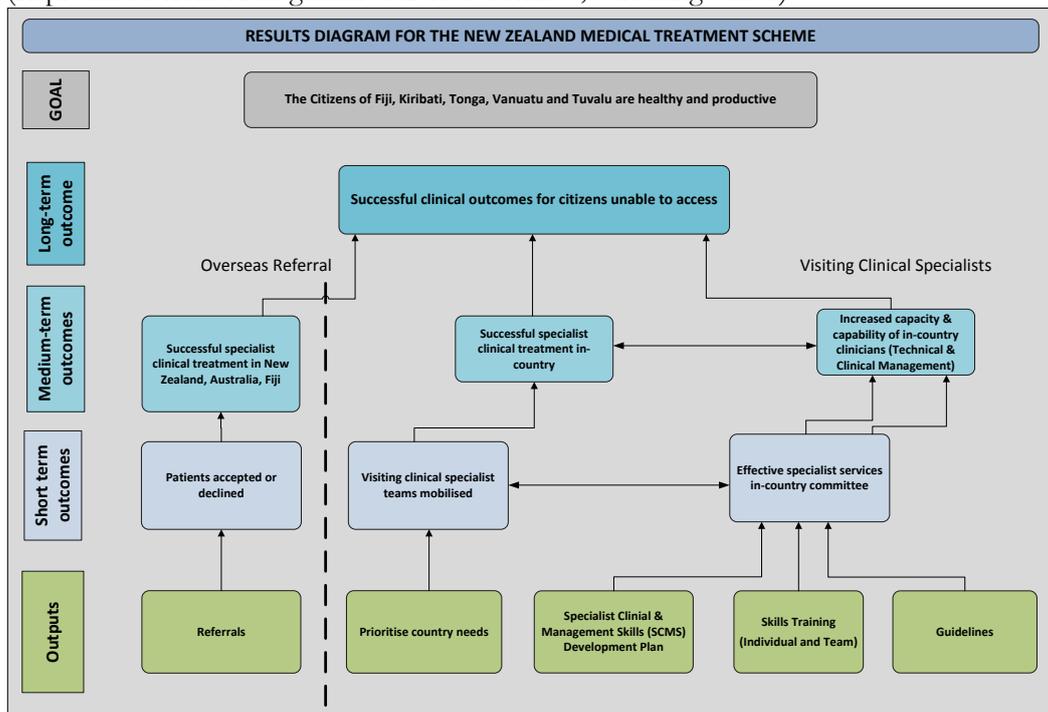
Tuvalu Ministry of Health *Strategic health plan 2009-2018*.

Vanuatu *Health sector strategy 2010-2016*.

No author (2004) *Report on a review of NZAID's Medical Treatment Scheme to Pacific Island Countries*. February 2004.

Appendix 2: Results diagram

Figure 12 Results diagram for the New Zealand Medical Treatment Scheme
 (Reproduced from Management Services Contract; colouring added)



Source: Management Services Contract 2011

Appendix 3: Outputs and impacts

Outputs and impacts: Overseas Referral Scheme

Number of patients treated overseas

The number of patients treated under the ORS is an indicator in the results measurement framework, with the target being a minimum of 65 patients per annum. This target was met in 2011/12 with the numbers in 2012/13 and 2013/14 being within 1-2 patients of reaching the target. Table 7 shows the actual numbers of ORS patients treated per annum was 78 in 2011/12, 63 in 2012/13 and 64 in 2013/14. In each case, these numbers were substantially higher than in 2010/11 – the baseline year for the evaluation. Overall, 205 patients were treated overseas under the NZMTS during the evaluation period of 2011/12 to 2013/14.

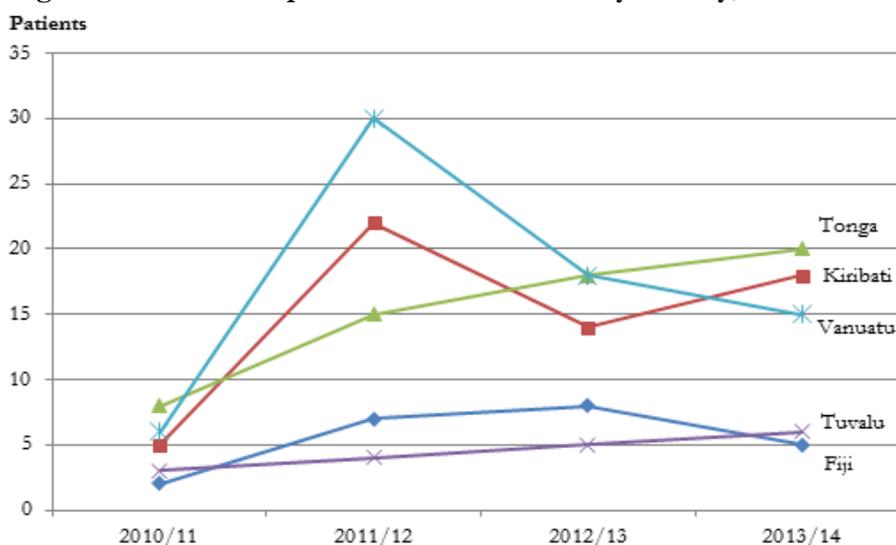
Figure 13 plots the numbers of patients treated each year by country. Of note, most of the countries had an increase in treated patients, which is consistent with the increase in budgets (Kiribati, Tonga, Tuvalu) and additional funds made available (Kiribati and Vanuatu).

Table 7: Number of patients treated overseas, 2010/11 - 2013/14

Year	Patients treated	Target
2010/11 (baseline)	24	n/a
2011/12	78	65
2012/13	63	
2013/14	64	

Source: Data provided by Health Specialists Ltd; Sapere analysis

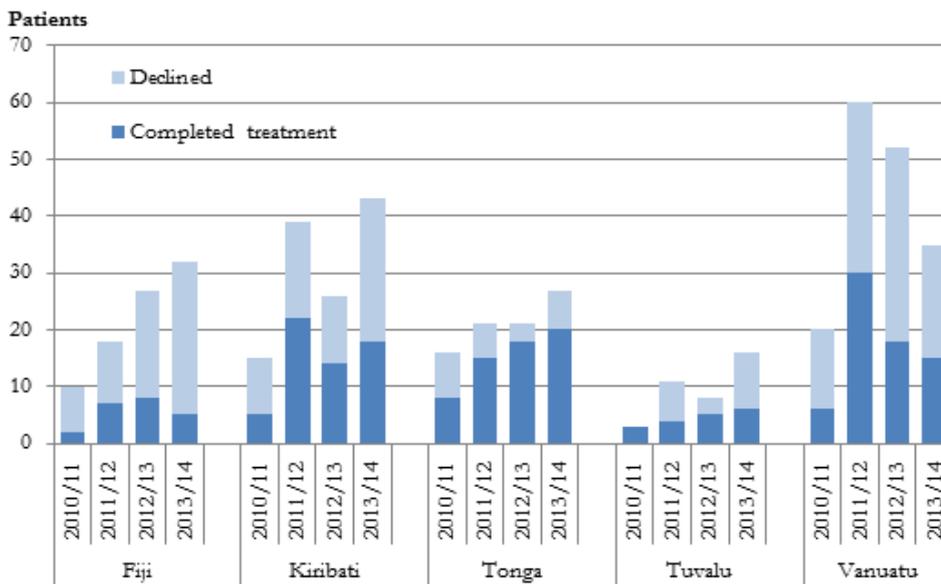
Figure 13: Number of patients treated overseas by country, 2010/11 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

Figure 14 shows the number of patients from each country that completed treatment overseas in each year alongside the number of patients who were referred by an ORC but declined by HSL. The overall ‘acceptance rate’ for the NZMTS – i.e. patients accepted and treated overseas as a proportion of all referrals from an ORC – was 47%, although this varies across countries. Table 8 shows the acceptance rates for the evaluation period of 2011/12 to 2013/14. Tonga had by far the highest acceptance rate (77%). The next highest acceptance rate was Kiribati (50%), followed by Tuvalu and Vanuatu (both 43%) and Fiji (26%).

Figure 14: ORS patients treated or declined for treatment, 2010/11 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

Table 8: ORS patients treated overseas as a proportion of referrals, 2011/12 - 2013/14

Country	Patients referred	Patients accepted & treated	Acceptance rate
Fiji	77	20	26%
Kiribati	108	54	50%
Tonga	69	53	77%
Tuvalu	35	15	43%
Vanuatu	147	63	43%
Total	436	205	47%

Source: Data provided by Health Specialists Ltd; Sapere analysis

The proportion of patients who are referred and accepted for treatment and who then complete appropriate treatment overseas is an indicator in the results measurement framework. The target is 95%. We did not receive any data against this metric but in interview with the MSC we were told that this target had been met.

Characteristics of patients treated overseas

The results measurement framework includes the same indicators and targets for the demographic characteristics of patients treated overseas:

- 51% of patients being female (with 49% being male);
- 30% of patients being children (the cut-off age is not defined, but is assumed to be 0-19 consistent with MSC reporting), and
- 10% of patients being from outer islands.

Table 11 shows the proportion of female patients across the evaluation period. The NZMTS as a whole was close to the target of 51%, with 49% of patients being female. Among the countries, only Vanuatu (59%) met the target. The next highest was Kiribati (48%), followed by Tuvalu (47%), Tonga (45%) and Fiji (35%).

Table 9: Female patients as a proportion of patients treated overseas, 2011/12 - 2013/14

Country	Total patients	Female patients	Female (%)	Target (%)
Fiji	20	7	35%	51%
Kiribati	54	26	48%	
Tonga	53	24	45%	
Tuvalu	15	7	47%	
Vanuatu	63	37	59%	
Total	205	101	49%	

Source: Data provided by Health Specialists Ltd; Sapere analysis

Table 12 shows the proportion of patients aged 0-19 years across the evaluation period. The NZMTS as a whole met the target of 30% being children, with 45% of patients aged 0-19 years. Most countries met this target, with Fiji (75%) having the highest proportion followed by Kiribati and Vanuatu (both 48%), Tonga (36%) and Tuvalu (20%). No data was on the proportion of patients from outer islands were available.

Table 10: Children (0-19 yr) as a proportion of patients treated overseas, 2011/12 - 2013/14

Country	Total	Children (0-19 years)	Children (%)	Target (%)
Fiji	20	15	75%	30%
Kiribati	54	26	48%	
Tonga	53	19	36%	
Tuvalu	15	3	20%	
Vanuatu	63	30	48%	
Total	205	93	45%	

Source: Data provided by Health Specialists Ltd; Sapere analysis

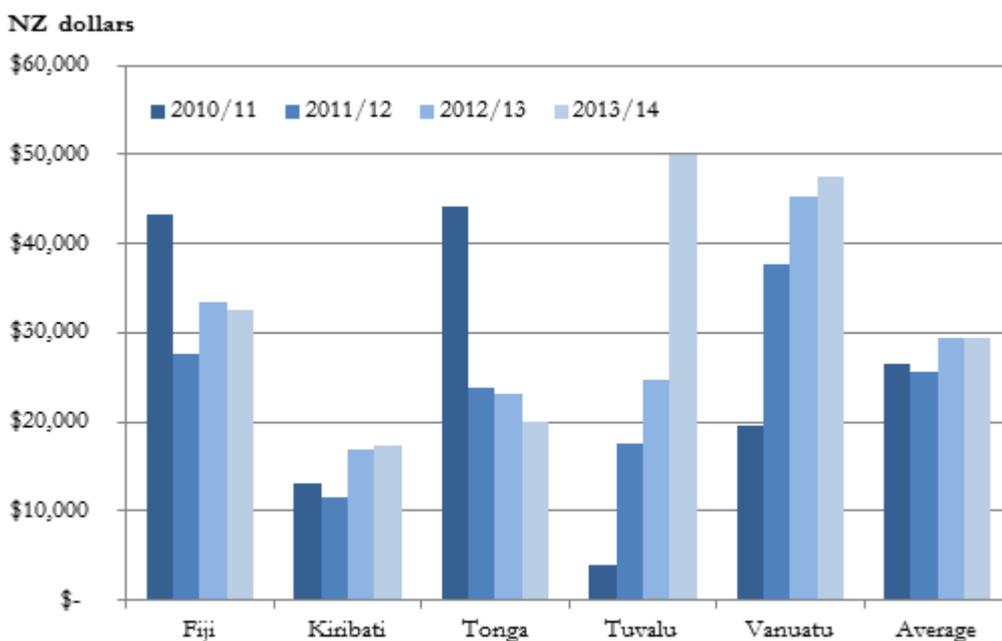
Cost per patient treated overseas

Cost per patient per year is an indicator in the results measurement framework, with the target being an average of \$25,000 per patient. Overall, the cost per patient has tended to be slightly higher than the target, although there is sizeable variation by country and year. The average cost per patient, among all five partner countries, was \$25,700 in 2011/12 and \$29,500 in 2012/13 and 2013/14. The baseline figure, from 2010/11, was \$26,400.

Figure 15 shows how the cost per patient varies over time – this is largely due to the mix of complexity, although the location of treatment provider may be a factor (e.g. patients in Kiribati and Tuvalu may be more likely to be assessed for further diagnosis and/or treated in Fiji). In the case of Vanuatu, for example, additional funds were made available to address a high number of rheumatic heart disease patients and the resulting cardiac surgery tends to be among the more costly surgical interventions under the ORS. This led to an increase in the average cost per patient from Vanuatu. In the case of Tuvalu, the high average cost in 2013/14 is driven by a single high-cost case within a small number of treated patients.

The cost per patient also varies by country for a number of other reasons, including: travel costs (being more relatively more expensive from some countries), country specific policies on patient accompaniment (e.g. medical escorts or guardians) and patient complexity.

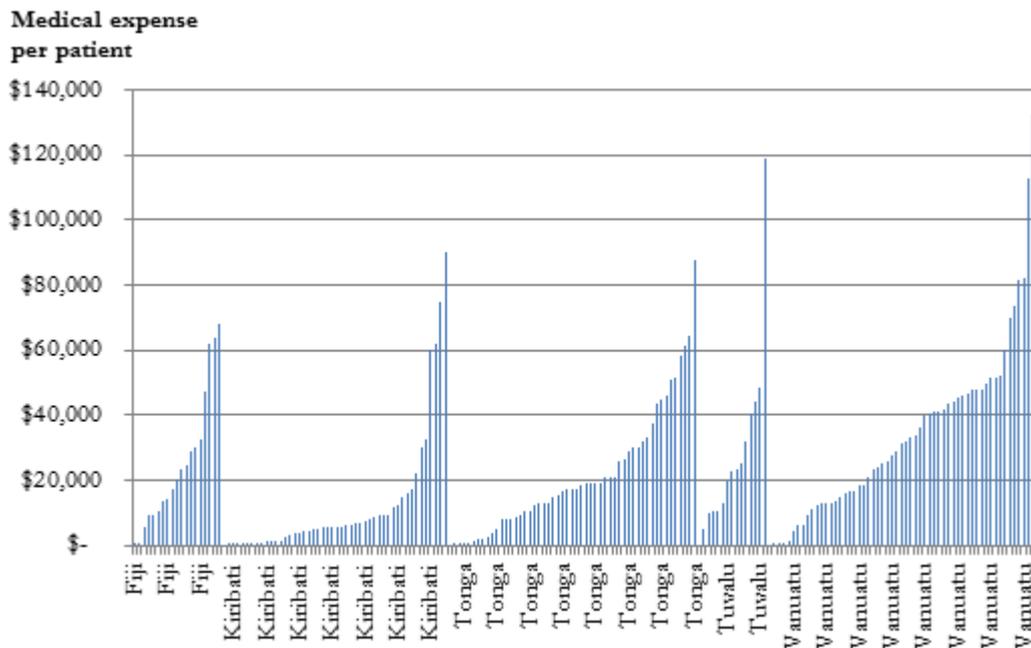
Figure 15: Cost per patient treated overseas by home country, 2010/11 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

We also looked at the distribution of patient medical expenses by country over the evaluation period, shown overleaf in Figure 16. These distributions may reflect the types of procedures being undertaken as well as the provider of the tertiary service. Vanuatu, for example, tends to have a mix of more costly patients (e.g. >\$40k per patient), reflecting what we heard about recent efforts to address rheumatic heart disease via cardiac surgery. In contrast, Kiribati tends to have a weighting to less costly patients (e.g. < \$20,000), which may reflect its greater use of referrals to Fiji for further assessment and diagnosis (which may not result in further treatment) or for treating conditions that would otherwise be more costly in New Zealand.

Figure 16: Medical costs per patient treated overseas, by country, 2011/12 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

Stakeholder views on the overseas referral process

Stakeholders provided the following views on the cost effectiveness of the ORS expenditure:

- in Tonga, referring clinicians liaise with the New Zealand specialist, and assemble the necessary information including treatment appointment and pricing estimate, before submitting a request to the ORC. A second opinion on a pricing estimate may also be sought as part of the process, e.g. seeking a pricing quote from another provider;
- two interviewees commented that treating patients in Fiji is better value for money, and less disruptive for patients than sending them to New Zealand; and
- we were told that HSL have long-standing relationships with suitable New Zealand providers – hospitals that have sufficient scale and efficiency of systems, the necessary support services, and the facilities to undertake the complex cases that come through the ORS. We were also told that HSL have negotiated price discounts with some providers, on the basis of the volume of patients that is provided through the NZMTS.

Ten interviewees stated that ORS referrals are based on criteria; however two said that the criteria used in-country were based on NZMTS Guidelines and four were unaware of the NZMTS criteria. Political interference in ORS referrals and ORC decision-making was a common problem, raised by nine interviewees in-country. However, interviewees were of the view that HSL apply the criteria rigorously, and that the robustness of this ‘final filter’ means that cases approved for treatment are legitimate and on the basis of clinical need.

- We heard anecdotal evidence of the impact on patient outcomes, for example, we heard from two interviewees that paediatric oncology survival rates have improved in Fiji. However we were unable to verify this in-country. We were told that clinicians are keen and efforts are being made at Lautoka but that a patient register is not yet operational.
- One interviewee commented that the ORS has a big impact at ‘ground level’ (patients) but this impact is difficult to see at the ‘policy level’ as the programme is so focused.

Outputs and impacts: Visiting Medical Specialists

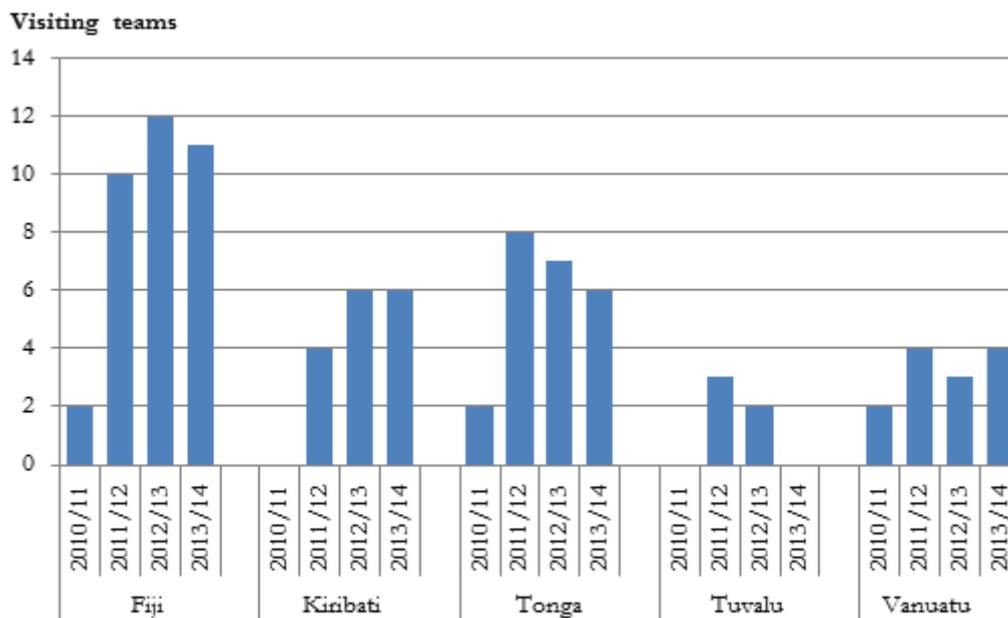
Number of visiting teams

The number of visiting teams to each country is shown in Figure 17. The number of teams during the period of 2011/12 to 2013/14 is generally higher than that of the evaluation baseline year of 2010/11. In all, there were 86 visiting teams between 2011/12 and 2013/14. It should be noted that 39 of these 86 visits (45%) involved solo specialists, with 12 (14%) being locums (i.e. short-term contracts to fill a vacancy or backfill an absence). The remaining 35 specialist visits (41%) involved multi-person teams.

Fiji has had the highest number of visiting teams, with 10-12 visits each year between 2011/12 and 2013/14. Tonga had the next highest number of visits with 6-8 visits per year. Accordingly, these visits allow for more patients to be treated in country and offer greater opportunities for capacity development. The higher number of visits may also be linked to budget size, with Tonga (\$500k) and Fiji (\$300k) having the largest base budgets. This is because these visits involve a trade-off between visiting teams and the overseas referral of patients – particularly for Vanuatu which has no national overseas referral scheme.

Vanuatu had two visits in 2010/11 and this increased to between 3-4 visits per annum in each subsequent year. Two countries, Kiribati and Tuvalu had no visits in 2010/11. Kiribati received 4-6 visits per annum in each of the following years, with Tuvalu receiving three visits in 2011/12 and two visits in 2012/13, with no visits occurring in 2013/14.¹³

Figure 17: Number of VMS teams by country, 2010/11 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

¹³ The MTS annual report produced by HSL for 2013/14 notes: ‘Plans for a Visiting medical specialist programme are currently on hold with Tuvalu this year. There has been considerable tension this year in the programme with frequent involvement by NZAID. This has made it difficult to manage a programme directly with Tuvalu’.

Number of patients seen and treated in-country

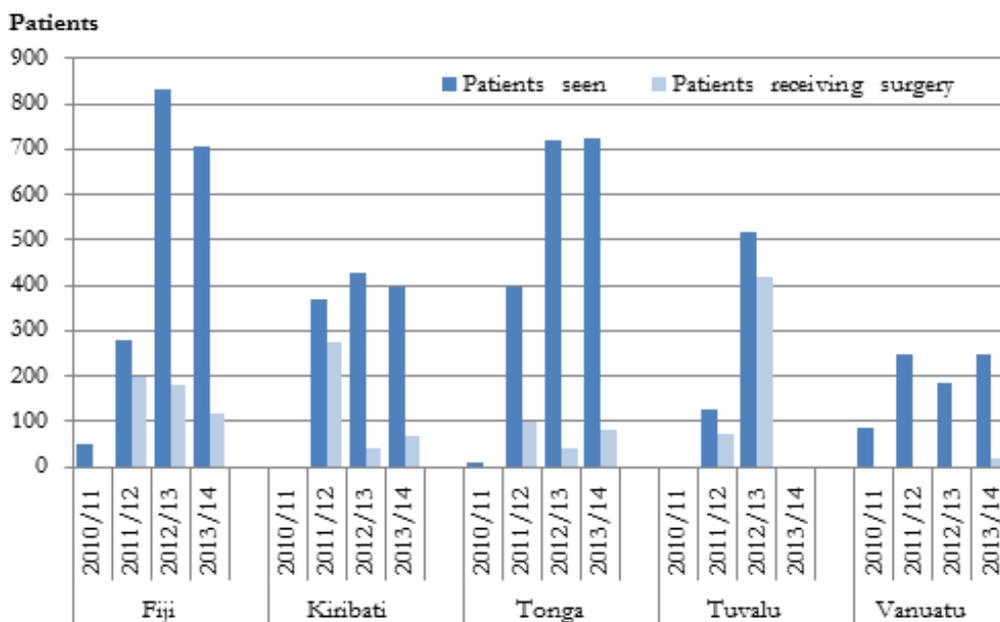
The number of patients that complete assessment and treatment in-country per year is an indicator in the results measurement table. There is no target specified for the number of patients other than ‘as many as can be accommodated during visits’. Overall, 6,177 patients were seen in-country by visiting teams between 2011/12 and 2013/14, with 1,602 patients also receiving surgery from visiting teams in-country.

Figure 18 shows the number of patients seen and the number that also receive surgery in-country for each year, by partner country. It is important to note that the number of patients seen depends on length of the visit and the focus of the visiting team – some may be more focused on conducting clinics and assessments and others may be more about capacity building through working with staff and assessing system and process. Moreover, the type of specialty matters – only teams with a surgical focus will conduct surgery. Teams with a medical focus will be focused on assessment, diagnosis and recommending treatments, which may be medical (e.g. prescribed medications) or surgical treatments.

Several specific points are worth highlighting:

- most countries had an increase in the number of patients relative to the baseline year of 2010/11 – consistent with the increase in the number of visiting teams;
- Tuvalu had no patients seen in 2010/11 (baseline) and again in 2013/14 due to visits from specialists teams being ‘on hold’ – as noted above;
- Fiji and Tonga had the highest number of patient being seen, which is consistent with their greater number of visiting teams; and
- high numbers of patients receiving surgery may be linked to the presence of a short-term surgical locum, for example, in Kiribati in 2011/12 and in Tuvalu in 2012/13.

Figure 18: VMS patients seen and receiving surgery by country, 2010/11 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

Characteristics of patients seen in-country

The results measurement framework also includes the same indicators and targets for the demographic characteristics of the patients seen in-country as those treated overseas, namely:

- 51% of patients being female (with 49% being male);
- 30% of patients being children (the cut-off age is not defined but presumed to be 0-19 as per MSC reporting), and
- 10% of patients being from outer islands.

Table 11 shows the proportion of female patients across the evaluation period. The NZMTS as a whole met the target of 51%, with 52% of patients being female. Among the countries, Kiribati (66%) and Tonga (51%) met the target, with Vanuatu (50%) and Fiji (48%) being very close. For Tuvalu, 39% of patients were female (this covers 2011/12 and 2012/13 only).

Table 11: Female patients as a proportion of patients seen in-country, 2011/12 - 2013/14

Country	Total patients	Female patients	Female (%)	Target (%)
Fiji	1,818	870	48%	51%
Kiribati	1,195	793	66%	
Tonga	1,841	942	51%	
Tuvalu	646	250	39%	
Vanuatu	677	336	50%	
Total	6,177	3,191	52%	

Source: Data provided by Health Specialists Ltd; Sapere analysis

Table 12 shows the proportion of patients aged 0-19 years across the evaluation period. Arguably, the NZMTS as a whole met the target of 30% being children, with 39% of patients being aged 0-19 years. Vanuatu (68%) had the highest proportion followed by Tonga (50%) and Kiribati (37%). The proportions were lower for Fiji (24%) and Tuvalu (21%). No data on the proportion of patients from outer islands were available.

Table 12: Children (0-19 yr) as a proportion of patients seen in-country, 2011/12 - 2013/14

Country	Total	Children (0-19 years)	Children (%)	Target (%)
Fiji	1,818	443	24%	30%
Kiribati	1,195	445	37%	
Tonga	1,841	916	50%	
Tuvalu	646	135	21%	
Vanuatu	677	460	68%	
Total	6,177	2,399	39%	

Source: Data provided by Health Specialists Ltd; Sapere analysis

Average cost per patient seen and per visiting team

The average cost per visiting team and per patient seen by visiting teams are indicators with targets in the results measurement framework. Table 13 compares the average cost per visiting team from across the NZMTS with the target of \$10,000. The cost per team was slightly above the target, varying from \$12,100 in 2011/12 to \$10,400 in 2013/14. The costs are influenced by the number of multi-person teams, the duration of visits, and the mix of destinations – with flights to Kiribati and Tuvalu being more expensive. The low cost per team in the baseline reflects there being a small number of visits to Fiji and Vanuatu only.

Table 13: Average cost per visiting team, 2010/11 - 2013/14

Year	Cost per team	Target
2010/11 (baseline)	\$4,200	n/a
2011/12	\$12,100	\$10,000
2012/13	\$11,100	
2013/14	\$10,400	

Source: Data provided by Health Specialists Ltd; Sapere analysis

Table 14 compares the average cost per patient seen from across the NZMTS with the target of \$75. The cost per patient was much higher than the target in each year, varying between \$124 and \$247 per patient seen. The costs not only depend on the visit costs (e.g. duration, team size, flight costs) but also on the focus on throughput (e.g. holding clinics) relative to capacity development activities (e.g. Continuing Medical Education tutorials).

Table 14: Average cost per patient seen in-country, 2010/11 - 2013/14

Year	Cost per patient	Target
2010/11 (baseline)	\$178	n/a
2011/12	\$247	\$75
2012/13	\$124	
2013/14	\$135	

Source: Data provided by Health Specialists Ltd; Sapere analysis

Visiting teams by type of specialty

Figure 19, below, present the visiting specialist teams by type of specialty. Of note is the range of specialties and the different focus for each country – reflecting the different stages of development and different priorities of their health systems. Notably, these include:

- urological surgery and gynae-oncology in Fiji;
- gynae-oncology and paediatrics in Kiribati;
- general surgery, paediatric surgery and emergency medicine in Tonga;
- surgical locums and urology clinics in Tuvalu; and
- cardiology and paediatric cardiology in Vanuatu.

Impacts of visits on patients

In terms of impacts on patients, we heard anecdotal evidence from one interviewee that neonatal mortality in Tonga has halved since their neonatal nurses received Continuous Positive Airway Pressure (CPAP) training (provided through the NZMTS) and a CPAP machine. This interviewee also stated that oncology survival rates have improved as a result of regular VMS nurse visits and New Zealand attachments for local nurses. We were also told by one interviewee that the NZMTS supported a rheumatic fever programme in Tonga, which cleared the list of rheumatic fever patients.

Figure 19: Visiting team specialty by country, 2011/12 - 2013/14

		Fiji	Kiribati	Tonga	Tuvalu	Vanuatu
Surgical specialties						
Surgical services	2011-12			2		
	2012-13			3		
	2013-14			1		
Paediatric Surgery	2011-12			1		
	2012-13			1		
	2013-14	2		1		
Cardiac Valves	2011-12	1				
	2012-13					
	2013-14					
Urology	2011-12	5			1	
	2012-13	5			1	
	2013-14					
Surgeon Locum	2011-12		1		1	
	2012-13	2	1		1	
	2013-14					1
General Surgeon	2011-12					
	2012-13	1				
	2013-14					
Emergency Surgeon	2011-12					
	2012-13	1				
	2013-14					
Surgeon	2011-12			2		
	2012-13					
	2013-14					
Anaesthetist	2011-12		2			
	2012-13					
	2013-14		2			
Medical specialties						
Cardiology	2011-12					1
	2012-13			1		1
	2013-14					1
Paediatric Cardiology	2011-12			1		1
	2012-13					1
	2013-14					2
Gynaecology Oncology	2011-12	2				
	2012-13	5	2			
	2013-14	3	1			
Paediatric Oncology	2011-12	2			1	
	2012-13					
	2013-14					
Paediatric	2011-12		1			1
	2012-13		2			1
	2013-14		2			
Psychiatric	2011-12			1		
	2012-13					
	2013-14					
Emergency Medicine	2011-12			2		
	2012-13					
	2013-14					
Urology Locum	2011-12					1
	2012-13	3				
	2013-14					
Paediatric Locum	2011-12					
	2012-13					
	2013-14		1			
Gynaecology Locum	2011-12					
	2012-13		1			
	2013-14					

Source: Data provided by Health Specialists Ltd; Sapere analysis

Appendix 4: Patient pathways

Introduction

This chapter describes an ‘archetypal’ patient pathway for an ORS patient being sent to New Zealand for treatment. We garnered this information in the following ways:

- a process mapping exercise with an in-country interviewee in Tonga, which we then verified with another in-country stakeholder;
- semi-structured interviews with a total of two former ORS patients; and
- the semi-structured interviews across all stakeholders.

Presentation and diagnosis

Patients typically present at hospital, and initial testing and diagnosis is undertaken by the relevant clinical specialist. Patients may be identified through screening clinics run by VMSs.

As noted earlier, referring clinicians in Tonga liaise directly with their New Zealand counterpart, seeking advice/second opinion on diagnosis, prognosis and treatment as well as securing an appointment time and pricing estimate. Direct contact with New Zealand specialists also occurs in Fiji, but less so in the other partner countries, who tend to use the MSC approval process as a way of testing the diagnosis and eligibility assessment. Fiji itself also plays a role in diagnosis and assessment of patients. As noted earlier, limited diagnostic capacity can mean the full extent of a patient’s condition is only revealed upon assessment by the overseas /receiving clinician.

Eligibility assessment

Each country has its own process for assessing cases and referring them to the MSC. These various committee structures are summarised in the following chapter. But essentially, the initial referrals come from in-country clinicians (possibly prompted by a VMS) and are considered by an in-country ORC, before being submitted to the MSC for approval. The MSC considers applications against the criteria and the available funding. Applications receive final approval from the in-country Permanent Secretary of Health, and in Tonga, Ministerial sign-off is also required.

Each country has its own variation of criteria used to assess eligibility. As noted in the previous chapter, several (nine) interviewees mentioned the issue of political interference in deciding which patients are referred to HSL; though three stated that there is no political interference. However, interviewees were unanimous that ineligible cases (that do not meet the criteria) are declined by HSL. Three interviewees described their in-country MTSs as operating as a kind of ‘release valve’ for politically-driven referrals.

While many (ten) interviewees stated that eligibility assessments are based on a set of criteria, there was low awareness amongst interviewees of the MTS Guidelines and criteria – four interviewees were not familiar with them and several stated that they had seen criteria at some point but described heuristically-based processes for day-to-day decision-making.

Patients appear to have little visibility of the criteria and decision-making process. Three stakeholder interviewees referred to patient/family misunderstandings regarding what the NZMTS will pay for and what the criteria are.

Getting ready to travel

Patients require visas and passports to travel; many do not have these, or the birth certificates required to obtain them. Three interviewees mentioned that the cost and timeliness of processing represents a challenge for patients accessing the scheme, in particular those from outer islands. Two interviewees mentioned that getting a sponsor for the visa application can pose a problem for patients without relatives in New Zealand. The cost of travel from the outer islands, especially for subsistence-based households was cited as an issue by two interviewees.

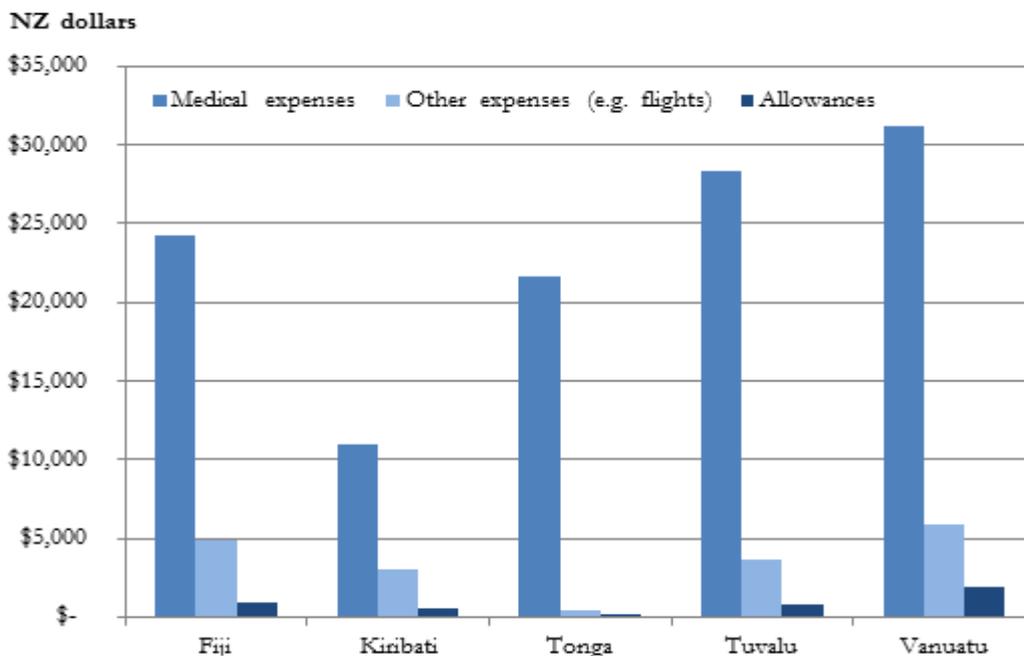
Patients must receive clearance to travel from the airline. In Tonga, this and the other paperwork (birth certificate, passport, and visa) is arranged by the in-country patient coordinator. This coordinator also ensures that the patient makes it onto their flight.

Patients may have a medical escort (depending on their medical condition) and/or a caretaker (a family member, particularly for children); policies for who accompanies the patient and how this is funded vary by country.

Figure 20 shows the average cost per patient for each country for medical expenses, other expenses (e.g. passport, visa and flights) and allowances while overseas. Some points of note include:

- Vanuatu has a relatively high average cost for medical expenses, which reflects the recent focus on relatively costly cardiac surgery;
- Vanuatu also has slightly higher ‘other expenses’ per patient, reflecting the policy of allocating funds from its ORS budget to pay for escort to accompany patients from outer islands; and
- Tonga has very low expenditure in ‘other expenses’ and allowances, which reflects that country’s policy to pay for patient travel and for accommodation in New Zealand to be provided by the patient’s relatives.

Figure 20: ORS average cost per patient by type of expenditure, 2011/12 - 2013/14



Source: Data provided by Health Specialists Ltd; Sapere analysis

Treatment in New Zealand

The NZMTS funds the cost of the agreed treatment and in some cases (under agreement between the MSC and partner country) can contribute towards living expenses (per diems) for the patient or their escort. In the case of Kiribati and Vanuatu, and sometimes Tuvalu and Fiji, the NZMTS will also cover the costs of the visas and passports.

The level of per diems was raised as an issue by one interviewee, who stated that the allowances under the NZMTS are higher than those under the in-country MTS. However, we were told by another interviewee that the partner countries determine the level of these per diems – and this is consistent with the Management Services Contract.

Patients are usually met off the plane, either by an ambulance or a family member. In Auckland, the HSL patient coordinator makes personal contact with the patient weekly to provide assistance and the allowances. This coordinator will also arrange a translator where this is required.

Patients may stay in New Zealand for several weeks or even months. In some cases co-morbidities are identified, which may also be treated, and complications can also arise. These factors can affect the final cost of treatment.

Returning home and follow-up care

The MSC informs the referring clinician of the treatment that was provided, the outcome, and the care plan. The HSL patient coordinator will advise the in-country coordinator when the patient is returning home, and suggest a follow-up appointment and that the patient completes a feedback survey. In Tonga, the in-country coordinator will also follow up on patients whose visa is due to expire. As noted earlier, follow-up care is the responsibility of the partner country. The capacity of health systems, including health information systems, as well as the challenges of maintaining contact with patients from the outer islands, mean that ensuring follow-up is problematic for the local health systems.

Patient perspectives on overseas referrals

Patient satisfaction with treatment is an indicator in the results measurement table. The target specified is ‘80% patient satisfaction with treatment’. Results from patient satisfaction surveys arranged by HSL suggest this target has been met across the evaluation period.

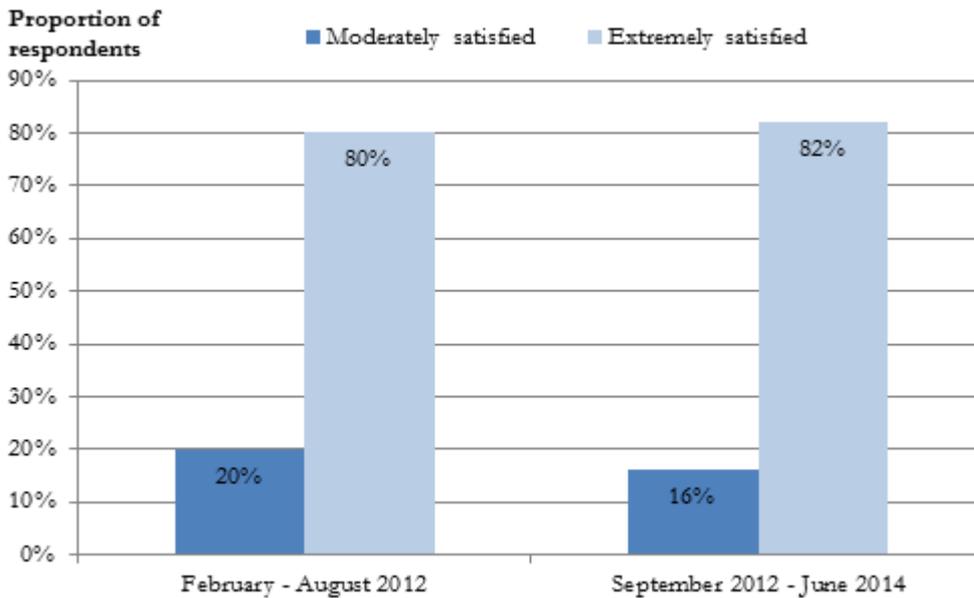
Satisfaction survey data was provided for two periods: February to August 2012 (6 months) and September to June 2014 (22 months). We focused on the following question: *Overall, are you satisfied with the care you received overseas, neither satisfied nor dissatisfied with it, or dissatisfied with it?*

Respondents provided answers on a seven-point scale, with the following results for those who responded that they ‘extremely satisfied’ or ‘moderately satisfied’:

- within February to August 2012, 80% were ‘extremely satisfied’ (n=16) and 20% were ‘moderately satisfied’ (n=4); and
- within September 2012 to June 2014, 82% were ‘extremely satisfied’ (n=51) and 16% were ‘moderately satisfied’ (n=10). In addition, 2% (n=1) responded that they were “neither satisfied nor dissatisfied”.

These results, relating to the responses of ‘extremely satisfied’ or ‘moderately satisfied’, are shown below in Figure 21.

Figure 21: Overall satisfaction with overseas care – moderately or extremely satisfied



Note: Answers were provided on a seven-point scale in response to the question *Overall, are you satisfied with the care you received overseas, neither satisfied nor dissatisfied with it, or dissatisfied with it?*

Source: HSL patient satisfaction survey data; Sapere analysis

The patient satisfaction survey also sought responses to a range of other questions relating to the broad areas of:

- the patient’s home country experience (e.g. how well home-country doctors explained what was wrong, what the treatment would be, and the preparation for overseas travel);
- the logistics of the overseas referral (e.g. how well the accommodation and allowances met the patient’s needs, the helpfulness of the HSL coordinator); and
- the treatment overseas (e.g. how well the doctors in New Zealand explained what they were going to do, how to take any medicine, and what a patient should do upon their return home).

These questions generally asked respondents to grade their answer on a five-point scale. The results are summarised in Table 15 in terms of the proportion of respondents who rated their experience on the highest two points on the scale. It is noticeable that almost all respondents tend to highly rate their experiences highly. Furthermore, the overseas treatment phases – the logistics and the treatment – were slightly more likely to be rated very highly than the assessment and preparation phase in the respondents’ home countries.

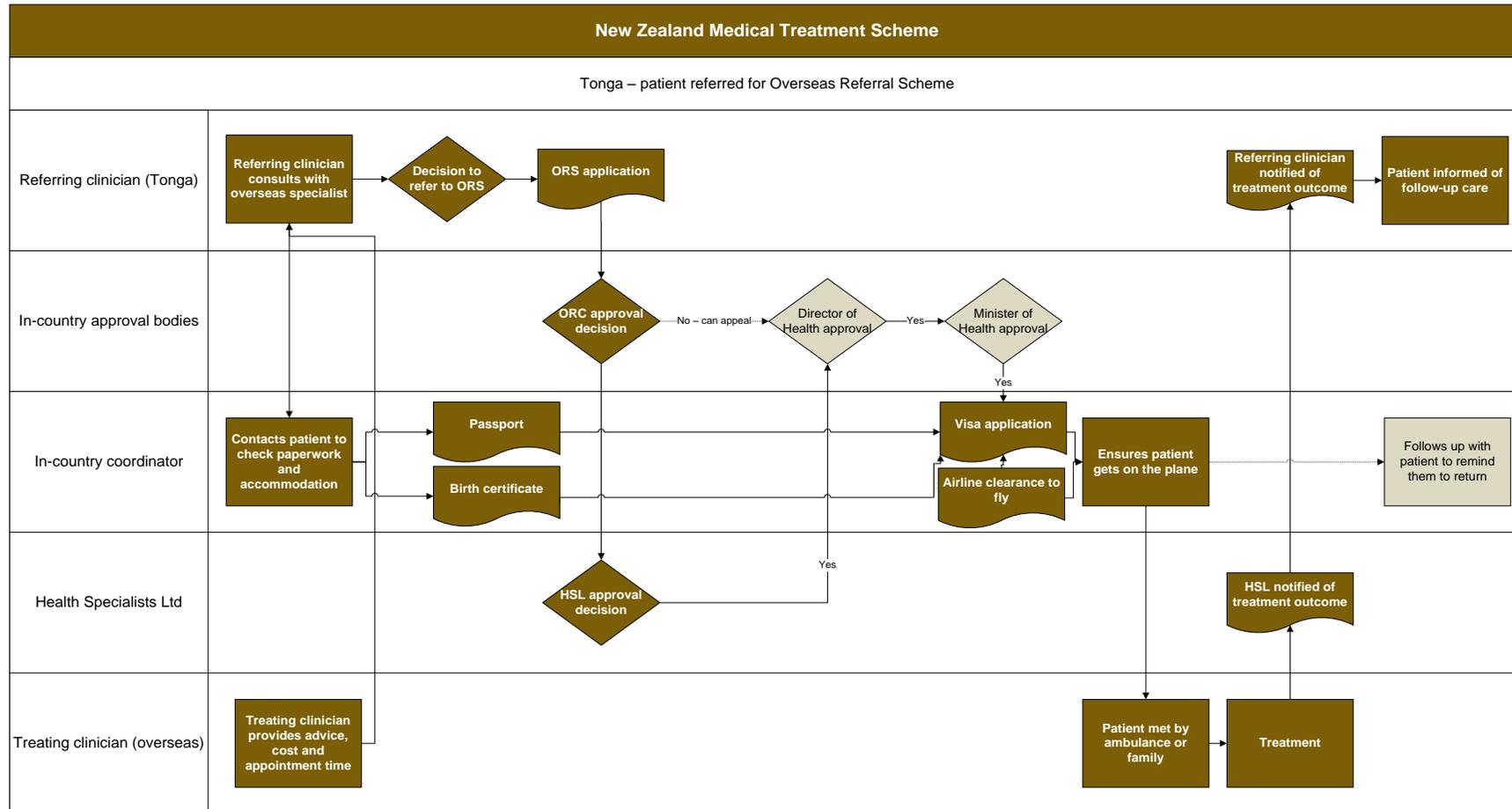
Table 15: ORS patient satisfaction survey responses

Survey question	Response threshold	Feb 2012 - Aug 2012 n=23	Sept 2012 - June 2014 n=65
Home country experience			
How well did your doctor(s) at home explain what was wrong with you?	Answering 'very well' or 'extremely well'	83%	66%
How well did your doctor(s) at home explain what they were going to do?	Answering 'very well' or 'extremely well'	86%	72%
How well did your doctor(s) at home answer your questions?	Answering 'very well' or 'extremely well'	83%	71%
Are you satisfied with how your home country prepared you for your overseas medical treatment, neither satisfied nor dissatisfied with it, or dissatisfied with it?	Answering 'moderately satisfied' or 'extremely satisfied'	91%	86%
How well was your travel overseas organised?	Answering 'very well' or 'extremely well'	90%	81%
Overseas experience – logistics			
How well did your accommodation meet your needs?	Answering 'very well' or 'extremely well'	90%	89%
How well did your allowances meet your needs?	Answering 'very well' or 'extremely well'	86%	88%
How easy was it to travel to your appointments?	Answering 'very easy' or 'extremely easy'	95%	92%
How helpful was the Health Specialist Administrator?	Answering 'very helpful' or 'extremely helpful'	100%	93%
Overseas experience – treatment			
How well did your doctor(s) here explain what was wrong with you?	Answering 'very well' or 'extremely well'	100%	98%
How well did your doctor(s) here explain what they were going to do?	Answering 'very well' or 'extremely well'	100%	100%
How well did your doctor(s) here answer your questions?	Answering 'very well' or 'extremely well'	100%	98%
How well did your doctor(s) here explain how to take your medicine?	Answering 'very well' or 'extremely well'	100%	94%
How well did your doctor(s) here explain what you need to do when you return home?	Answering 'very well' or 'extremely well'	100%	95%
Overall satisfaction with care overseas			
Overall, are you satisfied with the care you received overseas, neither satisfied nor dissatisfied with it, or dissatisfied with it?	Answering 'moderately satisfied' or 'extremely satisfied'	100%	98%

Source: HSL patient satisfaction survey data; Sapere analysis; note that some respondents skipped some questions

Process map

Figure 22: Process map – stylised pathway for an ORS patient in Tonga



Source: Sapere Research Group

Appendix 5: Overseas referrals to India – better value for money?

A recent report by SSCSiP on the overseas referrals systems in four Pacific Island countries (including three of our in-scope countries) discusses how countries are increasingly turning to India as a provider of low cost treatment – as a way of stretching limited budgets further, in order to benefit more people. The report states that *‘most PICs have now shifted their referral patients from Australia and New Zealand (in the 1980s and 1990s) to India (beginning in the early 2000s) largely due to cost differences’*.¹⁴ Unfortunately, robust comparative data on expenditure by referral destination are not available as the data in the report do not include all donor contributions.

The SSCSiP report notes that a challenge of seeking low cost treatment is *‘to simultaneously ensure good quality of healthcare services is received abroad. Low quality treatment often results in complications and follow-up operations that often the domestic health system is not able to respond to’*. The report does not cite data on patient outcomes from treatment in India compared to New Zealand or Australia, noting the lack of data recording and patient tracking (an issue to which SSCSiP has responded by co-funding patient coordinator positions).

In terms of qualitative information from our interviews, four stakeholders noted that patients from partner country referral schemes are being sent to India for tertiary-level hospital treatment, (e.g. Fiji, Kiribati). The stated advantage was that this is a lower cost option than sending them to New Zealand or Australia. We heard the following views on the advantages and drawbacks of this:

- two interviewees stated that the logistics of travelling to India are more difficult (e.g. longer and multiple flights);
- two interviewees made the point that accommodation in India is more difficult as patients do not have relatives there and need to stay in a hotel;
- one interviewee said that patients don’t want to go to India – they *‘would rather die’* in their home country than travel there for treatment; and
- in terms of patient outcomes, one interviewee said that the outcomes are good; one said there are no data on outcomes, and two stated that the quality of the record keeping and/or reporting tends to be lower than that of New Zealand-treated cases.

In the absence of complete and robust cost comparisons and data on patient outcomes, it is not possible to quantitatively assess the relative value for money of referring NZMTS patients to India rather than New Zealand. Our assessment is that the case is not clear cut, and that there are a number of relevant factors that need to be weighed up against the potential cost savings, such as patient comfort, and the logistics of travel and accommodation.

¹⁴ Wayne Irava, Shyamajanaka Mahalakanda and Ronesh Prased (undated) *A situational analysis and assessment of the Overseas Patient Referral Systems in four Pacific Island countries*. Report funded by DFAT through SSCSiP.