Royal Australasian College of Surgeons

Australian Aid

Lessons from *RACS Global Health's* Pacific Islands Program

Image: Vanuatu orthopaedic surgical trip, 2018. Image used with permission. Image credit: Darren James.

Key Findings

- Amidst surging surgical demand, the Pacific Islands Program (PIP) remains a relevant model to support specialised clinical service delivery and build surgical workforce capacity in the Pacific.
- Defining priorities for the PIP to support is challenged by limited surgical workforce data and nationally formulated surgical priorities and plans.
- Pacific-based surgeons highly value the PIP for the capacity building opportunities it provides. However, demonstrating gains to clinical competency is a challenge that needs to be addressed by adapting the PIP from focusing on training outputs to training outcomes.
- Support for countries to adopt clinical competency standards and frameworks for recognition of surgical development is broadly welcomed by Pacific surgeons.

Gaps in surgical care result in preventable death and disability[1]. The Royal Australasian College of Surgeons (RACS) recognises that investing in clinicians is essential to increasing access to healthcare in Pacific Island countries and meeting the ongoing needs of Pacific communities. Since 1995, RACS has been working with health partners in Pacific Island countries to improve access to and the quality and safety of surgical care through the DFAT funded Pacific Islands Program (PIP).

The PIP is delivered in partnership with Ministries of Health, national hospitals, universities and clinicians across 11 Pacific Island countries. With a focus on developing in-country workforce capacity in line with national priorities, specialist medical teams work with national clinicians to address patient needs and provide education, training and mentoring to in-country surgical teams.

For the Pacific specialist workforce, the opportunity to work alongside experienced visiting surgical teams help overcome professional isolation to acquire new skills. However, the translation of mentoring and training outputs into capacity and systems strengthening outcomes is harder to demonstrate.

A mid-term review of the PIP (2016-2022) was conducted in 2020 to understand its contribution to increasing surgical workforce capacity in the Pacific. The review highlights the value of the PIP for Pacific surgeons to develop surgical skills as well as opportunities to increase PIP's impact including by extending training support to surgical nurses and increasing opportunities for online learning.

DONOR

DFAT – Specialised Clinical Services in the Pacific (SSCSiP)

PARTNERS

Fiji National University (FNU) & Pacific Community (SPC)

COUNTRY

Fiji, Tuvalu, Solomon Islands, Nauru, Marshall Islands, Kiribati, Vanuatu, Samoa, Tonga, Cook Islands, Micronesia

THE CHALLENGE

Pacific surgical workforce gaps

A skilled workforce is the backbone of every health system, yet the World Health Organization (WHO) estimates there is a shortage of 17 million health care workers globally. In Pacific Island Countries (PIC's), the challenge of achieving a fit-for-size surgical workforce is particularly acute where small fluctuations in the numbers of surgeons (due to migration or workforce attrition) can have a big impact on patient access .

In most PICs where RACS operates, SAO (surgeons, anaesthetists and obstetricians) provider densities fall below the L*ancet Commission for Global Surgery's* target of 20 providers per 100,000 population while countries like Nauru and the Cook Islands face the added vulnerability of managing single providers of surgery, anaesthesia and obstetrics.

Persistent surgical workforce shortages are due to two major challenges - a significant undersupply of specialised surgical workforce and growing demand for specialist care. Universities in PICs are challenged to train the number of workers needed, and there are limited experienced clinical mentors available in-country to provide the on-the-job mentoring and supervision required to support surgical specialisation.

Adding to the challenge, most models of clinical development require exposure to more experienced surgical mentors - an opportunity often not available in the Pacific context, where many surgeons work in isolation and the specialties most needed may have no or limited presence in-country.

Table 1. Surgical workforce densities in Pacific Island countries

Country	Population	SAO (per 100,000 population)*	Total surgeons trained locally or regionally†	Resident national/ expatriate surgeons trained overseas‡	Regionally trained surgeons working overseas in 2018§	Surgeons working in-country or in specialty training (2018)	Additional surgeons required¶
Fiji	933,000	5.8	22	1	6	17	66
Solomon Islands	602,000	2.5	10	0	1	8	53
Vanuatu	260,800	3.2	5	0	1	4	22
Samoa	187,000	1.6	4	0	0	3	18
Micronesia	102,100	13	4	1	0	5	5
Tonga	103,000	14	4	1	1	3	3
Kiribati	110,000	8.2	1	1	0	2	6
Cook Islands	13,300	22	1	1	0	2	0
Nauru	10,000	30	0	0	0	1	0
Tuvalu	10,800	18.5	0	0	0	1	0-1
Total	**2,332,000**		**51**	**5**	**9**	**46**	**174**

*Data from Guest et al as cited in Watters et al . † Total number of surgeons from the specific Pacific Island nation who have trained in the region through the MMed programmes. ‡ For example, in Australia and New Zealand. § Surgeons trained in the region now living and working overseas (not training). ¶ Approximately half of specialist surgeons, anaesthetists and obstetricians (SAOs) should be surgeons so the additional numbers required are calculated from the SAO figures at half the rate of SAOs.

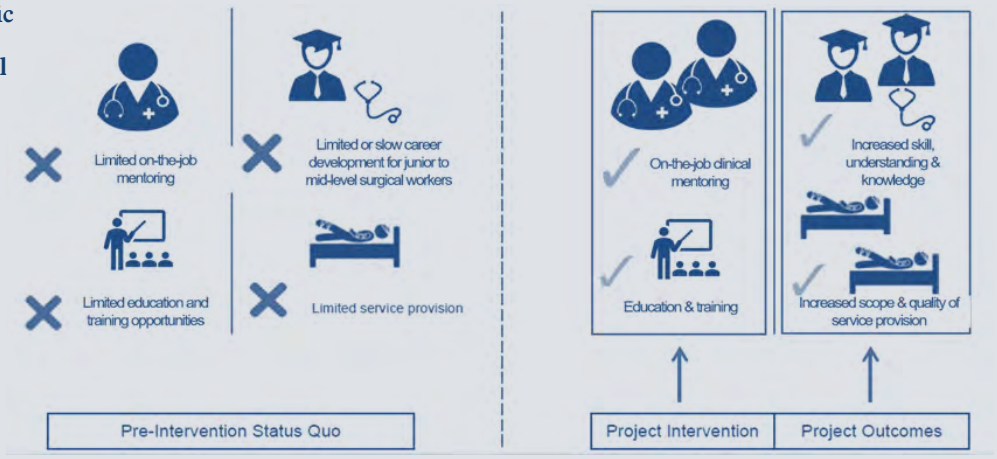
OUR APPROACH

Building surgical self-sufficiency

Gaps in workforce supply is a significant driver of lack of surgical access in PICs. Through the PIP, RACS works with governments and Ministries of Health in PICs to identify their surgical workforce needs and to support hospitals and educational institutions to train the surgical and health care workers needed to meet those needs – including nurses, surgeons, and anaesthetists. RACS does this through academic partnerships and through direct training of clinical and surgical workers to deliver care locally.

At the same time, RACS works with Pacific governments to assist in the development of National Surgical, Obstetric and Anesthesia Plans (NSOAPs). These plans will be nested within National Health Plans and will support policy frameworks that strengthen all domains of the surgical system. RACS also supports the delivery of specialist surgeries in-county and in partnership with Pacific clinical and surgical teams to address urgent patient demand for surgical care, not otherwise available in-country.

Figure 1. The Pacific Island Program intervention model



87% of Pacific health care workers surveyed felt the PIP had been 'very' or 'extremely beneficial'

Image: Young boy patient, Vanuatu 2018. Image used with permission.

THE REVIEW

Methodology

RACS GH conducted a mid-term review of the PIP to assess performance towards its program outcomes and identify opportunities to improve future implementation. The review included analysis of PIP program documents from 2016-2019, monitoring and evaluation (M&E) performance data, 35 key informant interviews and 79 online surveys with Australian and New Zealand-based surgical volunteers and stakeholders, and clinical counterparts in the Pacific.

Program documentation included health sector planning strategy documents and implementation data including clinical trip reports, correspondence describing requests for support, and presentations. These were reviewed for details of inputs, outputs, and outcomes.

The findings section of this paper is based upon these sources and have been corroborated with stakeholders involved in the direct implementation of the PIP including RACS Global Health team members, Pacific partners, regional Australian Department of Foreign Affairs and Trade (DFAT) representatives and RACS volunteers. In October 2020, RACS Global Health held a workshop to test and refine key findings with implementing partners, country stakeholders and surgical fellows and to discuss implications for programming.

KEY FINDINGS – HOW WELL ARE WE DELIVERING AGAINST PLANNED OUTCOMES?

Supported service delivery

Key Achievement: Between 2016 and 2019, the PIP supported the delivery of **over 1,700 surgical procedures** across eight countries and 11 specialties (see Table 2 in separate data table attachment). The largest proportion of these were ear, nose, and throat, followed by plastic and reconstructive, urology and orthopaedic procedures (see Table 3 in separate data table attachment). The number of ENT procedures demonstrates the large demand for ear health services in the Pacific & and a low number of specialised health care workers currently available locally to meet demand.

PIP impact: 90% of Pacific health care workers surveyed **rated the quality of care provided to patients by Visiting Medical Teams (VMTs) as '*excellent*' or '*very good*'**, and none rated the quality of care as '*poor*'. Beyond this, there are important questions about the experience of patients that can be better addressed through PIP monitoring. This includes equity of access to marginalized groups including people with disability.

Areas to address: Whilst Pacific interviewees rated the quality of care provided by VMTs as high, a review of VMT reports suggest some challenges including patient pre-screening, inappropriately sized patient lists and the quality of post-operative care. These issues have been explored in an independent review of Duty of Care commissioned by RACS in 2020 with recommendations to increase pre-and-post procedure debriefing and patient selection frameworks adopted.

RACS has also undertaken a gender audit of its international programs with broader implications for the equity of patient selection which will be explored in the upcoming PIP redesign.

Clinical mentoring

Key Achievement: Since 2016, the PIP has supported **736 clinical mentoring episodes** to Pacific surgical workers to build skills and confidence to deliver surgeries locally. Of clinical mentoring episodes, over half (55%) were provided to female health care workers including surgeons, nurses, and other health personnel. (see Table 4 in separate data table attachment).

PIP impact: Clinical mentoring outcomes are almost entirely anecdotal and therefore difficult to demonstrate. Based on Pacific interview reports, PIP VMTs play a pivotal role in building the confidence of Pacific clinicians at the early and mid-stages of their career by providing exposure to a range of sub-specialties. **87% of Pacific health care workers surveyed felt the PIP had been '*very*' or '*extremely beneficial*'** to their clinical development across a range of clinical areas including pre-screening clinical assessment (57%), and surgical skills (47%; see Table 5 in separate data table attachment).

Areas to address: Many Pacific surgeons reported having long-term collegial relationships with RACS surgical volunteers. Unlike RACS volunteer surgeons, volunteer nurses in the PIP generally visit on a less frequent basis and thus are unable to build long-term relationships with their counterparts. Some Pacific respondents suggested that membership of the Australian College of Perioperative Nurses (ACORN), and long-term commitment to the PIP should be pre-requisites for volunteer nurse selection.

Image: Young girl patient recieving treatment from RACS Fellow, Vanuatu, 2018. Image used with permission.

RECOGNITION OF EDUCATION & TRAINING

Key Achievement: RACS has also supported a range of professional development opportunities through the PIP including classroom-based training and workshops, delivery of formal and accredited courses and the attendance of Pacific health professionals at regional and international conferences. Between 2016 and 2019, **more than 1300 professional development opportunities** were supported by the PIP for Pacific surgical health care workers, of which just under half (45%) were provided to female surgeons and other health professionals.

PIP impact: 87% of Pacific health care workers interviewed found participation in education and training activities to be valuable to their overall professional development. Among Pacific surgeons interviewed, however, there were calls for PIP to support **stronger reporting against competency frameworks, formalised workforce development plans including Continuing Professional Development (CPD), and support training pathways.** Pacific informants also indicated the lack of formalised recognition of skills development as a factor affecting their motivation to participate.

Areas to address: Pacific health care workers urged PIP to support more formalised recognition of skill development through CPD, assessment frameworks and certification (e.g. Graduate Certificate in Perioperative Nursing). As opposed to informal workshops and seminars, health care workers wished to participate in more module-based and accredited courses e.g. *Care of the Critically Ill Surgical Patient (CCrISP®)*, *Emergency Management of Severe Trauma (EMST)*, and *Emergency Management of Severe Burns (EMSB)*. Pacific health care workers also valued informal training or clinical mentoring opportunities but wanted greater recognition for skill development activities supported through the PIP including clinical assessment and the implementation of frameworks to evaluate and verify clinical skill.

Clinical curriculum & resource development

Key Achievement: RACS has supported curriculum development in partnership with professional clinical organisations (including the Pacific Society of Anesthetists (PSA), the Royal College of Pathologists of Australasia (RCPA), the Australasian College of Emergency Medicine (ACEM), and Royal College of Pathologists of Australasia (RCPA). See Table 6 in separate data table attachment.

Together with the Australian College of Perioperative Nursing (ACORN) and the Pacific Community (SPC), RACS has supported the establishment of the Pacific Islands Operating Room Nursing Association (PIORNA) and is supporting 25 nurses to complete a Postgraduate Certificate in Perioperative Nursing through the Australian College of Nursing in 2021.

PIP impact: RACS is committed to increasing the sustainability of in-country training through the development of courses relevant to Pacific needs through the PIP. For courses such as CCrISP®, however, a review of progress reports and informant interviews suggest there are instances where the transition of courses to local delivery by trained Pacific medical educators has been hampered by intellectual property issues.

Areas to address: RACS is well placed to continue to play a gap-filling role in medical education through the PIP while capacity within FNU and Pacific professional clinical organisations (such as Pacific Island Surgeons Association (PISA), PIORNA and PSA) is being built. However, such support needs to be developed with a clear plan for transition to local ownership

Strengthening health systems

Key Achievement: In collaboration with the Pacific Community (SPC), RACS supported regionally endorsed approaches to strengthening policies within specific specialties. For example, the Pacific Ear, Nose, Throat (ENT) and Audiology group developed four regional ENT recommendations that were subsequently endorsed by the Pacific Directors of Clinical Services. Other regionally endorsed approaches to service delivery and professional development have been reported in areas of reproductive health, and for pre- and post-operative patient care. RACS has also worked with Pacific hospital partners (just as at the National Referral Hospital (NRH) in the Solomon Islands) to strengthen clinical governance processes and systems to enhance the quality and safety of patient care including infection and prevention and control.

PIP impact: Several respondents interviewed felt there was work still to be done to improve PIP's strategic alignment to Pacific priorities and that support to date has been opportunistic. Many felt that in the absence of a coordinating framework for surgical development, the PIP has adopted a demand-driven approach which at times has led to clinical and training needs identified through the PIP driving specialised clinical service development.

Areas to address: Both RACS and Pacific Ministries of Health are working towards improving the coordination and prioritisation of clinical support. The Pacific Community (SPC) and others, with RACS providing technical input, are supporting the development of NSOAPs in four PICs supported by PIP (Cook Islands, Fiji Tonga and Vanuatu. When operational, NSOAPs will ensure that programs, such as the PIP, can align with, and contribute to national priorities for improving access to quality surgical care across the Pacific.

Image: RACS surgical visit, Vanuatu, 2018

GOING FORWARD

Five ideas to drive impact

1. NSOAPs provide an opportunity for RACS to develop clear links between activities on the ground and country-level surgical priorities

To deliver against its system-strengthening objectives, the PIP needs to demonstrate clear links to priorities at a country-level and consolidate activities around these. Going forward NSOAPs reflects a unique opportunity for Pacific Island Countries (PICs) to progress on health systems strengthening through strategic planning. To this end, RACS is well placed to continue to support the development and implementation of NSOAPs across pilot countries. For the remaining six Pacific Island countries (Samoa, Solomon Islands, Marshal Islands, Tuvalu, Nauru, and Kiribati) that are focus countries for PIP, future priority setting will require country-level planning and consultation with Ministries of Health, service partners and providers.

The adoption of tools for assessing the surgical burden of a country's population which have been developed and piloted in low-income countries such as Sierra Leone and Rwanda - could also be considered in the Pacific to inform future program development. In addition, there are opportunities for RACS to advance the call for improved surgical data led by The Lancet Commission for Global Surgery which has identified gaps in surgical data among its core priorities for action.

2. Applying regional models of service sharing are central to achieving surgical self-sufficiency & efficiencies of scale

In small PICs, achieving economies of scale for surgical services is a challenge. Regional models of service sharing offer the potential to address this by consolidating workforce training and service provision either through the establishment of specialty hubs or Pacific-based VMTs. This approach has been adopted by other small-island regions, such as the Eastern Caribbean Network of Care for Specialized Clinical Services, and was proposed in the 2015 evaluation of DFAT's regional specialised clinical services program and the 2020 mid-term review of the PIP.

A specialty hub would see patients referred for surgery and able to travel within the Pacific for treatment. This is particularly relevant for services such as cardiac surgery that require large teams of specialists, specialized equipment and adequate facilities. Alternatively, the establishment of a Pacific VMT would require surgical teams to travel within the region to address patient needs.

3. Outcome measurement needs to address clinical capacity development and link to Pacific clinical competency frameworks

Increasing the focus on program outcomes is a challenge, due to the long-term and highly technical nature of clinical capacity development. Measuring changes in individual surgical skills is also challenged by a lack of clinical evaluation frameworks in the Pacific.

Efforts to improve clinical monitoring and assessment could include support for the development of individual performance metrics for surgical competence; the building of data registries and clinical logs; and strengthening of formal (i.e. audit, review and evaluation of clinical practice) and informal (i.e. on the performance feedback and coaching) mechanisms to provide feedback on clinical performance.

Feedback to surgeons and other health care workers on their performance is essential for fostering better surgical care and is strongly supported by Pacific clinicians and survey participants. Within this broader reform effort, RACS is well-placed to play a supporting and advisory role. However, improvements must be led by Pacific Ministries of Health, hospital administration and Pacific professional boards if they are to have enduring relevance and value.

4. RACS should look to expand support through joint efforts with medical specialty colleges

Needs for specialised clinicians differ by country. However, there was broad agreement on the need to upskill nurses and other support services across related medical specialties related to surgery, such as diagnostic services including pathology and radiology, as well as post-operative and rehabilitation care. Expanding support across related surgical support areas has clear benefits.

To provide coordinated support RACS should look to expand its services through partnerships with other medical Colleges, as well as development partners with specialist expertise, and local partnerships with community-based organisations, Disabled People's Organisations and local Non-Governmental Organisations (NGOs).

5. Clinical education must be supported by Pacific ownership

The PIP has supported Pacific clinicians to study a range of surgical skills training courses such as Care of the Critically Ill Surgical Patient (CCrISP). However, due to COVID-19, Pacific clinicians have not been able to undertake courses provided by RACS in Australia. Likewise, RACS clinical educators have not been able to travel to the Pacific to provide courses in-country. Due to the practical, hands-on nature of these skills training courses, they cannot be fully converted to an online format. As such, it is critical that Pacific clinicians can access these courses through local institutions. Local delivery of training is vital to the ongoing sustainability of clinical education, particularly in the context of COVD-19. Therefore, agreements that enable local delivery of clinical training need to be brokered. To support this, RACS plans to work with Pacific partner universities and surgical colleges in the United States and the United Kingdom to work through promulgation processes and intellectual property issues so that accredited courses such as CCrISP, that are in high demand and build surgical skills can be delivered by Pacific educational institutions.

Image: Child patient with mother, Vanuatu, 2018.

SUMMARY

Amidst surging surgical demand in Pacific Island Countries (PICs), the PIP remains a relevant model to support specialised clinical service delivery and build surgical workforce capacity. The PIP has successfully incorporated a strong emphasis on capacity-building through a multi-pronged approach of in-country, regional, overseas, and professional development opportunities. However, this needs to be matched with a stronger focus on demonstrating workforce development outcomes.

Going forward, this could be supported through the adoption of clinical frameworks and standards for surgical competency at a national or regional level with clear opportunities for RACS to support this within the next phase of PIP's implementation. The development and implementation of these clinical frameworks and standards need to be led at a national level and implemented by Pacific health administrators if they are to have ongoing relevance and value with RACS most likely playing a supporting and advisory role.

The training of more Pacific clinical educators represents a clear opportunity to support surgical workforce development and self-sufficiency. For this to be successful, RACS needs to work with curriculum providers and Pacific institutions to resolve issues relating to intellectual property. Local delivery of clinical education is central to ensuring the sustainability of Pacific workforce development.

Other options to strengthen PIP's impact have been discussed in the form of the development of a regionalisation strategy for Pacific service-sharing. Such a model would seek to foster surgical self-sufficiency through regional care networks or hub-and-spoke service models.

Going forward NSOAPs reflects a unique opportunity for PICs to make progress on global goals such as Universal Health Coverage and the United Nations Sustainable Development Goals. This will need to be supported by RACS and other actors through partnerships that embrace the collective strengths of both national and global actors to deliver safe and affordable surgical care for Pacific Island communities.

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