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## **Activity Completion Report**

Australia Timor-Leste Program of Assistance for Specialist Services (ATLASS)

Timor-Leste

Royal Australasian College of Surgeons

30 November 2012

General information .....	3
Executive Summary .....	5
Activity Summary .....	7
1. Summary Data .....	7
2. Activity Description .....	10
3. Expenditure / Inputs .....	11
4. Approach / strategy adopted and key outputs received .....	11
5. Key outcomes .....	14
6. Expected long-term benefits and sustainability .....	23
Overall assessment.....	28
6. Relevance .....	28
7. Appropriateness of objectives and design .....	29
8. Implementation Issues.....	30
9. Lessons Learned.....	32
10. Recommendations for further engagement.....	33
11. Handover/exit arrangements .....	34
Annex A – Other donor funding .....	36
Annex B – Case studies of successful health outcomes .....	37
Annex C – Testimonials.....	39

## **General information**

### **Abbreviations and Acronyms**

AETSSP	Australia East Timor Specialist Services Project
AOA	Australian Orthopaedic Association
ASC	Annual Scientific Congress
ASSERT	Assosiasaun Hi'it Ema Ra'es Timor Loro sa'e
ATLASS II	Australia Timor-Leste Program of Assistance for Secondary Services
AusAID	Australian Agency for International Development
BME	Biomedical Engineering
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
ED	Emergency Department
ENT	Ear, Nose and Throat
ETEP	East Timor Eye Program
ETBU	East Timor Blind Union
FN	Fo Naroman
HNGV	Hospital Nacional Guido Valadares
IPMC	International Projects Management Committee
LTA	Long-Term Advisor
M&E	Monitoring and Evaluation
MEF	Monitoring and Evaluation Framework
MoH	Ministry of Health
NHSSP	National Health Sector Strategic Plan 2011-2030
OT	Operating Theatre
PMC	Program Management Committee
PG	Postgraduate
RACS	Royal Australasian College of Surgeons
SDP	Australia-Timor-Leste Strategic Planning Agreement for Development 2011
STGs	Standard Treatment Guidelines

UNTL            Universidade Nacional de Timor Loro sa'e

UPNG           University of Papua New Guinea

**The Royal Australasian College of Surgeons certifies that this ACR has been completed in accordance with Activity Completion Report, registered #184, May 2011**

## Executive Summary

The Australia Timor-Leste Assistance for Specialised Services (ATLASS) Program commenced in Timor-Leste in October 2006 as a 4.75 year program with funding from the Australian Government through AusAID. The Royal Australasian College of Surgeons (RACS) was contracted as the implementing agency and worked closely with the Timor-Leste Ministry of Health (MoH) to deliver the program. ATLASS underwent two program extensions in 2011 and 2012 to allow sufficient time for the design of the new program phase.

The overarching goal of the ATLASS Program was to contribute to improved health outcomes for people with surgically treatable illness, disability or trauma in Timor-Leste. Specifically, the ATLASS Program aimed to improve the availability and quality of essential general and specialist surgical services in Timor-Leste.

At the end of the Program in June 2012, the Program's total budget was \$9.37 million over 5.75 years.

ATLASS achieved a range of key outcomes towards improving the availability and quality of essential general and specialist surgical services in Timor-Leste through the delivery of activities under four components - Long-Term Training, Mentoring and Capacity Building; Short-Term Specialist Support and Planning; Institutional Linkages Initiative; and Program Management and Monitoring:

- Strengthened capacity and clinical skills of a core group of Timorese clinicians in general surgery, ophthalmology, anaesthetics and peri-operative nursing through a combination of in-country mentoring delivered by long term advisers (LTAs), as well as short courses and out-of-country specialist training.
- Increased participation of surgical trainees in operations - 95% of all operations undertaken in 2011 were done or assisted by one or more surgical trainees, increased from 51% at the beginning of ATLASS.
- Increased access to safe anaesthesia in the districts, with every hospital in the country now having at least one qualified nurse anaesthetist.
- Strengthened emergency care management at the national hospital through the placement of a long term emergency physician.
- Improved trauma management skills of Timorese medical personnel through delivery of Primary Trauma Care (PTC) courses at the Hospital Nacional Guido Valadares (HNGV) and referral hospitals.
- Increased access to surgical and other clinical care for people in rural and remote communities through short-term specialist visits and outreach by LTAs and visiting teams.
- Establishment of a number of key linkages with Australian and other overseas institutions to provide targeted support for surgical and other clinical care and support services, resulting in improvements in clinical skills and service delivery, most notably in emergency medicine in partnership with St Vincent's Hospital, Melbourne, and a partnership approach to training for treatment of club foot using the Ponseti method.
- Effective and efficient management of the Program in a challenging, resource-poor and politically volatile environment.

The Program's inherent flexibility allowed it to respond to changing health priorities and to feedback from evaluative reviews. Short and long-term training attachments in- and out-of-country were successful in producing Timorese specialists in general surgery, ophthalmology and anaesthetics. LTA mentoring and capacity building has and continues to demonstrate success in building and cementing capacity and capability. The Program also provided a very high quality of continuous clinical cover at the HNGV. The short-term visiting teams' schedule was exceptionally successful, and provided specialist services in the country's districts.

The Program encountered some difficulties in recruiting LTA surgeons for some periods of the Program. However, the rotation of a bank of Timor experienced international surgeons when a long

term (12 months) surgeon was unavailable limited the negative impact of recruitment problems of shorter deployments of the surgeon.

In the early stages of ATLASS there were also challenges with a lack of potential trainees to choose from, however this significantly improved by the end of the Program.

The need for a more robust monitoring and evaluation (M&E) framework/system and baseline data was identified as crucial to enable effective tracking of progress towards objectives and reporting of outcomes – this will be incorporated into future activities. Activities to support the strengthening of institutional linkages resulted in some successful collaborations but were ultimately not found to be strategic and sustainable and will not be incorporated as a specific component into the future program.

The ATLASS Program has contributed to the development of a skilled and capable health workforce in Timor-Leste. Program activities have centred on improving the skills, expertise and capacity of Timorese specialists, a core group of whom are now well placed to lead the delivery and future development of clinical services across the national and referral hospitals. Significant gains in the development of a specialist health workforce have been seen in the lifespan of the Program; however the need for donor support remains for the medium to long-term to ensure self-sufficiency and sustainability in the provision of clinical services in order to consolidate safe, quality services and clinicians capable of meeting the country's specialist health demands.

The MoH has requested for RACS and AusAID to deliver ATLASS Phase II, which draws on the strengths as well as lessons learnt during ATLASS, by focusing on training and capacity development that will solidify specialist healthcare in Timor-Leste.

## Activity Summary

## 1. Summary Data

The overarching goal of ATLASS was to contribute to improved health outcomes for people with surgically treatable illness, disability or trauma in Timor-Leste. The ATLASS Program aimed to improve the availability and quality of essential general and specialist surgical services for the people of Timor-Leste.

The Program involved a range of activities across four specific component objectives:

1. Long-Term Training, Mentoring and Capacity Building
2. Short-Term Specialist Support and Planning
3. Institutional Linkages Initiative
4. Program Management and Monitoring

### 1.1 Map of Timor-Leste



## 1.2 Key Dates

Design	July 2006
Commencement	1 October 2006
Review	2007, 2009
First Program extension	June – December 2011
Second Program extension	January – June 2012
Completion	30 June 2012

### 1.3 Approved and actual financial expenditure

Table 1.1: ATLASS Sources of funding

Source	Approximate Value (\$A)	Purpose
<b>Government of Australia through AusAID</b>	<b>\$9.37 million</b>	Support for the delivery and development of specialised clinical services in Timor-Leste
<b>Volunteer contributions</b>	\$1.64 million	Provision of specialist services and training support
<b>Other donors and funders</b> – Orthopaedic Outreach, Optometry Giving Sight, St John Ambulance, Eye Surgery Foundation WA, ASOHNS, Rotary clubs, RANZCO, Self-funded volunteers (note: a full list of other donor funding is provided at Annex A)	\$1.5 million	Provision of medical supplies and consumables, funding for team members
<b>Medical company donations (ALCON)</b>	\$322,000	Alcon Medical provided 500 eye packs per year
<b>RACS International Travel Grant</b>	\$25,000	Registration support for a number of relevant conferences and training
<b>Voluntary Clinical Director</b>	\$103,500	Providing clinical governance oversight of program
<b>Voluntary Speciality Coordinator contribution</b>	\$222,188	Provision of clinical direction for the specialist visits

The Program also received discounts on car rental and subsidised domestic air travel.

#### 1.4 Donor and Partner Government management and contracting arrangements

Division of responsibilities within ATLASS have been clearly defined from the start and management arrangements of the contract have worked well over the life of the Program. All in-country liaison and support for the effective delivery of Program activities has been facilitated through the Dili-based program management team under the direction of the Team Leader and incorporating national staff. A Program office was maintained over the life of ATLASS at the HNGV. The strong corporate knowledge of national staff and their established relationships with key stakeholders within the health and government sector have added to the overall effectiveness of the Program.

Program management staff in Melbourne have provided overall contractual and operational management for the effective administration of the Program. Regular communication between the Melbourne and Dili offices has ensured the efficient delivery of activities.

Responsibilities of the MoH have included maintaining salary payments for health workers; assisting in the identification of suitable trainees and providing them with sufficient time off to undertake



training; chairing and participating in Program Management Committee (PMC) meetings; and providing suitable accommodation at HNGV for the long term anaesthetist and general surgeon and providing the support office.

The Second Secretary – Development Cooperation was the AusAID counterpart in Dili for the Program. AusAID responsibilities included the provision of strategic input and advice; monitoring implementation; participation in PMC meetings; and regular liaison with the Program management team in Dili and Melbourne.

### **1.5 Activity governance arrangements**

ATLASS held twice yearly PMC meetings in-country which provided a forum for endorsing annual work plans, considering progress towards achieving stated objectives and discussing issues pertinent to the Program. The PMC meetings were chaired by senior representation from the MoH. Attendees included representatives from the MoH, HNGV, referral hospitals, AusAID and RACS. The PMC meetings and regular consultation with key stakeholders ensured that the delivery of services was aligned with Timor-Leste's national health priorities. The Volunteer Project Director was responsible for providing technical guidance and strategic oversight to program direction, ensuring quality implementation and alignment of program activities with stated objectives. ATLASS has been fortunate to be guided by two experienced and dedicated volunteer Project Directors, who have added great value to strategic planning, particularly with regards to clinical activities, and decision-making.

Volunteer speciality coordinators were appointed for each surgical speciality and assisted with the identification and verification of suitable specialist volunteers; provided technical advice and input; and helped to monitor activities and issues arising within their specialty.

The RACS International Projects Management Committee (IPMC) meetings are held annually and provide an opportunity for volunteer Project Directors and Speciality Coordinators from all of RACS' International Development programs to analyse issues and discuss lessons learned across the programs in the Pacific Islands, Papua New Guinea (PNG) and Timor-Leste. The IPMC reports to the International Committee of RACS which meets three times a year. The International Committee also reviews and monitors RACS International program activities and sets policies and guidelines for RACS' international activities. All governance arrangements and inputs are honorary and provided on a pro bono basis.

Wherever possible, the ATLASS management team also capitalised on meetings with Timorese surgical trainees and relevant stakeholders attending the RACS Annual Scientific Congress (ASC) and other meetings in the region. Visiting specialist teams were always encouraged to hold debrief sessions with hospital administration and local counterparts at the conclusion of each visit as an opportunity to discuss the outcomes of the visit, any issues arising and recommendations for future engagement.

### **1.6 Aid modalities used**

The Program's main aid modality was technical assistance, provided in the form of both long- and short-term specialist assistance, teaching and mentoring, scholarships and procurement.

RACS also collaborated with a number of external organisations to deliver complementary services, which have maximised the effectiveness of ATLASS-funded activities. For example, as a member of the Vision 2020 (V2020) Australia Global Consortium, RACS has had access to supplementary funding support to deliver eye health activities in accordance with the stated objectives of the Australian Government's Avoidable Blindness Initiative (ABI). This additional support has allowed the significant expansion of eye health activities and the development of a comprehensive and sustainable eye care system for Timor-Leste. RACS has worked closely with the MoH, the Fred Hollows Foundation New Zealand (FHFNZ) and Australia, and other national and international non-government organisations to deliver a range of eye health activities. Furthermore, RACS has a long standing and effective relationship with ProVision and Optometry Giving Sight (OGS), which have provided funding for two optometrists to accompany each visiting ophthalmology team. The ophthalmology teams have also received considerable financial support from the Eye Surgery

Foundation, St John's Ambulance and various other charitable organisations. The external expertise and input has been vital in ensuring that the Timorese community have access to eye care services, while national capacity is being developed further.

In addition, RACS worked closely with the Rotary Club of Balwyn, Victoria, to develop the Primary Ear Care Project. The project was established in response to an identified need for improved ENT services to manage preventable deafness due to chronic middle ear diseases, particularly in school aged children. Activities that were delivered by the Primary Ear Care Project were designed to increase accessibility and availability of ear care services through training, outreach and awareness raising.

Many ATLASS volunteers also generated additional funding to support extra team members, and procurement of additional medical supplies and equipment to supplement resources purchased through the Program. The majority of unused medical disposables were subsequently donated to local hospital at the end of the visit.

## **2. Activity Description**

### **2.1 Background and Rationale**

Australia is the largest donor to the health sector in Timor-Leste. After the departure of Indonesia from Timor in 1999, much of the country's service delivery system, including its health system, was in tatters. Many staff, including doctors, had left the country. The Australia East Timor Specialist Service Project (AETSSP) was initiated in 2001 at the request of the Timorese MoH and the United Nations Transitional Administration in East Timor to help address the severe shortfalls in specialised medical and clinical services at the time.

When AETSSP came to an end in September 2006, the MoH requested the Australian Government and RACS to continue support for specialist medical and clinical services through the design and implementation of ATLASS. ATLASS represented a progression towards a more demand-driven program with a much stronger emphasis on capacity building than in AETSSP. At the time of design of ATLASS, careful consideration was given to the emerging priorities of the MoH, which included greater decentralisation of health care through the five referral hospitals, establishment and consolidation of standards of clinical care and building the capacity of the medical workforce. ATLASS commenced in October 2006 and concluded in June 2012.

### **2.2 Goals and objectives**

The original goal of ATLASS was "to improve the health status and outcomes of people living in Timor-Leste with surgically treatable illness, disability or trauma". In 2008 the Program's goal was revised to "contribute to improved health outcomes for people with surgically treatable illness, disability or trauma in Timor-Leste". This change was a result of a recommendation by the Program Review and Evaluation Team (PRET) 2007, which recognised that the original aim was too broad to be realistic and achievable for the Program, as it was just one contributor to improving the health status of Timorese people, not the sole contributor. The purpose or end of program outcome for ATLASS was "to improve the availability and quality of essential general and specialist surgical services for the people of Timor-Leste."<sup>1</sup>

ATLASS comprised four components, each with a specific objective:

#### *Component 1 - Long-Term Training, Mentoring and Capacity Building*

To strengthen general surgical, anaesthetic and peri-operative nursing capacity and clinical skills through a combination of in-country mentoring and short courses and out-of-country specialist training.

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<sup>1</sup> Independent Progress Report, 30 June 2010, p1.

*Component 2 - Short-Term Specialist Support and Planning*

To support surgical and other clinical care through short-term specialist visits and/or outreach to regional communities by long-term advisors

*Component 3 - Institutional Linkages Initiative*

To provide targeted support for surgical and other clinical care and support services through strategic linkages with Australian and other overseas institutions

*Component 4 - Program Management and Monitoring*

To manage the Program effectively and efficiently, and maintain a Program office at the HNGV

### **3. Expenditure / Inputs**

The overall budget from AusAID for ATLASS under the original contract was AUD\$8.15 million. ATLASS underwent two program extensions (from July – December 2011 and from January – June 2012) to allow sufficient time for the design of the new program phase. These program extensions each necessitated an increase in budget to allow the continuation of core activities, bringing the total Program budget to \$9.37 million over 5.75 years. At the end of its contract in June 2012, the Program reported total expenditure of \$8.99 million.

The key activity inputs for ATLASS were human resources, expertise and equipment.

Disposable medical supplies and essential equipment were procured to support the self-sufficiency of the visiting teams and the delivery of high-quality specialist services by the in-country resident team. The total amount of supplies, equipment and consumable procurement for ATLASS was \$813,130

In November 2010, a financial and systems audit commissioned by AusAID of the RACS International Development Programs concluded that the internal systems, procedures and controls employed by the RACS were operating in an efficient and effective manner.

Payment of claims for the provision of services and activities were made in arrears in accordance with contract terms. No funds were provided in advance by AusAID except for the continued support of Timorese surgical trainees currently completing their specialist training in Bandung, Indonesia, Port Moresby, PNG and Suva, Fiji.

### **4. Approach / strategy adopted and key outputs received**

One of the aims of AETSSP was to train Timorese doctors, but the project was required to focus predominantly on service provision in Dili because the immediate needs were overwhelming and the numbers of Timorese doctors working clinically was extremely limited. This situation had considerably improved by the end of AETSSP and as a result ATLASS was designed as a more flexible program, supporting the training and mentoring of Timorese doctors and nurses and extending sub-specialty services to the districts. Through a combination of fixed resources and fully-flexible inputs, the Program's strategy was to respond to changing MoH priorities within well-defined areas. The inherent flexibility in the Program's design allowed RACS to respond appropriately to evolving requests and priority health needs of the country.

RACS has been able to deliver high-quality clinical services to Timor-Leste through a resident surgical and anaesthetic team, nursing support followed by emergency care input for a limited time as well as through short term advisors. As required and requested, the resident team and visiting specialists have provided technical advice and guidance to the MoH and HNGV.

Specifically, the Program aimed to improve the availability and quality of clinical services through four over-arching strategies:

#### **1. Deploying Long-Term Advisers to Timor-Leste**

ATLASS funded long-term positions at HNGV in Dili for a general surgeon, an anaesthetist, an orthopaedic surgeon, an emergency physician and a nurse with skills and experience in peri-operative

nursing as well as an ICU nurse. Through the presence of the LTAs, ATLASS provided a very high quality of continuous clinical cover at the HNGV.<sup>2</sup> The LTAs were specifically tasked to collaborate closely with the HNGV to provide in-service training and assist with systems strengthening, quality assurance and other types of capacity building for Timorese clinical staff and counterparts. To facilitate a 'learning by doing' approach to in-country training and mentoring, the LTAs were able to participate in the clinical and on-call rosters at HNGV and in clinical outreach activities to referral hospitals.

### **Key Outputs**

- The Program employed a General Surgeon from October 2006 onwards, ensuring improved surgical services were available, as well as continuous and high-quality training and supervision to Timorese surgeons and surgical trainees. In the period October 2006 to June 2012, the LTA General Surgeons provided 2,246 operations at HNGV.
- The Program employed an Anaesthetist continuously from October 2006 to June 2012, ensuring improved anaesthesia services at HNGV and on outreach visits, and continuous, high-quality training and supervision for Timorese Nurse Anaesthetists. In the period October 2006 to June 2012, the LTA Anaesthetist delivered 3824 anaesthetics at HNGV.
- Two LTA Nurses were employed between May 2007 and June 2009, providing training, supervision and support to improve standards of intensive care and peri-operative nursing. This input ceased as recommended by the PRET as it was agreed that a "whole of hospital" nursing approach was required. It was agreed to let the St John of God's Hospital's program of support for nursing development take on this responsibility and ATLASS to re-direct the funds for the nurses to supporting emergency care management.
- An Emergency Physician was employed during 2010 and for most of 2012, strengthening emergency care at HNGV.
- An LTA Orthopaedic surgeon was deployed from late 2010 onwards with some intermittent gaps due to problems with recruitment of an appropriately qualified orthopaedic surgeon. The LTA Orthopaedic Surgeon facilitated the procurement of basic orthopaedic equipment for HNGV and commenced orthopaedic outreach activities. The orthopaedic surgical service performed 222 operations in periods between October 2010 and June 2012.

## **2. *Supporting a range of short-term specialist medical teams and individuals to provide essential services otherwise not available in Timor-Leste.***

Capacity to deliver specialist clinical services in post-conflict Timor-Leste is still limited. The short-term specialist visiting medical teams were designed to meet priority health needs, with a focus on extending services to the referral hospitals and training local healthcare workers. As noted in the Independent Progress Review (IPR) report of November 2010, the short-term visits were a highly cost effective service as the participating team members are volunteers.

### **Key Outputs**

- Specialist surgical and medical services were provided by visiting teams and individual specialists over 90 visits to Timor-Leste. In the period 2007–2012, the short-term visits performed 2275 operations and 11,474 consultations and treatments in seven sub-specialty areas: Orthopaedic surgery, Paediatric surgery, Paediatric Cardiac surgery, Ophthalmology, Plastic and Reconstructive surgery, Ear Nose and Throat (ENT) surgery and Urology.
  - 61.1% of the operations occurred at hospitals outside Dili.
- ## **3. *Supporting selected Timorese doctors to undertake and complete out of country specialist training in general surgery and anaesthesia; in-country training of selected Timorese doctors in urology, cleft lip surgery and burns management, and orthopaedic surgery; and providing in-service supervision and technical support for Timorese Nurse Anaesthetists.***

The Program's approach to building capacity placed emphasis on clinical training. The inherent flexibility of the Program allowed it to respond to emerging capacity or skills gaps and other priorities

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<sup>2</sup> Independent Progress Report, 30 June 2010, p7.

as identified by the MoH, HNGV and/or referral hospitals. ATLASS was the only program in Timor-Leste to provide preparation support for doctors undertaking specialist training overseas, and integration support upon their return.

Surgical and anaesthetic training focused on preparing Timorese doctors to work independently as surgeons and anaesthetists under prevailing conditions in Timor-Leste, and to support them to assume a leadership role in clinical mentoring for colleagues returning from overseas medical training – and eventually also those graduating from the new medical school in Dili.

#### **Key Outputs:**

- The Program trained the country's first ophthalmologist, Dr Marcelino Correia in Timor, Nepal and in Australia where he obtained a Masters of Medicine (MMed) in International Ophthalmology. Dr Correia completed training in 2009 and is now working as an ophthalmologist at the National Eye Centre (NEC).
- The Program trained Timor's second general surgeon, Dr Joao Pedro Xavier, who successfully completed his MMed in Surgery at the University of Papua New Guinea (UPNG) and returned to Timor-Leste at the end of 2010.
- The Program trained the country's first anaesthetist, Dr Flavio Brandao, who completed his MMed in Anaesthesia at the Fiji School of Medicine and returned to Timor-Leste in December 2011.
- Dr Nilton Tilman successfully passed his MMed Part 1 examinations and was admitted in 2010 to commence his MMed Part 2 program in general surgery at the UPNG.
- Dr Alito Soares was supported to develop his skills in both orthopaedic and general surgery. Dr Soares was accepted into formal training in general surgery at Fiji National University in 2010. He passed the Diploma in Surgery the first time and was accepted onto the MMed in Surgery program.
- Dr Evangelino Soares was prepared by ATLASS for formal specialisation in general surgery. In 2010 he entered the surgical training program at University of Bandung, Indonesia where he is progressing well.
- 12 Nurse Anaesthetists were trained in a one-year training program run by the Institute of Health Science (IHS) in Dili. Together with the nine trained under AETSSP, ATLASS and AETSSP are almost exclusively responsible for the training and provision of all the accredited Nurse Anaesthetists working in Timor-Leste.
- ATLASS started training Dr Joao Ximenes in cleft lip surgery and burns management under the guidance of the visiting plastic surgeon, Mr Mark Moore. Dr Joao Ximenes is now able to perform simple cleft lip surgeries.
- The Program is training Dr Joao Pedro Xavier in open urological procedures under the guidance of the visiting urologist, Mr Don Moss. Dr Joao Pedro Xavier is now able to perform Open Prostatectomies under minimal guidance.
- Dr Edgar Morato was identified and supported by the short-term visiting ENT specialists to develop his interest in ENT surgery. He left for Indonesia in 2011 on an MoH scholarship to specialise in ENT surgery.
- Dr Saturnino Saldanha undertook a clinical training attachment in Perth to prepare for the final exams in orthopaedic surgery in Malaysia where he has been training. Dr Saldanha was one of the first trainees under AETSSP and he was supported privately by an ATLASS LTA surgeon to train in Malaysia. With additional support from ATLASS in 2012, Dr Saldanha passed his final exam in November 2012 and is now Timor-Leste's first qualified orthopaedic surgeon.

#### **4. *Supporting selected Timorese doctors, nurses and other categories of health workers to undertake a range of in-country and targeted overseas short courses and training attachments to strengthen their skills and capacity, gaining leverage from institutional linkages with Australian and other international partners.***

In addition to the provision of clinical capacity building through in- and out-of-country training, the Program also facilitated participation in short courses and training attachments to strengthen skills and capacity.

#### **Key Outputs**

- The ATLASS LTA Emergency Physician delivered two-day Primary Trauma Care (PTC) courses to healthcare workers at all five referral hospitals. 72 participants were trained in PTC in 2010, from five districts - Oecussi (16), Suai (11), Baucau (14), Maliana (16) and Maubisse (15).
- One Timorese doctor and two nurses completed a training attachment in the ED at St Vincent's Hospital in Melbourne, resulting in the Timorese team returning and re-designing the patient flow in the ED at HNGV and a number of reported improvements.
- Surgical trainees completed training attachments at Geelong Hospital and Royal Adelaide Hospital; Dr Soetomo General Hospital in Surabaya and Sanglah Hospital in Bali, Indonesia; Tilganga Institute in Nepal; and Nerayana Nethralaya Institute in Bangalore, India. ICU and OT nurses also completed training attachments. The result of these attachments was improved morale, transfer of skills and introduction of some improvements in processes.
- Drs Alito Soares, Nilton Tilman, Evangelino Soares, Edgar Morato completed Basic Surgical Skills (BSS) training in Australia.
- Dr Joao Pedro Xavier completed an Early Management of Severe Trauma (EMST) course in PNG and he and Dr Mendes Pinto have completed the Disaster Preparedness Training program run by the National Critical Care and Trauma Response in Darwin.
- Dr Joao Ximenes and three nurses completed two training workshops in Burns Management in Surabaya, Indonesia which have led to them setting up a simple but effective burns care protocol at the HNGV.
- Joao Ximenes also attended a plastic surgery workshop in Fiji and he did the EMSB course.
- Dr Flavio Brandao did the EMST and EMSB courses in Fiji.
- Dr Mendes, Dr Joao Pedro Xavier and Dr Joao Ximenes completed Surgical Master classes at the RACS Annual Scientific Congresses they attended.
- Dr Joao Pedro Xavier and Dr Flavio Brandao completed an intensive English-language course in Darwin which contributed significantly to their success in coping with their MMed courses in PNG and Fiji respectively.<sup>3</sup>
- In partnership ASSERT, a local non-governmental organisation in Timor-Leste, the Australian Orthopaedic Association (AON) philanthropic arm Orthopaedic Outreach, and the MoH, workshops and practical training sessions in the non-invasive Ponseti method for treating club foot were delivered to Timorese doctors, midwives, clinic nurses and physiotherapists from across Timor-Leste's 13 districts. The treatment is now available in four districts. In addition, two Timorese doctors, Dr Joao Ximenes and Dr Alito Soares, are now competent in the tenotomy procedure.<sup>4</sup>

## 5. Key outcomes

The overall expected program goal was to “contribute to improved health outcomes for people with surgically treatable illness, disability or trauma in Timor-Leste”. The ATLASS Program’s Monitoring & Evaluation (M&E) system was not resourced to systematically collect data at this high development level. As stated in the 2010 IPR, there is a plausible and sufficient link between the high quality of services ATLASS provided and the likelihood that patients experienced an improved quality of life and a reduction in disability or adverse outcomes of trauma.<sup>5</sup> Annex B presents a selection of stories illustrating positive health outcomes for patients treated through ATLASS specialists.

More immediate development outcomes were articulated as ‘objectives’ specific to the Program’s components. These are demonstrated in the table below:

<sup>3</sup> Two trainees [Alito Soares and Evangelino Soares] attended ASSET training in Basic Surgical Skills (BSS) in 2009; Joao Ximenes attended the EMSB; Joao Pedro Xavier and Saturnino Saldanha attended Masterclasses at ASC and 2 trainees [Joao Pedro Xavier and Flavio Brandao] attended English training in Darwin. Joao Ximenes also attended the BSS course in Australia and so did Dr Edgar Morato. What about Nilton?

<sup>4</sup> D. McNicol, Progress Report of the Ain Kleuk (Club Foot) Detection and Treatment Program In Timor Leste, December 2010.

<sup>5</sup> Independent Progress Report, 30 June 2010, p7.

Expected Outcome	Outcome Achieved	Evidence
Strengthened capacity and quality of surgical, anaesthetic, emergency and peri-operative nursing workforce. <sup>6</sup>	<p>ATLASS has contributed to the establishment of Timor-Leste's first cohort of specialised medical personnel. Capacity has been developed in general surgery and ophthalmology cleft lip surgery, burns management, paediatric surgery, orthopaedic surgery and urology skills have been developed. The existence of a permanent, local, skilled specialist health workforce in Timor-Leste will contribute to improved health outcomes for the population in the long term.</p> <p>There has been a marked increase in the competence and confidence of the national workforce to independently provide a range of specialised services. The Timorese practitioners are recognised as skilled and reliable and achieve consistently good patient outcomes in a resource-poor and challenging environment.</p> <p>The anaesthetic workforce was strengthened through the training and mentoring of Timor-Leste's first qualified anaesthetist. The 12 Nurse Anaesthetists completed training under ATLASS and together with those trained under AETSSP (nine), form the backbone of anaesthetic services in the country.</p> <p>The Program has contributed to increased capacity of nurses at HNGV, with better standards and quality practices in place for the safe delivery of intensive, surgical and post-operative care.</p> <p>PTC courses trained a cohort of doctors, nurses and other healthcare workers in life-saving trauma management skills across all six hospitals.</p> <p>New and emerging workforce needs were also met through, for example, the up-skilling of nurses at HNGV to care for burns patients to support the work of Dr Joao Ximenes; as well as primary ear care nurse training to complement the development of ENT surgical services.</p>	<p>First national ophthalmologist, Dr Marcelino Correia, based at the National Eye Centre (NEC);</p> <p>Second general surgeon, Dr Joao Pedro Xavier, based at HNGV;</p> <p>First anaesthetist, Dr Flavio Brandao, based at HNGV;</p> <p>Dr Nilton Tilman is completing general surgery training at UPNG through ATLASS support. He will finish his training in 2014;</p> <p>Dr Alito Soares is training in orthopaedic and general surgery at Fiji National University with ATLASS support. He will finish his training in 2014;</p> <p>Dr Evangelino Soares is specialising in general surgery at University of Bandung, Indonesia. He will finish his training in 2014;</p> <p>In-country specialist training in cleft lip surgery and burns management for Dr Joao Ximenes who can now perform simple cleft lip surgery, unassisted.</p> <p>The trainees are consistently operating more independently; reports from resident team and specialist visits, as well as personal communication from the surgeons and trainees, indicate increased skill, professionalism and confidence amongst surgeons and surgical trainees.<sup>7</sup> Please see Section 6 '<i>Long-term Benefits and Sustainability</i>'.</p> <p>12 Nurse Anaesthetists trained in a one year training program run by the IHS. ATLASS and AETSSP are exclusively responsible for the training of <i>all</i> the accredited Nurse Anaesthetists working in Timor-Leste, who effectively supply</p>

<sup>6</sup> Initially this component was directed towards surgery, anaesthesia and peri-operative nursing only. In response to changes in 2009, the component was amended to include a focus on emergency medicine and emergency medicine training for doctors and nurses. This expected outcome has thus been amended to reflect the expected outcomes from 2009 onwards.

<sup>7</sup> See, for example, RACS LTA Progress reports, January – March 2012 and April – June 2012.

Expected Outcome	Outcome Achieved	Evidence
		<p>100% of anaesthetics at the referral hospitals and safely manage emergency obstetric care.<sup>8</sup></p> <p>Reports from the resident team and specialist visits indicate increased abilities in nursing at HNGV.<sup>9</sup> The nurses were up-skilled through a series of activities including training in wound care, infection control practices, patient assessments, the use of ventilators, sterilisation techniques, assisting in theatre and safe drug administration.</p> <p>Nursing staff collaboratively developed clinical quality management processes. Clinical audits were conducted to illustrate progress and areas for improvement. Reports show observable improvements in nursing care and understanding of good nursing practices.<sup>10</sup> Better patient flow and triage in the ED is also in evidence.<sup>11</sup></p> <p>In-country and overseas practical training was attended by Timorese surgeons, doctors and nurses, including in Emergency care, PTC and the Ponseti method.</p> <p>Reports from visiting ENT and Plastic and Reconstructive specialist teams attest to improved capacity and quality of specialised nursing available at HNGV.<sup>12</sup></p>
Improved health outcomes for patients through provision of high quality specialist services.	<p>Lives have been saved and physical afflictions have been diminished or eliminated as a direct result of ATLASS clinical interventions.</p> <p>The specialist clinical services delivered by ATLASS are demand-driven and target areas of need not met by existing resources in-country. ATLASS has improved health outcomes</p>	<p>A selection of cases demonstrative of successful health outcomes is annexed (See Annex B).</p> <p>In the period 2006-2012, highly skilled volunteer specialists consulted 11,474 Timorese and performed 2275 operations across 90 visits.<sup>13</sup> In total, 61.1% of specialist visits were conducted in referral hospitals outside Dili.<sup>14</sup></p>

<sup>8</sup> Independent Progress Report, 30 June 2010, p8-9; and RACS LTA reporting.

<sup>9</sup> See, for example, RACS Report from Ms J Booth, Plastic and Reconstructive Surgery visit, Dili, 26 May to 2 June 2012.

<sup>10</sup> See, for example, RACS Report from Ms J Booth, Plastic and Reconstructive Surgery visit, Dili, 26 May to 2 June 2012; and RACS ATLASS Annual Report, (January – December 2010).

<sup>11</sup> LTA Emergency Physician Report, End of Term Report, 2012

<sup>12</sup> See, for example, RACS Report from Ms J Booth, Plastic and Reconstructive Surgery visit, Dili, 26 May to 2 June 2012 and

<sup>13</sup> RACS reporting, 2007-2012.

<sup>14</sup> Specialist surgical services have been provided by ATLASS in Dili, Liquica, Aileu, Manatuto, Ermera, Bobonaro, Cova, Lima, Oecussi, Ainaro, Manufahi, Baucau, Lautem and Viqueque.



Expected Outcome	Outcome Achieved	Evidence
	<p>for patients requiring care in Orthopaedics Surgery, Paediatric Surgery (incl. Paediatric Cardiac Surgery), Ophthalmology, Plastics Surgery, ENT and Urology. The focus was on extending specialist healthcare to the districts, which are under-serviced and often have a large backlog of surgical patients. Improving accessibility and addressing this backlog reduces strain on poorly funded and under-resourced health facilities, contributing to better health outcomes for all patients.</p> <p>The correction of preventable or treatable conditions (e.g. preventable hearing impairment, vision loss, treatment of cleft lip and palates, club foot or burns contractures) has a particular impact on the quality of life of children, as they are able to return to school and take full advantage of educational opportunities.</p> <p>The development of an educated, skilled, healthier and more productive population will in the long-term contribute to social, political and economic stability for Timor-Leste.</p>	<p>In Dili, the LTAs in surgery and anaesthesia accounted for 2246 general surgery operations, 209 orthopaedic operations and 3343 anaesthetics. For 2011, this amounted to 38% of all operations performed at HNGV and 25% of all anaesthetics.<sup>15</sup></p> <p>A prominent example of the backlogs being addressed is in plastic and reconstructive surgery; the majority of cleft lip and palate reconstructions are now performed on children. Very few are performed on adults unlike a few years ago.<sup>16</sup></p> <p>Specialist visits have performed life-changing surgery on 731 children and young people (0-20 years) for a range of conditions. 1821 children and young people were provided non-surgical interventions, including glasses.</p> <p>Workshops and practical training sessions in the non-invasive Ponseti method for treating club foot were conducted between 2008 and 2010, resulting in Ponseti services now available at Dili, Oecussi, Maliana and Maubisse hospitals.</p> <p>The economic impact of avoidable blindness and hearing loss are well established.<sup>17</sup> ATLASS has directly contributed to the elimination of avoidable blindness and the treatment and management of hearing loss through the provision of 10 ENT visits and the Primary Ear Care project; 30 ophthalmology visits and linkages with activities provided through East Timor Eye Program (ETEP) and V2020.<sup>18</sup></p>

<sup>15</sup> Reliable statistics as to the proportion of all operations and anaesthetics performed are not available

<sup>16</sup> Excerpt from M Moore's report, Dili, 26 May-2 June:

"On this visit 26 new cleft referrals attended – 4 patients had previous surgery, 3 in Indonesian times and 1 on a previous Mercy ship visit. Of the remaining 22 cases, 16 were aged under 1 year, 3 were pre-school and the remaining 3 were aged 7, 9 and 20 years. On that basis 72.7% of these cases were receiving their surgery at an approximately age appropriate time and 86.3% having their primary surgery at an age that will allow them to attend school successfully and unimpeded by a disfigurement. This is in stark contrast to the situation the team encountered on its previous visit in February 2012 to Oecussi – then only 2 of 15 new referrals were age appropriate, and only 33% would have surgery pre-school. A massive 66% presented late for treatment and had been largely denied access to education. The disparity between visits reflects access to healthcare and the effect our teams visits have had – in Oecussi [there has been] no real surgical service throughout Portuguese, Indonesian and more recent times, whilst Dili has seen more than 25 visits since 2000, resulting in the ability there now to provide cleft surgery at an age consistent with that provided in the developed world. This is a significant positive outcome for these short term visiting surgical teams."

<sup>17</sup> See, for example, H.R. Taylor, 'The Economics of Vision Loss', *International Congress Series* 1282 (2005) 453–457; A Foster and S Resnikoff, 'The impact of Vision 2020 on global blindness', *Eye* (2005) 19, 1133–1135; Centre for Disease Control and Prevention, 'Economic costs associated with mental retardation, cerebral palsy, hearing loss, and vision impairment', *MMWR Morb Mortal Wkly Rep.* (2004) Jan 30;53(3):57-9. See also: WHO, 'Deafness and Hearing Impairment' Fact Sheet 300, <http://www.who.int/mediacentre/factsheets/fs300/en/index.html>.

<sup>18</sup> ATLASS coordinated and facilitated activities in conjunction with ETEP and the V2020 Avoidable Blindness Initiative to support the development of a comprehensive and sustainable eye health service for Timor Leste.

Expected Outcome	Outcome Achieved	Evidence
Strategic linkages established with Australian and other overseas institutions or organisations to facilitate sustainable support for surgical and clinical care and allied services.	ATLASS has established strategic linkages with Australian and other overseas institutions and organisations, supporting the development of sustainable surgical and clinical care and allied services.	<p>Strategic linkage with St Vincent's Hospital, Melbourne facilitated an Emergency Department scoping visit (2009) and attachments in Melbourne for Timorese staff. A nursing counterpart from St Vincent's Hospital who participated in the scoping mission maintains a strong connection with the ED, including through return visits to Timor (now supported through St John of God). The LTA ED Physician was supported by nurses provided by St John of God following the restructure of nursing development assistance. This collaborative effort has resulted in a redesigned ED at HNGV with better triage and patient flow.<sup>19</sup></p> <p>In partnership with ASSERT, Orthopaedic Outreach and the MoH, ATLASS provided workshops and practical training sessions in the non-invasive Ponseti method for treating club foot. Delivered to Timorese doctors and physiotherapists, Ponseti services are now available at Dili, Oecussi, Maliana and Maubisse hospitals. <sup>20</sup> Three of the core group of physiotherapists have received further training in Australia. An evaluation of the Ponseti Method after one year of implementation and six monthly refresher courses for 10 Ponseti practitioners were also conducted. A report by Orthopaedic Surgeon Mr David McNicol on the Second National Ain Kleuk and Ponseti Technique Workshop held in 2010 highlighted the Timorese expertise and leadership evident in the training of the technique<sup>21</sup>.</p> <p>Trainee placements were facilitated at Geelong Hospital; Royal Darwin Hospital; Royal Adelaide Hospital; Dr Soetomo General Hospital, Surabaya, Indonesia; Nerayana Nethralaya Institute in Bangalore, India; and Sanglah Hospital in Bali, Indonesia.</p>

<sup>19</sup> Independent Progress Report, June 2010, p.8. See also:

<sup>20</sup> D.McNicol, Progress Report of the Ain Kleuk (Club Foot) Detection and Treatment Program In Timor Leste, December 2010.

<sup>21</sup> *Ibid*

Expected Outcome	Outcome Achieved	Evidence
		<p>Professional development through conference attendance was also facilitated for Timorese surgeons and surgical trainees.</p> <p>A Histopathology visit was conducted in 2007 to assist development of a histopathology service in Dili.<sup>22</sup> Staff at the Dili laboratory were trained in technical aspects of histopathology.</p> <p>A biomedical engineering scoping mission was conducted in conjunction with Chemtronics Biomedical Engineering, a subsidiary of Cabrini Health Care in 2007, and a follow-up visit occurred in 2008. ATLASS also funded a visit (2008) of an X-ray engineer from Shimadzu to assess damage to the main X-ray machine at HNGV.<sup>23</sup></p> <p>A scoping mission to look at options for a Timor-Leste Medical Board was completed in 2009 – the mission provided suggestions to the MOH and the Timor-Leste Medical Association on possible ways towards a system of registration and regulation of health professions. Consideration of the establishment of a Medical Board is likely to be gain traction from 2012-13 as the number of doctors trained in different systems is set to expand considerably.</p> <p>Strategic linkages with ETEP/V2020/FHFNZ:</p> <ul style="list-style-type: none"> <li>• Monthly cataract surgery outreach program was delivered to all five referral hospitals by Dr Marcelino Correia and the ETEP and V2020-funded ophthalmologist</li> <li>• 15 ophthalmic and eye care nurses have been trained. Reports from ETEP and V2020 funded LTA Ophthalmologist and Timorese ophthalmologist attest to the nurses' competence to identify and manage a range of treatable eye diseases and to provide support in surgery, including performing phaco treatment and administering eye blocks (local anaesthetic).</li> </ul>

<sup>22</sup> ATLASS Progress Report (January – June 2009) p.5.

<sup>23</sup> ATLASS Progress Report (January – June 2008) p.20.

Expected Outcome	Outcome Achieved	Evidence
		<ul style="list-style-type: none"> <li>Equipping five referral hospitals with ophthalmology equipment to ensure effectiveness of outreach visits to the value of approximately AUD\$971,037 of extra budgetary support through ETEP.</li> </ul> <p>Additional team members were supported to join specialist surgical teams through contributions from the Eye Surgery Foundation, Rotary Club of Balwyn, ProVision, Orthopaedic Outreach and St John's Ambulance.</p>

## 5.1 Unexpected Outcomes

For the first two years of ATLASS, the program employed two LTA nurses to assist in the development of nurse capacity at HNGV; an Operating Theatre nurse and an ICU nurse. The LTA Nurses contributed to improved critical care management and provided in-service training to hospital nursing staff but faced some barriers in successful input delivery, for example, delays in the development of a proposed one-year Diploma course in critical care nursing, and identified issues with standards and protocols that were not fully addressed. It was found to be difficult to address issues of standards for nursing in isolation to the overall need to strengthen the hospital service in general.<sup>24</sup>

In 2008, the Program concluded that that ATLASS was not the best vehicle to deliver capacity development for nurses. This decision was endorsed as appropriate by the PMC as well as by the PRET in January 2009. Inputs from specialist nurses through ATLASS were discontinued in 2009.

In line with recommendations, a more comprehensive nursing program commenced in 2010 through the support of St John of God's. ATLASS was then able to re-distribute funds towards an LTA Emergency Physician.

ATLASS did not begin with a component dedicated to developing emergency and trauma management services. Following the decision to discontinue the nursing activities and in view of repeated requests from HNGV to assist with the improvement of the emergency department, it was agreed to redirect funding towards supplying a second surgeon and an emergency physician, to provide clinical and educational support, and assistance with the development and implementation of ED systems at HNGV.

While there were some setbacks in the development of emergency and trauma management services, particularly in relation to identifying national counterparts in the HNGV ED, the outcomes achieved in the development of emergency and trauma care at both HNGV and referral hospitals were positive. The combination of LTA inputs, on-the-job training, delivery of PTC workshops and institutional linkages with St Vincent's Hospital in Melbourne, Australia, resulted in strengthened systems of managing trauma and improved standards of emergency care. Additionally, training in Basic Life Saving (BLS), Advanced Life Saving (ALS) and common emergency presentations (anaphylaxis, asthma) has been offered to both doctors and nurses; and the status of emergency paediatric care at HNGV has been assessed against World Health Organisation (WHO) standards to inform the development of standard treatment guidelines for common paediatric emergency presentations<sup>25</sup>. These outcomes are important achievements in the development of a comprehensive national emergency care system.

ATLASS also attempted to assist in the development of a histology laboratory to provide reliable histopathology services at HNGV. Ms Suzanne Ward, from St John of God's Pathology in Ballarat, Australia, was deployed to Dili and trained eight staff members in preparing histology slides. She assessed the staff as being capable of undertaking basic routine histology tasks. By May 2007, the first diagnosable slides were being examined by the resident pathologist and the hospital laboratory at HNGV was successfully processing surgical and clinical specimens to a diagnosable standard. It was expected that follow-up visits would take place in order to reinforce the techniques. However requests for further visits did not eventuate and the histology service is still not functional.

A positive outcome of the Program has been the establishment of a regional network between Timorese surgical and anaesthetic trainees and their counterparts across the Pacific, specifically where ATLASS-supported Timorese doctors have taken up training positions at UPNG and the Fiji School of Medicine. Dr Flavio Brandao, for example, reports:

*"The Program provided the opportunity for me to study to be a Master of Medicine in Anaesthesia in Fiji. In Fiji I studied with many people from various backgrounds who provided different information and viewpoints about working under different conditions. This provided a good balance between working in developed and non-developed situations i.e working with available resources in an appropriate manner to provide good outcomes for our patients."*

<sup>24</sup> Program Review and Evaluation Team (PRET) Mission Report, 12-16 JANUARY 2009, p.8.

<sup>25</sup> Matthew White, LTA Monthly Report July 2012.

The opportunity to foster professional connections with peers across the surgical community in the Pacific has begun to generate positive, sustainable outcomes for the emerging cohort of surgeons and anaesthetists in Timor, especially in terms of access to an active network of counterparts who work in a similar context of professional isolation, skilled human resources shortages, budget constraints and developing specialist infrastructure. This regional network will facilitate cross-institutional linkages and peer support which will be especially significant once Australian specialist support is reduced or phased out.

The important relationships established between ATLASS advisers and their Timorese counterparts is a key success of the ATLASS program and is described further below in the context of the appropriateness of the Program's objectives and design. One unexpected outcome of these strong relationships was seen in 2012 through the example and work of the Emergency Physician which led one Timorese doctor, who until that time was set to become an O&G, to change his mind about his preferred speciality – he is now preparing to become an emergency physician and to enter training at UPNG. The Program has supported him through the LTA ED. It is hoped that the MoH will be able to fund his specialisation in PNG. Until then the ATLASS LTAs will continue to mentor him.

In the area of eye health, national ownership of patient screening activities was strengthened during the Program. While the training of eye care workers (ECWs) has led to expected outcomes such as increased skill and capacity in patient identification and referral, these opportunities have also had the additional benefit of engaging staff in the coordination of outreach screening efforts. The ATLASS eye care outreach program, delivered collaboratively with the FHFNZ has improved the utilisation of ophthalmic services and improved eye health outcomes for remote and vulnerable communities across Timor-Leste. Ophthalmology visits were conducted to every single district in Timor-Leste. ECWs from NEC and referral hospitals have demonstrated the capacity to successfully coordinate the challenging logistical requirements of outreach visits, as well as the clinical competence to provide a quality screening service to Timor's isolated populations. National ownership of outreach activities is an important step for ensuring the sustainability of this service.

ATLASS has also initiated sustainable programs in support of disability services and primary health, the activities of which were not anticipated at the time of design but resulted in very successful outcomes. Some of the activities were jointly supported by and conducted in partnership with other organisations (for example, V2020, the Rotary Club of Balwyn), demonstrating the importance of a strong and sustained partnership approach that has helped to achieve many of the sustainable outcomes resulting from the ATLASS Program. The flexibility of the Program and collaboration with sector partners has facilitated the delivery of a comprehensive package of services to complement core secondary and tertiary activities, including in the treatment of club foot, institutional strengthening of the disability workforce, and comprehensive Primary Ear Care.

Following the BME scoping mission in 2007, the Minister of Health endorsed the proposal for the establishment of a national BME service based in HNGV, comprising of three LTAs. The AusAID funded and World Bank managed HSSP-SP then started implementation of the project, initially with one LTA. Two more followed a year later. The project commenced well and had started to develop the BME services in HNGV, referral hospitals and CHCs. However, from mid-2011 LTA contracts were not renewed, resulting in an immediate negative impact in HNGV. The ATLASS Team Leader constantly brought the lack of BME to the attention of MoH, HNGV and donors. However, ATLASS was instrumental in moving BME forward following the initial request for Program assistance by the first Minister for Health.

During the design for the rehabilitation of HNGV, the building that previously housed the operating theatres was not included and no immediate use of this building was envisaged. At the same time the ATLASS team continued to struggle to find adequate rooms in HNGV for use as classrooms. The Program identified the opportunity to establish a training centre for the hospital in this space for use by all health staff. The floor plan was designed and proposed to the Director of HNGV who agreed to the plan, as did the MoH. Eventually the US Navy funded and arranged the construction of the training centre, which now comprises two classrooms, a library, a skill lab, a tutorial room and two offices. The centre is in daily use by medical students, student nurses, short seminars and tutorials. The RACS Program team has also extensively benefitted from use of this training facility.

With an increase of surgical specialists far exceeding the expectations of 2002 when the planning for the rehabilitation of HNGV started, the two operating rooms are insufficient for all surgeries. This is particularly so with unplanned emergencies such as CS leading to the cancellation of elective cases so that the emergency surgery can be done. Following a request from the HNGV General Director, ATLASS was responsible for the redesign of the current theatre building to allow it to house an third operating room. The Program commissioned an architect (funded out of ATLASS funds) to design the operating room. The US Navy was again approached for funding and construction. In spite of a positive reaction, the final approval was not given by the end of June 2012, although it is still expected to be forthcoming.

With the return of the first Timorese specialists and the graduation of hundreds of newly trained doctors imminent, in 2010 ATLASS identified an opportunity to develop post graduate training in Timor to further develop the capacity of the Timorese medical workforce. The initial idea was to develop PG Diplomas in the main specialties where there was Timorese faculty, along similar lines to the system in Fiji. This idea was very well received by most Timorese specialists and particularly by the newly appointed Dean and Vice Dean of the Medical School. The cultivation and development of the idea occurred over time, with the PG Diploma launched during the first half of 2012. This would not have been possible few years earlier because of the lack of Timorese faculties. The fact that the UNTL and the Medical School, established by the Cuban medical brigade, are now well established has played a pivotal role in this success. The presence of the training centre at HNGV is also pivotal to the smooth implementation of the PG courses. The PG Diploma is a pivotal feature of the next phase of ATLASS.

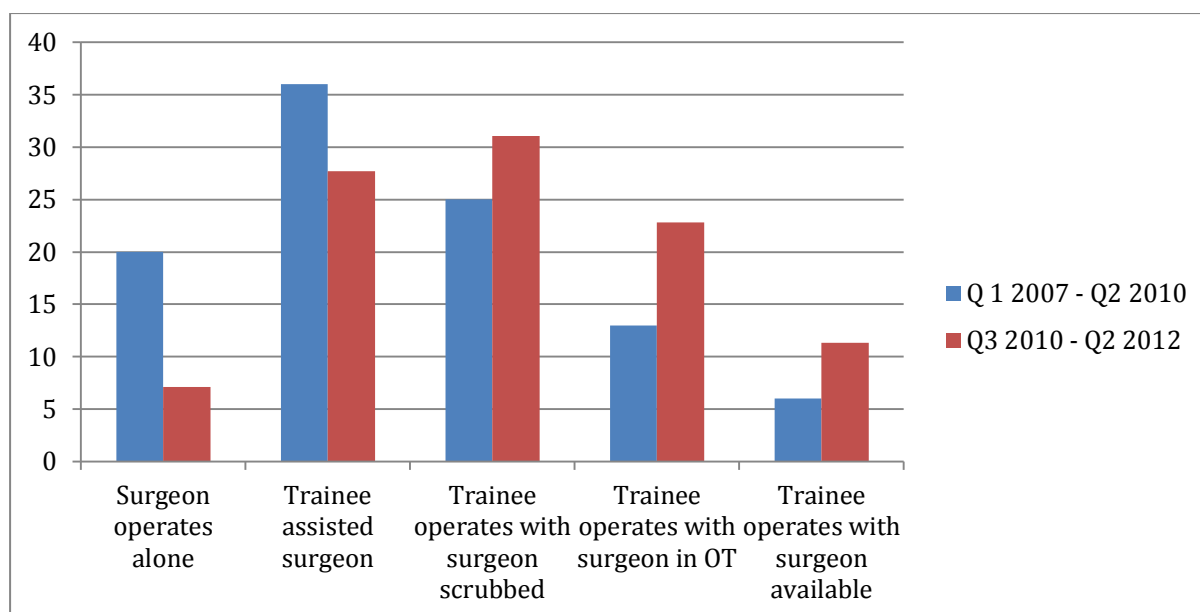
## **6. Expected long-term benefits and sustainability**

The key expected long-term benefits of the ATLASS Program are the continued development of quality health services across Timor-Leste and, as a direct result, improved health outcomes and quality of life for the Timorese population.

The Program has already generated significant benefits in terms of strengthening the capacity of the Timorese health workforce to deliver clinical services. Training the country's second general surgeon, an ophthalmologist and an anaesthetist, as well as supporting formal surgical training for an additional three trainees, and qualifying a group of 12 Nurse Anaesthetists, has laid a strong foundation for building a sustainable surgical service in Timor-Leste. It is anticipated that this cohort of ATLASS-trained specialists will lead the delivery and future development of surgical and anaesthetic services across the national and referral hospitals. The involvement of the ATLASS-supported surgeons, such as Dr Joao Pedro Xavier and Dr Flavio Brandao, is already essential to the delivery of the Postgraduate (PG) Diploma through the Universidade Nacional de Timor Loro sa'e (UNTL), the key activity of the ATLASS II Program. Their contribution to the teaching and training of Timor-Leste's emerging health workforce ensures the sustainability of past successes and the viability of a specialist workforce.

The increased skill levels and enhanced professionalism of the surgical trainees is measurable. ATLASS records from operations conducted at HNGV demonstrate the increased capacity of the Timorese surgeons to conduct operations independently, with steadily more limited assistance from an expatriate surgeon.

### **Figure 1: Analysis of HNGV Logbooks on Involvement of Timorese Surgical Trainees**



ATLASS has also greatly contributed to the standard and quality of services available at HNGV. For example, the Department of Surgery has benefited from regular audit meetings, surgical case studies, and participation in morbidity and mortality (M&M) reviews.

Further, the Program has been instrumental in establishing monthly *Grand Rounds* for the entire medical staff at HNGV which are well attended by national and international doctors as well as medical students. It has taken the Program many years for this to happen and sustainability has only occurred once there are Timorese specialists in the hospital.

The Timorese surgeons themselves report feeling increasingly sure of their skills and abilities. For example, Dr Joao Pedro Xavier, who is focusing on urology, reports:

*I think perhaps 65% of my skills have come through the guidance of the LTAs. It has been useful to have several LTAs rotating through as I think I can always learn something from each one as they all have different techniques and experiences. [...] I am very happy with my skills in benign prostatic hyperplasia as to this point none of my patients have developed complications as a result of my surgery. My skills have provided positive patient outcomes for all of them.*

The six monthly reports demonstrate increased professionalism amongst the surgical trainees since the start of the Program, including better patient follow-up; performing on-call duties out of hours; improved punctuality; and active participation in the operating theatre.<sup>26</sup> These are important factors in ensuring the quality and sustainability of the Timorese surgical services.

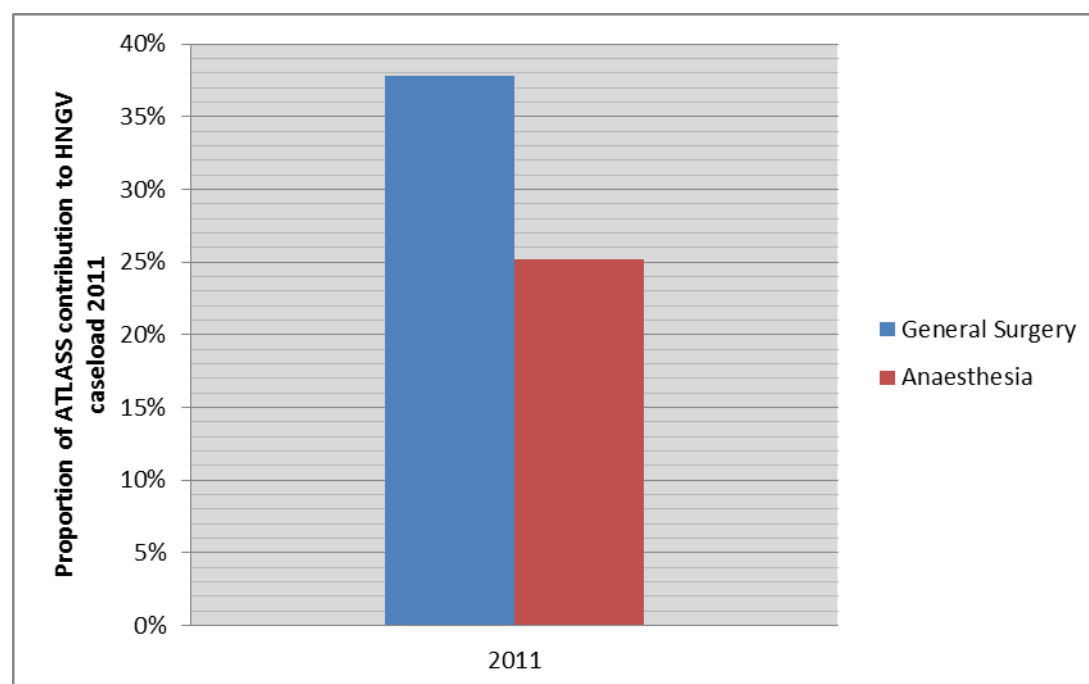
The Program's contribution towards establishing a national department of surgery will have a sustainable impact on Timor's health sector both in terms of strengthening human resources for health and ensuring its capacity to meet the health demands of the population. A national-led surgical service, staffed by highly skilled clinicians who are guided by quality assurance protocols and a professional attitude towards patient care will have sustained benefits for the country. It is expected that the training outputs of the Program will also impact the scope and availability of some speciality and sub-speciality services provided by the national health workforce, particularly where ATLASS-trained surgeons and surgical trainees continue to hone specialist skills in their chosen areas of interest including; urology (Dr Joao Pedro Xavier), paediatric surgery (Dr Nilton Tilman), cleft lip surgery and burns management (Dr Joao Ximenes) and orthopaedic surgery (Dr Alito Soares).

<sup>26</sup> ATLASS Six Monthly Report (July-December 2009), p4.



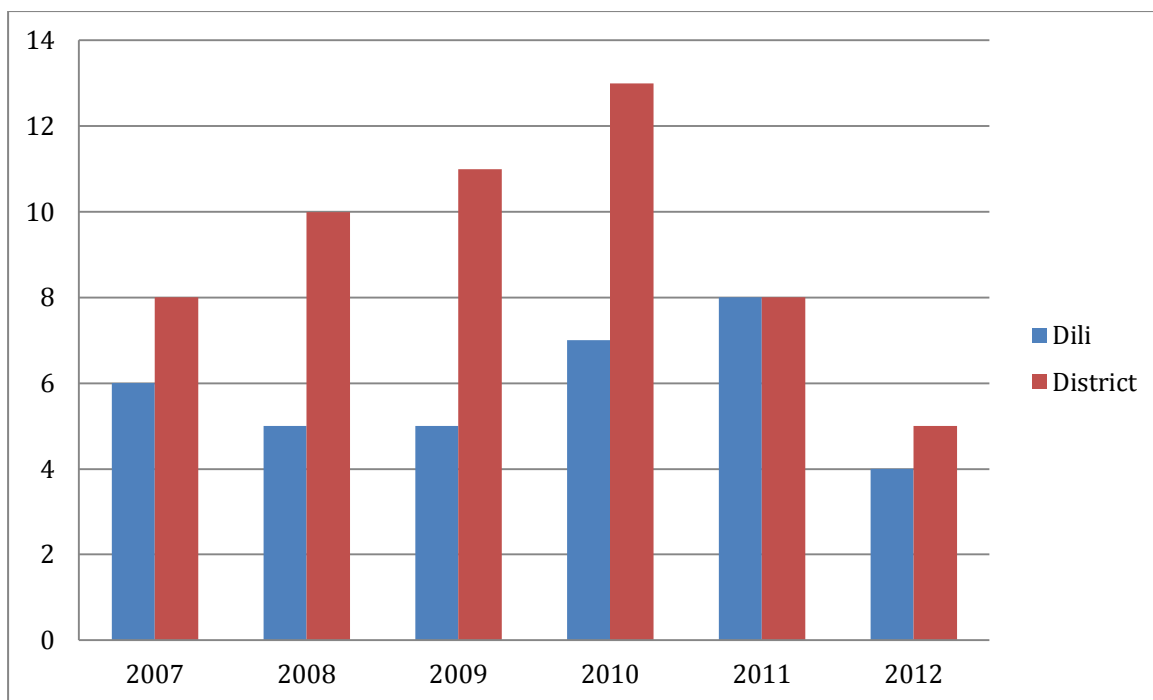
The increasing ability of the Timorese surgeons to tackle the significant workload correlates to a decreased reliance on ATLASS for clinical services, if not for supervision and training support. The IPR reported that from 2007-2009, ATLASS accounted for approximately 70% of all general surgeries performed and approximately 40% of all anaesthetics delivered at HNGV. More recent data shows reliance on ATLASS services has diminished: 2011 operation records show ATLASS accounted for 38% of all operations and 25% of all anaesthetics provided in 2011.

**Figure 2 Analysis of HNGV Logbooks showing RACS contribution to general surgical and anaesthesia caseload for 2011**



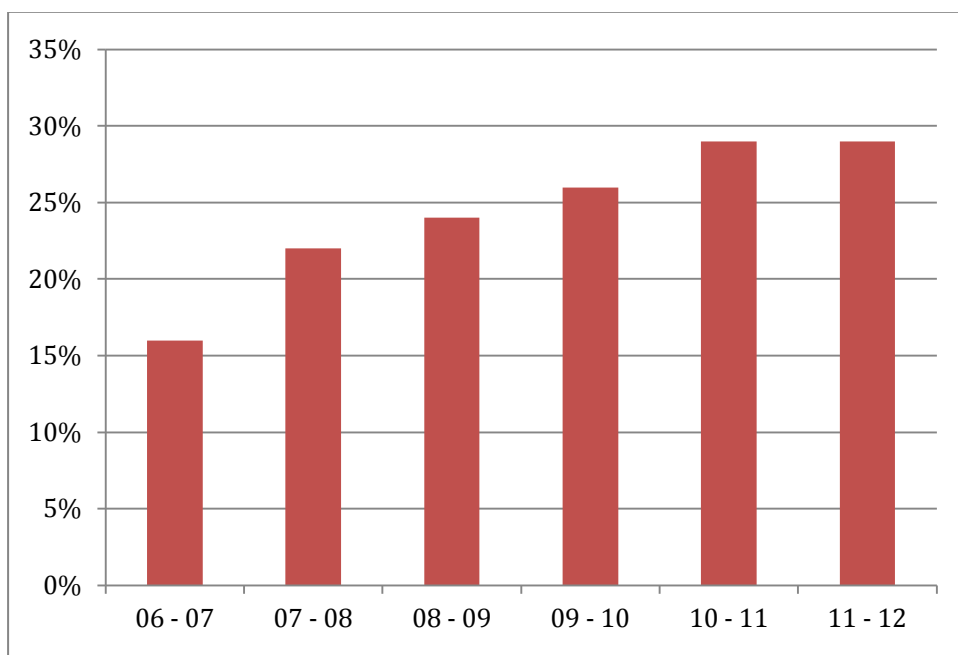
As highlighted below, ATLASS made a significant contribution to the availability of specialist services at the district level; 61.1% of all specialist visits from 2007 to 2012 were conducted at hospitals outside Dili.

**Figure 3 ATLASS Specialist Visits 2007-2012**



The ongoing development of anaesthesia services under the Program will significantly contribute towards establishing a comprehensive, sustainable specialist health care system in Timor. In addition to delivering Timor's first qualified anaesthetist, the cohort of Timorese Nurse Anaesthetists trained under ATLASS and AETSSP have been largely self-sufficient in the provision of basic anaesthetic care. These nurses account for the majority of anaesthetic care delivered at each of the referral hospitals. Anaesthetic services have a special relevance to achieving better maternal health outcomes. Currently 28% of all anaesthetics administered at HNGV by the LTA Anaesthetist are for women undergoing a Caesarean section.

**Figure 4: ATLASS contribution to providing access to emergency obstetrics care showing % of Anaesthetics administered by LTA Anaesthetist for Caesarean Section [2006-2012]**



Similar data is not available for the Nurse Anaesthetists working in the referral hospitals. ATLASS II is working towards collecting systematic information on the work of the Nurse Anaesthetists in order to tell a more comprehensive story. The demonstrated capability of the Nurse Anaesthetists, as well as the national anaesthetist's capacity and commitment to delivering a quality service in collaboration with the LTA Anaesthetist, suggests that the national anaesthesia department is well placed to develop into an effective, self-sufficient, decentralised service at both national and district levels.

However, a sustainable, comprehensive surgical and anaesthetic service cannot materialise in a vacuum. Donor support in the medium to long-term, focused on providing a continuity of capacity building activities, will be required to bring about self-sufficiency in surgery and anaesthesia to consolidate safe, quality services in Timor-Leste, capable of meeting the specialist health demands of the population.

While the returning Cuban-trained medical workforce will make a contribution to the medical care available at the district level, there is still a demonstrable need for specialist care, which must be delivered in the short- to medium-term by external input. The clinical workload in Timor-Leste is sizeable and the country's surgeons and hospitals will require on-going support to allow the healthcare service to develop and to ensure the quality of care.

A combination of ongoing formal training or professional development opportunities, on-the-job mentoring and skills transfer in new procedural techniques and practical supervision, as facilitated through Components one and two of the Program, will ensure that the cohort of ATLASS-trained beneficiaries will continue to develop into capable and confident health professionals who are equipped to build the country's pioneer surgical and anaesthetic workforce. Prematurely refocussing or discontinuing these types of targeted support activities could pose a potential risk to the national capacity in Timor-Leste. It is anticipated, however, that progress made during this Program will continue to advance through initiatives planned under the new ATLASS Phase II Program. ATLASS II should continue to provide short-term specialist visits with a particular focus on training and up-skilling the local workforce.

The potential risk of inadequate or declining MoH budget allocations could also undermine the development and sustainability of comprehensive specialist health services in Timor. To meet the stated objective of developing a hospital service that can adequately respond to the secondary health care needs of the population, as outlined in the Timor-Leste Strategic Development Plan 2011-2030 (SDP) and the National Health Sector Strategic Plan 2011-2030 (NHSSP), a long-term commitment to allocating funding for the ongoing development of medical infrastructure and human resources for health will be required. During the course of ATLASS, the RACS management team have observed and reported deteriorations in maintenance of biomedical equipment, supply of hospital consumables and drug supplies. With the rapid intake of newly trained doctors, further shortages are predicted. Unless these issues are addressed, the safety, quality and availability of surgical and anaesthetic services will decline. This scenario also applies to the availability of appropriate medical equipment and hospital infrastructure, particularly in relation to developing specialist services. Throughout the life of the Program, visiting ATLASS teams were fully supported by equipment, instruments and consumables sourced through RACS. The MoH will need to consider the recurrent costs of upgrading, maintaining and re-equipping the national and referral hospitals to support a sustainable service. There is a protracted need for a biomedical engineering service. Moreover, as the number of doctors trained in different systems is set to expand considerably, the need for a Medical Board to ensure standards through a medical registration system is again in evidence.

The healthcare service has also been strengthened through the Program's focus on training nurses and other secondary healthcare staff, including physiotherapists. The development of professionals that have skills in the Ponseti technique and in primary ear care are particularly relevant to the Timorese context, given the high instance of club foot and of chronic ear disease, especially amongst children. The Program supported two LTA nursing positions in intensive care and peri-operative nursing development prior to St John of God taking on the responsibility for system-wide nursing workforce development. Further training inputs are envisaged in ATLASS II; these are essential to ensuring skill retention, development and sustainability.

Ultimately, the expected increase in availability of quality secondary and tertiary health services as a result of ATLASS training and capacity development initiatives will have a long-term impact on the health outcomes and quality of life for the Timorese population. Patients who access the national health system for surgical care of treatable illness or disability will, in most cases, lead more independent and economically productive lives in their communities. In particular, vulnerable populations, including women and children, will continue to benefit as a result of ATLASS activities/inputs and outputs; the Program has had a strong focus on correcting congenital conditions and the safe provision of emergency obstetric care. Health outcomes and quality of life for other vulnerable groups, such as Timor's many remote populations, will also benefit from the Program's focus on improving equity of access through outreach programs, as well as provision of emergency and primary trauma training in the referral hospitals and nurse anaesthetist training. The long-term impact of ATLASS having addressed the surgical backlog in cleft lip and palate cases, for example, shows the far-reaching positive effects a Timorese surgical service can have. A collection of illustrative examples is at Annex B.

The political context in which the ATLASS Program began was volatile. Initial short-term visits were hampered by security concerns, but close communication with the referral hospitals resulted in only a few visits having to be postponed. ATLASS has built a mutually respectful and effective relationship with the MoH which should ensure the sustainability of ATLASS' achievements.

## **Overall assessment**

### **6. Relevance**

ATLASS was designed and initiated in 2006 at the direct request of the Minister of Health of Timor-Leste. Its design took into account key lessons learnt from AETSSP, ATLASS' predecessor. AETSSP was forced to focus predominantly on clinical service provision because of the lack of Timorese doctors to train, which was highly relevant in the immediate post-Independence period. ATLASS instead was designed to operate as a more flexible program by providing both fixed inputs (through the LTAs) and flexible inputs.

ATLASS has been highly relevant in terms of continuing Australian support for strengthening specialist services and in meeting the huge unmet need for secondary and tertiary health services in Timor-Leste. In this sense, ATLASS is entirely aligned with Timor-Leste's Basic Services Package (BSP) and the Health Sector Strategic Plan (HSSP), both of which recognise the critical role of specialised services in hospital settings and of referral pathways.<sup>27</sup> ATLASS, as an AusAID-funded Program, was also aligned with AusAID's country strategy for Timor-Leste, as well as with the overarching aims of the Millennium Development Goals (MDG).<sup>28</sup>

The Program's flexibility in design and responsiveness to changing needs has been central to its continued relevance to local context and needs. The combination of long-term in-country presence has allowed a maximum continuity of service and training balanced with clinical work. The short-term inputs have been further valuable sources of training as well as targeted specialist care at the district level. ATLASS' design represented a progression towards a more sustainable, long-term approach to building national capacity in some basic but also specialised secondary services. The MoH is now phasing in hundreds of recently graduated medical practitioners, gradually reducing Timorese reliance on external support. The human resource context is thus changing in Timor-Leste, and ATLASS II's design has drawn on both this changed context and lessons learnt during ATLASS to best adapt and remain relevant and effective.

AusAID's cross cutting policy objectives remained at the forefront of activities conducted under the Program, both in the setting of activity objectives and through Program Management. ATLASS was supported and guided by a strong and clear framework of RACS' policies including on gender equity; disability inclusiveness; cultural awareness and development best practice; environmental protection; counter-terrorism and child protection.

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<sup>27</sup> Timor-Leste Strategic Development Plan 2010-2030 (2010), especially Chapter IV: Sectoral Activity Framework – Education and Health, p15.

<sup>28</sup> Australia-Timor Leste Country Strategy 2009-2014 (2009).

For example, alongside sector partners in Timor-Leste and Australia, ATLASS made important progress towards better disability inclusion in the healthcare referral system, as well as in disability awareness and management. The successful approach to addressing disability through a coordinated approach in Timor-Leste will continue in the next phase of ATLASS.

Administratively, extensive background checks are done on volunteers prior to mobilisation and expectations regarding working with children and the use of photographic and video material are made very clear. The College has not experienced any incidences throughout the life of the ATLASS Program.

## **7. Appropriateness of objectives and design**

The objectives of ATLASS were highly relevant and appropriate to the situation in Timor-Leste when the Program was initially designed, and throughout the life of the Program have continued to remain very relevant.

The core program objectives of ATLASS in ensuring continuity in service provision, while being increasingly focused on skills transfer and capacity building, were realistic and feasible within the timeframe, while also maintaining a degree of responsiveness and flexibility to MoH and national and referral hospitals' priorities.

There was an appropriate balance of resources available for both clinical service activities and capacity building initiatives. The short-term visiting specialist teams were particularly important in providing otherwise unavailable sub-specialty care both in Dili and the districts, and are highly valued by the MoH.

The robust professional networks developed between Timorese health professionals and the ATLASS team of specialists (both resident and visiting) was a positive outcome of the Program and a strength of its design. In addition to the continuity provided by the LTA specialists, more than half of the short-term volunteer specialists engaged by RACS have been involved in the Program on more than one occasion.<sup>29</sup> This has allowed productive and influential professional relationships to be fostered with Timorese counterparts, supporting both their clinical and professional development. Expert guidance and mentorship has extended beyond formal Program activities and has involved ongoing professional dialogue and support. This is especially relevant and important given the limited current availability for specialist supervision and leadership in Timor-Leste. These relationships have facilitated the development and consolidation of skills and confidence required to perform simple, unassisted procedures. Successful examples of the protégé-mentor relationship are highlighted in Annex C. The success of these mentoring relationships is also evidenced by the fact that they have been introduced as a formal component within ATLASS II. The positive engagement, skills development and antidote to professional isolation that these mentoring relationships represent are key to supporting Timor-Leste's clinical leaders.

The Program design anticipated that there would be a higher number of doctors graduating over the course of the five year period than actually eventuated. The design of the Program was perhaps overambitious about the number of doctors that could be trained in this timeframe and the availability of potential trainees to take up training posts. From 2012 there has been an increase in the number of Timorese medical graduates, who will benefit from postgraduate training under the next phase of ATLASS and continuing training and mentoring by LTA and STAs.

The 'Institutional Linkage' component of the Program has been of mixed relevance. Many relationships and networks were established that benefited individuals, but there has not been enough time or resources to develop many sustainable institution-to-institution linkages. This component has not been reproduced in ATLASS II.

Close liaison with and involvement of MoH and other key stakeholders, throughout program planning and implementation have also ensured that the Program's activities were appropriate and relevant to local context and needs.

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<sup>29</sup> The percentage of volunteers who participated more than once in period 2007-2012 was 59.35%.

## 8. Implementation Issues

Timor-Leste remains a fragile environment. Poor infrastructure and an overstretched national health budget have meant that the visiting teams and Long-Term Advisors are constantly faced with challenging conditions. The political unrest, particularly at the Program's inception, had demanded close monitoring and the reorganisation and/or suspension of activities in periods of critical safety concerns.

Supply shortages have consistently hampered clinical work. Weak central pharmacy and poor procurement systems have disrupted and often prevented service delivery. For example, whenever there is a stock shortage of reagents, the X-ray department stops working entirely.<sup>30</sup> Basic essential pharmaceuticals are often in short supply or unavailable. The initially promising histology laboratory has not been given on-going support and has faltered, meaning it can take days (if not weeks) to obtain important results. The biomedical engineering (BME) service in-country has deteriorated after a promising start. Since the contracts of the two international BME engineers have not been renewed, there has been a progressive deterioration of equipment and maintenance, aggravated by a more bureaucratic system of accessing services.<sup>31</sup>

Within the hospital setting, there is still weak post-operative care. Especially at the district level, the limited post-op care available means visiting surgeons must carefully select cases, performing only those that are essential and possible in a resource-poor environment. There is acceptance of surgical intervention, yet many surgeons still contend with local preferences for faith healing and alternative medicine, especially in orthopaedic surgery.

Recruitment and retention of international LTA positions provided some challenges. The Program had some difficulty in recruiting LTAs who were prepared to stay for 12-24 months or more on a continuous basis (with the exception of the Anaesthetist position which had the same LTA for the entire program), but the rotation of the group of Australian and international surgeons with Timorese experience in between long term deployments of more than 12 months negated any negative impact. Overall, the Program has been able to recruit three long term surgeons who together worked in Timor for over 4 of the 5.75 years.

The Program has not managed to increase the number of formally accredited Timorese specialists to the levels originally conceived. Highly competent trainees have been unable to take up overseas training positions for personal reasons, whilst others have failed exams or struggled with the training institution's culture. In addition, the number of Timorese doctors who could be recruited for specialisation was low throughout the Program; only recently has there been a number of Timorese and internationally -trained doctors graduate which will increase the pool of candidates considerably.

Attendance rates at courses and training opportunities offered by the Program have been very varied. Valuable clinical staff are often promoted to administrative positions, whilst some highly competent and motivated people have struggled with extremely demanding workloads and familial expectations.

### 8.1 Financial Management and fund flows

ATLASS funding was managed with core funding provided for fixed adviser and visiting team fees, reimbursable costs and RACS management fees. RACS provided initial funding with claims to AusAID for payment of services and reimbursement of expenses made in arrears. This was considered to be an appropriate approach given the context of the Program.

Funding was expended according to the proposed budget plan. Where variation occurred (for example, in the redistribution of funds from nursing inputs to an LTA Emergency Physician), a contract amendment was negotiated with AusAID.

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<sup>30</sup> LTA Progress Report, April-June 2012.

<sup>31</sup> LTA Progress Report, April-June 2012.

ATLASS has provided very high quality specialist surgical services to the people of Timor Leste, and very high quality training and mentoring of Timorese doctors and nurses. The costs of the Program were appropriate and delivered excellent value for money, particularly when compared to the potential cost of offshore clinical treatment. As noted in the IPR report of November 2010, the short-term visits were a highly cost effective service as the participating team members are volunteers. A RACS cost-benefit analysis comparing the cost of offshore treatment versus treatment through in-country team/visiting specialists based conservatively on AUD\$12,000<sup>32</sup> per person x number of operations performed (LTAs + STAs) demonstrates that had the 5284 operations conducted by STAs and LTAs over the course of ATLASS been conducted offshore, the total cost would have been significantly higher (over \$63 million (Annex D)).

With agreement from AusAID, remaining funds for Overseas Specialist Training (Surgery & Anaesthesia) are being used as acquittable funds advance of \$215,000 to cover the continuing costs of Timorese surgeons completing their Masters Program (expected until 2016).

## **8.2 Monitoring and evaluation**

ATLASS used an M&E framework and Program Monitoring Matrix (PMM) to guide reporting on achievements of the Program. The PMM is a tool to present progress at a glance over six monthly intervals against key indicators and outputs, and over time the cumulative achievements of the Program. Information for six monthly reports was drawn from internal ATLASS Team Leader and LTA reports and visiting specialist team reports. Additionally, individual LTA reports provided important discussion of issues that affected the implementation of the program. These are often systems issues that have the potential to be addressed through other health sector support activities. It is important that these are captured and presented in the six monthly reports.

Both the PRET and the IPR identified areas of the Program's M&E process that could be strengthened in order to provide a clearer and more accurate demonstration of key outcomes and measures. Recommendations on improving the Program's M&E approach were incorporated following these reviews in 2009 and 2010. Further, a clear M&E Framework for ATLASS II has been established from the beginning of the Program, including the identification of clear indicators and measures of success.

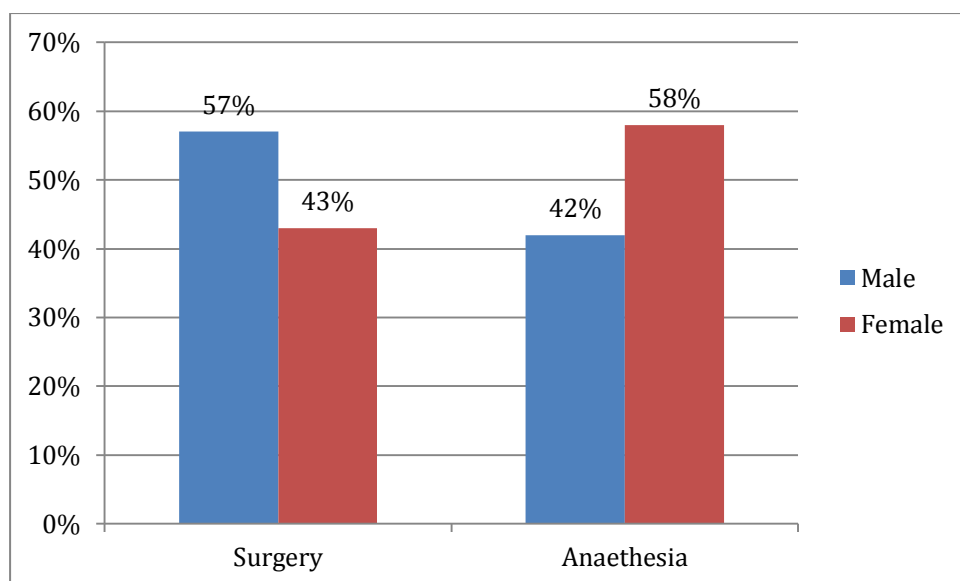
## **8.3 Gender**

All clinical services delivered by ATLASS give equal access to both men and women. Figure 5, below, indicates an approximately equal distribution of men and women accessing ATLASS services during the life of the Program. Women have had the additional benefit of competent anaesthetic services being available for emergency Caesarean sections, which has a direct link to reduced maternal and neonatal mortality.

**Figure 5: Breakdown of male and female patients accessing ATLASS services, 2006-2012**

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<sup>32</sup> Comprising hospital and specialist fees, patient airfare and accompanying person airfare, accommodation and living expenses.



The lack of female candidates for training is reflective of the current gender imbalance apparent in the Timorese tertiary education sector and in the health workforce. This is likely to change with the influx of hundreds of Cuban-trained doctors over the next few years, a good proportion of which are women. The Program has, in addition, identified two female candidates to undergo training in ophthalmology and anaesthesia in the coming years.

There is no discrimination in the selection of men and women to participate as volunteers or as staff in the Program. Two female surgeons have been LTAs during the Program for a combined period of over 2.5 years i.e. over 50% of the original duration of ATLASS.

## 9. Lessons Learned

At an administrative level, one of the most important lessons learnt was the need for a **robust M&E framework (MEF) and system as well as baseline data** to enable effective tracking of progress towards objectives and reporting of outcomes. This was a weakness of the ATLASS Program, as the MEF proved too complex, with too many indicators and no clear Program logic. The confusion the framework generated complicated report writing and limited the Program's ability to tell a comprehensive story about achievements and setbacks. For example, the **lack of individual capacity building plans** for the surgical and anaesthetic trainees prevented the measurement of successes against milestones. This made it very hard to show the progressive increase in skills development due to lack of baseline assessment data at the start of Program. Considerable efforts have been made, as a result of this experience, to develop a clear, simple and effective framework for ATLASS Phase II.

At an implementation level, it became clear that the **presence of an in-country resident team** is still essential to ensuring continuous support and mentorship to the Timorese surgical and anaesthetic trainees. The relationships between the trainees and the LTAs that have developed over time have proved true, strong and productive. Although promising, the Timorese specialist service is not yet ready to stand alone and there is a continuing demand for input from experienced and capable LTAs. The LTAs have proved to be the best placed to strengthen the surgical and anaesthetic departments at HNGV, and in delivering essential specialist clinical services.

Many lessons were learnt in the process of **training** and supporting Timorese specialists. The importance of adequate preparation of the trainees before going overseas became very clear. English classes and regular on-the-job training, coupled with ongoing support from mentors and regular communication during their overseas periods is essential to their success.

In terms of Program activities, the **institutional linkages** component faced difficulties in gaining traction and delivering the expected outcomes of a Health Sector Institutional Linkage Facility and



strengthening of formal twinning relationships in Australia and internationally. There were difficulties encountered in attempting to develop institutional linkages due to the fragmentation of activities and limitations of time. This component revealed the importance of **coordination with other health providers**, international and national NGOs to ensure a collaborative approach and avoid duplication. For example, a concerted effort was made to develop a collaborative relationship with FHFNZ in the delivery of ophthalmic care and training in Timor-Leste, which has proven to be successful and is continuing. However, ultimately this component proved difficult to implement and is not being replicated in ATLASS II.

Given the complex environment of Timor-Leste, the **importance of flexibility** within program design was another key lesson. A program such as ATLASS must be responsive to changing priorities in the political as well as the health context. For example, as outlined earlier, ATLASS established that it was not the best vehicle to support improvement in **OT and peri-operative nursing**. It was determined that this area was best left to other specialist organisations such as St John of God's to support nursing development more broadly. The inherent flexibility of the Program allowed it to divert resources to Emergency Medicine improvements, an area which has since seen some of the Program's most important successes.

## 10. Recommendations for further engagement

The rapidly evolving context of the Timorese health system has resulted in changing national health priorities. Both the Timor-Leste government and AusAID have a stated focus on maternal, neonatal and child health (MNCH) in the next few years, as reflected in the NHSSP, the SDP and the MDG. Secondly, the influx of new graduates over the next years will change the face of primary care and creates demand for further training in order to develop secondary and tertiary care.

The next phase of ATLASS will need to respond accordingly, to ensure the Program remains highly relevant and can continue to contribute effectively to national health priorities. Specifically, there remains a role for ATLASS in:

- a. Improving Maternal, Neonatal and Child Health (MNCH): this can be done through the provision of paediatric and obstetric services, as well as general specialist care to women and children. Safe anaesthetic provision for Caesarean sections, for example, is key to reducing neo-natal mortality. But other specialties should not be neglected. For example, an ENT screening visit in 2012 sampled the degree of hearing loss amongst 262 school children in Baucau. The study demonstrated an urgent need for more ENT services. The Primary Ear Care Project, as well as future ENT surgical trainees, will meet a certain demand, but external inputs in the form of specialist ENT surgical services remain essential to support the fledgling service.
- b. Developing secondary and tertiary care: ATLASS Phase II has been designed in order to meet the priority need for further training. It will develop and deliver a Postgraduate Diploma program at the UNTL which will equip junior doctors with a selective skillset to be able to provide safe and effective medical treatment in the districts. Selected Diploma graduates may continue on to specialist training opportunities overseas by accessing MoH scholarship funds.
- c. Institutional strengthening and support: there is still a great demand for institutional and administrative support in Timor-Leste. A priority is, for example, to assist the MoH to establish a medical registration board, which can monitor standards of medical care and professionalism. Better referral systems could also be established with specialist support. There is great need for more complementary services, including a BME service; a pathology service; and disability and mobility services. These efforts require careful planning and cooperation between hospitals, donors and the MoH.

## 11. Handover/exit arrangements

### People involved

Name of person	Type of employee <i>e.g.: AusAID, contractor, govt counterpart</i>	Role	Time engaged	Contact details	Position post-activity <i>if known</i>
Daliah Moss	RACS	Director, External Affairs	2006-2012	RACS Melbourne office	
Eric Vreede	RACS	Team Leader and LTA Anaesthetist	2006-2012	ATLASS Dili Office	
Karen Moss	RACS	Program Officer	2006-2012		
Natalie Stephens	RACS	Operations Officer – in country	2009/2010		
Kegan Barlow	RACS	Operations Officer – in country	2010/2011		
Karen Myers	RACS	Operations Officer – in country	2012		

### Documentation produced by activity

Name of document	Type of document <i>e.g.: report, survey, analysis</i>	Document owner <i>e.g.: Ministry in partner govt</i>	Date document produced	Location/s of document following completion of activity
Medical Board scoping report	Report		October 2009	
ED scoping report	Report		January 2009	
BME scoping report	Report		2007	
Audiology surveys (x 2).	Survey		2009	
Program six monthly reports	Report		Over the course of the Program	

Note: include documents where the Intellectual Property belongs to AusAID, as well as those related to the activity but the property of other parties

### Physical assets purchased with activity funds

The ATLASS Program has continued into Phase II in 2012, and the Program Management arrangements remain unchanged. Assets from ATLASS remain with the HNGV and Program Management Team in Dili. See Asset Register at Annex E for further details.

Physical asset	Cost	Date of purchase <i>if known</i>	What will happen to asset following completion of activity?
Toyota Prado car	AUD 39,000	April 2007	Handover to new Program
Proton Wira car	USD 5,500	24/4/2008	Handover to New Program

#### Contractual obligations/terms and status at end of activity

Name of contract	Contract number	Contractual obligations/terms	Status at the end of activity
Australia – Timor Leste Program of Assistance for Specialist Services (ATLASS)	CON 39677	Provision of specialist medical services including training and mentoring support for Timorese surgical trainees and other medical personnel.	Completed

#### Continuation of components of activity

Which component is being continued?	Who is taking this forward?	Contact details
Overseas Specialist Training (Surgery & Anaesthesia) funds are being used as an acquittable funds advance of \$215,000 to cover the continuing costs of three Timorese surgeons completing their Masters Program (expected until 2016).	This is being managed under the new ATLASS Program	RACS Melbourne

## Annex A – Other donor funding

<b>ATLASS Sources of funding</b>								
Financials - Calculation of Funding Support from other Donors (exl GST)								
Organisation	Oct-Dec 2006	2007	2008	2009	2010	2011	Jan - June 2012	Subtotal
V2020					\$426,274.00		\$137,168.00	\$563,442.00
Eye Surgery Foundation				\$25,000.00	\$31,996.95	\$30,458.03		\$87,454.98
ProVision / Optometry Giving Sight		\$16,660.00	\$28,800.00	\$23,800.00	\$23,800.00	\$23,800.00	\$9,520.00	\$126,380.00
Rotary Balwyn						\$50,000.00	\$20,000.00	\$70,000.00
St Johns Ambulance (National)			\$13,378.37	\$6,254.04	\$27,330.69	\$30,058.66	\$0.00	\$77,021.76
St Johns Ambulance (WA) - Teleophthalmology					\$1,000.00	\$20,134.00		\$21,134.00
Lions of Mudgeerabra						\$20,134.00		\$20,134.00
Novartis						\$65,028.10		\$65,028.10
RANZCO Eye Foundation							\$10,000.00	\$10,000.00
Nautilus Law						\$25,000.00		\$25,000.00
Alcon			\$5,000.00			\$4,000.00	\$35,750.00	\$44,750.00
ASOHNS						\$55,000.00		\$55,000.00
Red Cross (ETEP)			\$21,169.75					\$21,169.75
Private Donors (ETEP)		\$16,400.00	\$23,900.00	\$4,458.50	\$6,562.50	\$18,243.92	\$13,750.00	\$83,314.92
Self-funded volunteer contribution (airfares)		\$14,000.00	\$30,000.00	\$24,000.00	\$54,000.00	\$50,000.00	\$22,000.00	\$194,000.00
Orthopaedic Outreach			\$19,877.41	\$20,675.13				\$40,552.54
<b>Total Funding Support from other donors</b>								<b>\$1,504,382.05</b>

## **Annex B – Case studies of successful health outcomes**

### **Testimonials**

Expert guidance and mentorship has extended beyond formal ATLASS Program activities to the forging of committed and collaborative mentoring relationships between the Advisers and counterparts. Similarly, professional advice and direction has been maintained between short-term volunteers and counterparts through e-mail, phone and SMS communications. This type of support is especially relevant and important given the limited current availability for specialist supervision and leadership in Timor-Leste

An example of the successful protégé-mentor relationship is that developed between Dr Joao Ximenes and Plastic Surgeon, Mr Mark Moore. This relationship has directly contributed to Dr Joao Ximenes developing the skills and confidence required to perform simple, unassisted cleft lip operations, and has facilitated opportunities including a training attachment with Mr Moore in Adelaide, Australia to foster skills in burns management.

#### ***Excerpt from Mr Mark Moore's report, Dili, 26 May - 2 June 2012:***

The progress of Dr Joao Ximenes as a cleft surgeon continues – with the completion of this visit he has now performed more than 50 unilateral cleft lip repairs as the lead surgeon. He is very able to mark out and plan his anticipated surgical approach and is able to complete lip and nose closure in the incomplete cleft lip cases with results that are the equal of the visiting surgeons and considerably better than has been offered to the Timorese patient in the past. Equally his understanding of the pre-op and post-operative care of cleft cases is well developed, ensuring appropriate discharge planning and follow up of these cases. He needs support to perform this surgery when our teams are not around ... his confidence must continue to be built, and this requires that the best operative conditions are available with consultant medical anaesthetists in attendance. The challenges for Dr Joao Ximenes are many, not the least that he continues on a daily basis having to fulfil the role of a General Surgical trainee with all the duties and on-call that this entails.

#### **Excerpt from Dr Joao Ximenes' Feedback Report, July 2012**

Generally speaking my practical skills are good but the program has helped me gain the theoretical knowledge to apply those skills. Surgeons such as David Watters, Glenn Guest, Hamish Ewing, Ronald Beck, Kathryn Edyvane provided learning opportunities through observing their techniques and they encouraged me to try new procedures- even when there were language difficulties they would use body language to impart the knowledge!

The mentorship of Mark Moore has been extremely important to my development because of the continuation of the relationship over a number of years. Mr Moore's patience in teaching me has provided me with a lot of encouragement and confidence to try increasingly complicated procedures. Because of this long term relationship I am happy to work together with RACS as long as they are in country.

I now feel more confidence in making judgements for certain diagnosis particularly in the cleft and burns area- this is something that has come with long term support from Mr Mark Moore –when I am not confident of a diagnosis I can always discuss with him or refer the patient to him when he is in country. However over time I can see that my own judgement has improved and I now feel that I am the local surgeon with the best knowledge of burns treatment.

Another notable example is the relationship developed between urologist Mr Don Moss and Timorese surgeon Dr Joao Pedro Xavier. The support and training offered by Mr Moss during repeated visits has had valuable practical implications – Dr Joao Pedro is now able to perform open prostatectomies under minimal guidance.

#### **Excerpt from Dr Joao Pedro Xavier interview, August 2012**

- How has the visiting urology team been useful in developing your skills in urology?

Very helpful as usually I do all the cases and gain a lot of experience during a one week period. The visiting surgeon, Mr Don Moss, assists me and provides advice on my surgical technique. During the

intensive week we discuss cases and review the surgeries undertaken so there is a lot of knowledge imparted during the week.

- Please provide an example case where the skills and knowledge that you have gained through the program's support has had a high impact towards a positive patient outcome.

I am very happy with my skills in benign prostatic hyperplasia as to this point none of my patients have developed complications as a result of my surgery. My skills have provided positive patient outcomes for all of them.

## **Annex C – Testimonials**

*See attached document*

# Annex D – Cost-benefit Analysis

	If provided offshore				As provided under ATLASS	
	January 2007 - June 2012				January 2007 - June 2012	
Speciality	Operations	Unit Cost	Sub total			
Orthopaedic	226	12,000	2,712,000		Long Term Adviser and Short Term Specialist support costs	\$ 5,077,259
Paediatric (including Paed Cardiac)	87	12,000	1,044,000		Equipment and Consumables	
Ophthalmology	1842	12,000	22,104,000		LTA Supplies, disposables and reference materials	\$ 44,317
Plastics	528	12,000	6,336,000		Surgical and Anaesthetic Equipment	\$ 122,285
ENT	126	12,000	1,512,000		STS Disposables and Supplies	\$ 646,528
Urology	20	12,000	240,000			
LTA Surgery - Orthopaedic Surgeon	209	12,000	2,508,000			
LTA Surgery - General Surgeon	2246	12,000	26,952,000			
<b>TOTAL</b>	<b>5284</b>		<b>\$ 63,408,000</b>		<b>TOTAL</b>	<b>\$ 5,890,389</b>