



THE ROTARY FOUNDATION & CLUB OF GAWLER - CHANGING FUTURES IN BHUTAN WITH INTERPLAST

Thanks to the generous support of the Rotary Foundation and the Rotary Clubs of Gawler & Thimphu, Interplast has been able to deliver a successful two-week surgical and hand therapy clinical and training program in Thimphu, Bhutan. Through this visit, many lives have been changed through the delivery of reconstructive surgical services and associated allied health support, and local doctors, nurses and hand therapists in Bhutan have received crucial training in these areas. Interplast is grateful for the support of both the Rotary Foundation & the Rotary Clubs of Gawler & Thimphu with this program, and looks forward to continuing this partnership to change futures across the Asia Pacific region.

BACKGROUND TO INTERPLAST'S PROGRAMS IN BHUTAN

For over 30 years Interplast has been sending fully qualified Australian and New Zealand volunteer plastic and reconstructive surgeons, anaesthetists, nurses and allied health professionals to 25 countries in the Asia Pacific region. Volunteers provide free reconstructive surgery for those who would otherwise not be able to afford these services, significantly improving the quality of life for people who are disabled as a result of congenital or acquired medical conditions including cleft lip and palate, burn scar contracture wounds, tumors and growths. Interplast also has a strong focus on training, mentoring and building surgical capacity of in-country medical personnel.

Since carrying out a needs assessment in August 2014 (following requests from local Bhutanese partners to provide support in plastic and reconstructive surgery), Interplast has continued the work originally started by Australian volunteers, Ms Suzanne Caragianis and Dr Philip Griffin who had been undertaking volunteer programs in hand surgery and hand therapy to Bhutan for several years beforehand.

To assist in developing local plastic surgery capacity, Interplast started working with the Jigme Dorji Wangchuk National Referral Hospital (JDWNRH), the Ministry of Health and the Khesar Gyalpo University of Medical Sciences of Bhutan (KGUMSB) to establish a Memorandum of Understanding, to formalise the partnership and plans for programs and activities moving forward, which commenced with the first combined plastic and reconstructive surgery and hand therapy mentoring activity in May 2015. The MoU was finalised and signed by all parties in April 2017.



Interplast™

Repairing bodies & rebuilding lives
in the Asia Pacific region

ABOUT THIS PROGRAM

Thanks to the generous funding provided by the Rotary Foundation & the Rotary Clubs of Gawler & Thimphu, Interplast implemented a plastic & reconstructive surgery and hand therapy mentoring activity from 16 October – 3 November 2017. This was the sixth visit by an Interplast surgical team and followed on from the previous visit in April 2017.

The team was based at the JDWNRH in Thimphu throughout this period. The aim of this visit was to consolidate the efforts of previous teaching programs and to continue to teach reconstructive surgery techniques to the surgeons and related staff, as well as mentor and teach local and regional physiotherapists and physiotherapy technicians in hand therapy.

The majority of the team departed Bhutan on the 26th of October, however Ms Svens (hand therapist) stayed on until the 2nd of November to see and treat hand therapy patients for postoperative care and deliver additional training.

The October 2017 Interplast volunteer team to Bhutan consisted of the following members:

- Dr Tim Proudman (Plastic surgeon & Team Leader)
- Dr Mark Moore (Plastic surgeon)
- Dr Matthew Grills (Anaesthetist)
- Ms Vanessa Dittmar (Nurse)
- Ms Amanda McFall (Nurse)
- Ms Birgit Svens (Hand Therapist)
- Mr Darcy O'Neil (Hand Therapist)

The team as a whole had extensive prior experience with Interplast and in Bhutan. Together this combination of skills and experience helped deliver a successful program. The entire team was Adelaide based.



The interplast team (bar Darcy) on arrival in Paro



ACHIEVEMENTS

In all of its activities, Interplast seeks to implement its ‘twin-track’ approach to programming, which both provides important capacity building of local medical personnel while also meeting immediate medical need. This approach implemented in Bhutan focuses on giving patients access to life-changing medical procedures that they would otherwise not be able to afford or access, while also building the capacity of local medical staff through a range of formal and informal training and mentoring activities.

SURGICAL PROGRAM

The team arrived in Thimphu early in the morning on the 17th of October and undertook screening at the Jigme Dorji Wangchuk National Referral Hospital (JDWNRH) in the afternoon. On their arrival the team were informed that 4 of the 8 operating theatres were being renovated. This meant the team did not have access to the usual theatre 7. They were therefore required to operate from 3pm to 8.30pm. A second theatre along with local staff was made available so both surgeons could operate at the same time.

The team screened 107 patients in the outpatient department on the first day (split into Hand and General Plastic Surgery 48 and ENT, Clefts and Head and Neck 59). A total of over 160 patients were screened during the visit. A total of 50 operations were performed of varying complexity.. A surgical bay was set aside for Interplast patients on the orthopaedic ward and the ENT ward. All activities were undertaken with local staff.

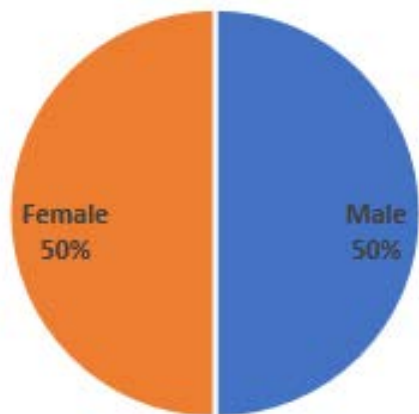
After the 8 am morning ward round the team would screen another 8 –10 patients each day before surgery started at 9am . During the day cases were also scheduled for the team in general surgery, ENT, dental/oral surgery and orthopaedic theatres. The ENT surgeons had in particular arranged for ear reconstruction for Dr Moore to undertake, and Oral Surgery had identified cleft lip and palate (primary and revision) and pharyngoplasty operations for assistance.

There was an even gender split of patients (50% male & 50% female). The patient’s age range was evenly spread out for this program. 50% of patients receiving surgery were aged between 19 and 45 years of age. A further 36% were aged 18 years and under. Patients aged 46 and over accounted for 14% of patients receiving surgery.

Procedures undertaken on the 50 patients included 13 upper limb surgeries, 12 skin lesions and soft tissue deformity procedures, 6 burns reconstruction surgeries, 6 head & neck procedures, 6 cleft lip and palate, 3 ear deformities and 3 trunk and lower limb procedures.

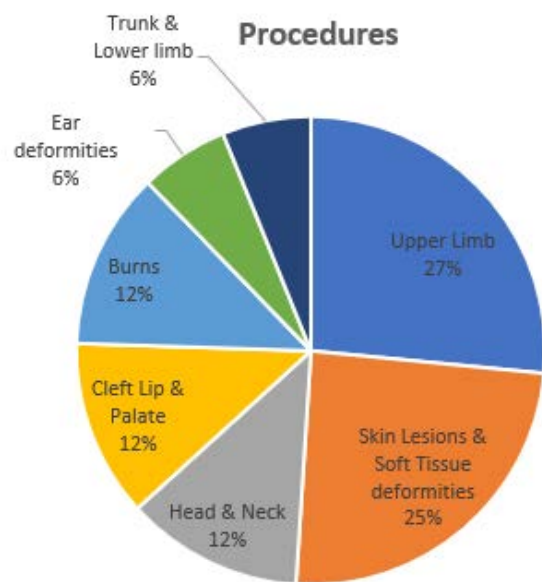
Please see the following for demographic details, including gender and age, of the patients consulted, and types of procedures performed.

Procedures Performed

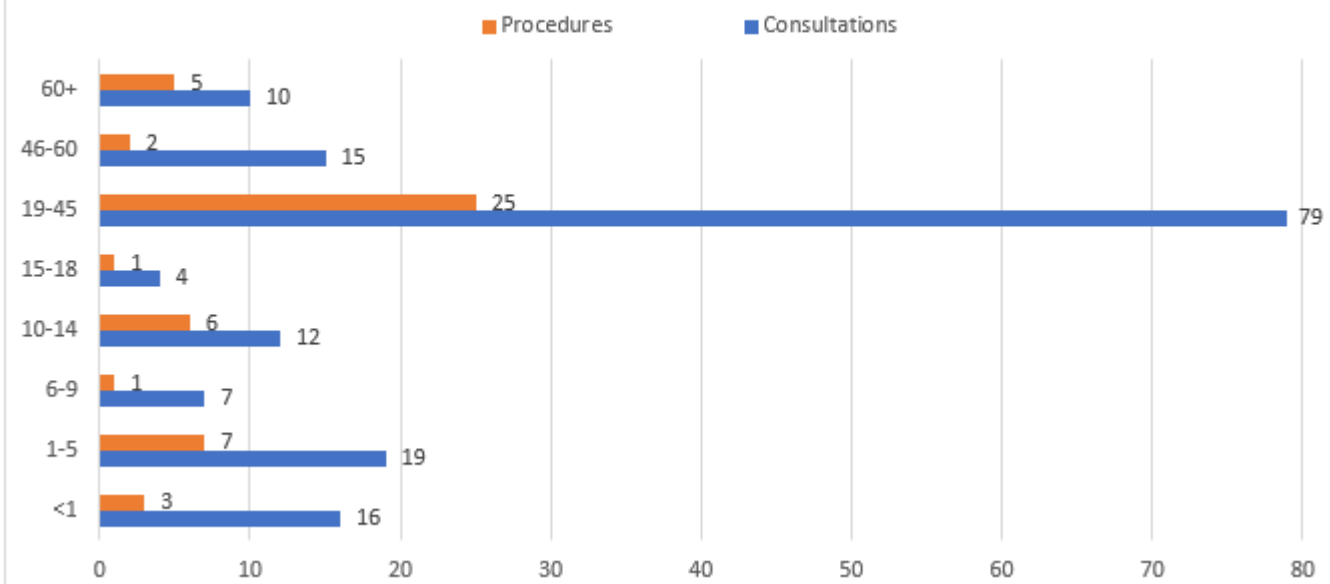


GENDER OF PATIENTS

TYPES OF PROCEDURES



Age Breakdown of Patients



REPAIRING BODIES, REBUILDING LIVES

DECHEN

Dechen, a 21 year old woman from Samtse is an energetic young woman with plenty of drive. Working at a resort in Bumthang after completing her Class X, Dechen sustained an injury which left her with a paralyzed left arm. When the Interplast team were able to assess her, it was found that Dechen had damaged the artery and main nerve which meant she was not been able to flex her fingers and lift her hand. With no feeling in her thumb, index or middle finger the consequent impact of her life was significant.

"I am dependent on my friends to do simple work like washing clothes. I feel handicapped because I cannot even tie my hair" -

Dechen

Due to the type of injury and the scarred wound bed standard means of nerve repair was not possible. The Interplast team worked to transfer the nerve of the thumb index and middle fingers to the side of another nerve. It will take 6 to 12 months to determine the extent of Dechen's recovery from surgery which made the extended follow up care provided by the Interplast hand therapists and their students more valuable.



Above: Tim attending to Dechen

"In the meantime, she will be helped by the hand therapist who will remain here for a week after our main team leaves to supervise management and help train local staff about the ongoing care that is required" - Interplast volunteer surgeon Dr Proudman

TSHEWANG



Tshewang is an 11 year old boy who visited Interplast with his dad back in November 2015 for his first stage ear reconstruction. He lives five hours away from Thimphu and his dad stays with Tshewang in hospital each time, leaving at home his wife and three other children.

His ear deformity was discovered at birth and his family wondered now they could help their son until they heard an announcement about Interplast's visit. Tshewang was very shy when he first presented in November 2015, and said that other children noticed that he was different. In addition, his ear deformity impacted his hearing. The auricle (external ear) helps block and muffle

some sound from behind us, helping us to distinguish whether a sound is coming from our front or our rear. It also gathers a much larger sound wave (making our hearing far more sensitive) than with no auricle.

Tshewang said that he is happy with his new ear. He can't explain why but he feels better and more like the other children. He went on to add that without his operation he might still be ashamed of showing his condition.

His second stage ear reconstruction during this visit was successful. Following the procedure, Tshewang explained that he now has more friends and other children treat him better. He still feels a little different but better than before. His father was happy with his new ear. When the team asked Tshewang if Interplast had made a difference for him nodded and smiled.

"Thank you to the (Interplast) team for coming and giving my son a new life" -
Tshewang's dad



Tshewang's ear pre & post operative

HAND THERAPY

The Interplast hand therapy team treated 102 patients in total at JDWNR Hospital in Thimphu. These patients represented a mixture of acute and chronic injuries and conservative (non-operative) and post-operative cases. There was high incidence of post-operative electrical and flame burns, multiple soft tissue injuries and wrist/elbow fractures which were non-operative.

There was also a high degree of tendinopathies, wrist and thumb sprains. The team undertook most of the post-operative wound care dressings in the hand therapy clinic rather than on the ward with much of the wound care dressings and sterile tools were brought in from Australia.



Birgit and Darcy treating patients in the busy clinic

TRAINING ACTIVITIES

Teaching involved active participation by consultants and surgical residents (specialist trainees) in screening clinics and surgical cases as surgeon under supervision or assistant surgeon. These collaborative operating sessions are intrinsic to all Interplast programs in Bhutan and encouragingly, surgeons from the rural districts were also present during the program and were able to participate in the cases.

Interplast volunteer surgeon's Dr Proudman and Dr Moore undertook surgical training and mentoring with five local surgeons. In-theatre training consisted of ear reconstruction, cleft lip/palate, pharyngoplasty, flap reconstruction of the head and neck, management of soft tissue injuries and tendon and nerve repair. Further tutorials were also undertaken to provide local surgeons with as much support and training in varied formats. These tutorials were led predominantly by Dr Proudman and topics included Flap Reconstruction in the Head and Neck as well as Microsurgery reconstruction—applications of free flaps.

Dr Matthew Grill provided anaesthetic services to the surgical team in the dedicated theatre. He also provided training and support in a number of operating theatres with difficult intubations and other anaesthetic procedures. An anaesthetic resident and nurse provided support to Dr Grill and this provided an opportunity for one-on-one mentoring. Of note, Dr Grill provided teaching regarding a 4 month old baby for a cleft lip repair and a 5 year old child for a palatoplasty.



Teaching involved active participation by consultants and surgical residents in screening clinics and surgical cases as surgeon under supervision or assistant surgeon. Dr Santiram, an orthopaedic surgeon from Mongar is seen above consulting alongside Drs Moore & Proudman.

TRAINING ACTIVITIES - CONT

The Interplast team included two theatre nurses. This allowed for in-theatre mentoring. Ms Dittmar provided instruction on instrument preparation, care, cleaning and draping. She also spent time discussing the preservation of clean, disinfected and sterile areas in the operating room.



Amanda (far left) and Vanessa (far right) with local nursing staff

During the Interplast visit, the resident hand therapy staff and nine other physiotherapists and physiotherapy technicians from regional areas across Bhutan attended this education and mentoring program. This occurred via observation, mentoring, supervised practice and formal and informal education over 12 working days. For the most part, physiotherapists and physiotherapy technicians attended the Hand Therapy clinic from 9am to 3pm. Formal lectures were provided to this group on Chronic and Acute Conditions of the Upper Limb, Basic Splinting and Splint Pattern. Flexor tendon injuries and rehabilitation were provided to the Physiotherapists and Physiotherapy technicians at JDWNR Hospital. Small group education on upper limb assessment, wound care, pressure garment re-tensioning, diagnostic tests, treatment and splinting occurred informally in the hand clinic via practical sessions.



Therapists participating in the Hand Therapy Teaching program

MEETINGS

The team held a number of meetings with all local partners. The Interplast team received compliments about the quality of our service and our engagement with the local medical community at all our meetings with the Minister, the Director General and the Hospital President.

Of note, Dr Proudman & Darcy O'Neil met with H.E the Minister of Health Tandin Wangchuk as well as the Khesar Gyalpo University of Medical Sciences (KGUMSB) President to discuss plastic & reconstructive surgery training. During the meeting, Dr Proudman delivered a presentation on its importance, and the Minister responded by expressing his continued support for Interplast's work and the need for reconstructive surgery services and its development as a priority in Bhutan.

THANK YOU ROTARY CLUB OF THIMPHU

The team (as is standard practice during all Interplast visits to Bhutan) met with the Rotary Club of Thimphu over a dinner. This was an opportunity to engage once again with the club and thank them for their support in securing the Global Grant which made this visit possible. The team also presented the Rotary Club of Thimphu with the Rotary Club of Gawler's pennant.



Dr Kinzang P. Tshering (President of KGUMSB), Dr Proudman, H.E Tandin Wangchuk (Minister of Health) & Darcy O'Neil



Dr Proudman presenting the RC of Thimphu with a pennant from the RC of Gawler

FUTURE PLANS

The Ministry of Health, JDWNRH & KGUMSB all expressed their strong support and thanks to the Interplast team and office staff for subsequent Interplast visits.

Interplast will continue to support the development of reconstructive surgery services in Bhutan and the training opportunities that it presents in the foreseeable future. Of note, Interplast will seek to support the training of Dr Sonam Jamtsho who is in his 3rd year of General Surgical training. He has been identified as an appropriate plastics trainee and has declared a strong interest in pursuing the speciality. Funding permitted; Interplast continues to aim to deliver two programs annually to Bhutan, each with a strong education focus. In the short-term, it is Interplast's intention to deliver another two week program to Thimphu in April 2018.

THANK YOU THE ROTARY FOUNDATION AND THE ROTARY CLUB OF GAWLER

Interplast is grateful to the Rotary Foundation and the Rotary Clubs of Gawler & Thimphu for entrusting our organization with this much appreciated funding and looks forward to working with the Foundation and the RC of Gawler in the future.

Local media articles of the Interplast visit can also be found on the following links:

<http://www.kuenselonline.com/plastic-and-restorative-surgical-camp-underway-in-thimphu/>

<http://www.kuenselonline.com/interplast-changes-lives-in-bhutan/>