



**Interplast<sup>®</sup>**

**IN MONGOLIA**

**2014 - 2020**



# Interplast<sup>®</sup>



*When I first approached the Southgobi Central Hospital and Interplast team, they welcomed us without any hesitation. We are very grateful for the surgery and the healing of my daughter. I hope that Interplast will come back to Mongolia to perform these important surgeries for many needy children of Mongolia.*

(Mother of ten year old patient)

*I used to have so much pain that I couldn't move my right arm, but after the surgery the pain reduced. I was able to lift up my hand. My pain is not completely gone yet, but I'm glad it's much better than before. I was not able to exercise in physical education classes, but now I can do some small exercise. Two children in our class have burns and I told them about Interplast.*

(Patient; nine year old girl)

*When Dr Pescod first visited Mongolia, he found anaesthetists had a lack of access to training, and now the program has provided regular training.*

(Dr Altanzul; Anaesthetist)

*Dr Pescod first came to Mongolia in the early 2000s and assessed the state of anaesthesia in Mongolia, examining safety (in anaesthesia practice) and options to form linkages with international organisations.*

(Dr Odgerel Boldbaatar; Anaesthetist)

*(Interplast volunteer) Ms Diana Francis ... has helped address these challenges, bringing together all rehabilitation physicians in Ulaanbaatar, interviewing them, teaching classes and sharing practical knowledge and experience in the workplace.*

(Dr Tsermaa Sandag; Doctor of Rehabilitation Therapy)

*Dr David (Pescod) has been working with Australian and Mongolian anaesthetists for over twenty years. ...The long term continuous goal of the MSA is building capacity of doctors with training, and to continue the cooperation with Interplast. Continuous support from Interplast and the ASA is critical to the sustainability of the MSA.*

(Dr Gandbold Lundeg; Anaesthetist and MSA Secretary)

*Local counterparts are exceptionally dedicated to their work, and to improving health care for their country. Ganbold (Dr Lundeg) is an extraordinary leader; he is very well respected. There is a cohort of health professionals in Mongolia who are dedicated to improving care for all Mongolians. Whatever training we offer, they take it and improve their own practices.*

(Dr Pescod)

*The MSA is sustainable, and even if we stay away, there's been an impact. There is room for continuing support; we can always do more.*

(Mr Matthew Blanks; Coordinator, International Programs)





# ACKNOWLEDGEMENTS

Interplast would like to acknowledge the work and passion of everyone who has been involved in this review of its Mongolia program, led by Ms Amanda Richmond.

Ms Erdenechimeg Ulziisuren interviewed senior hospital administration, anaesthetists, surgeons, nurses and allied health professionals; patients and their families, and undertook substantial data collection. Ms Ulziisuren's data, and the collated insights of local partners and beneficiaries were integral to the review.

Interplast's volunteer medical professionals contributed through interviews, providing their unique insights and learnings from their years of delivering surgical, allied health and mentoring programs. A list of volunteers is at the end of **Section 5 – Interplast Programs in Mongolia 2014-2015 to 2019-2020**.

Australia's Ambassador to Mongolia; HE Mr Dave Vosen, and Program Officer, Mr Urnukh Khuujii, gave their views from an Australian Government perspective, giving Interplast valuable insights into how its programs fit within Australia's broader international development program.

Interplast's Director, International Programs, Ms Jess Hill; and Coordinator-International Programs, Mr Matthew Blanks; provided the organisational perspective, insights on managing the program and aspirations for its future direction. Chief Executive Officer, Mr Cameron Glover, and Chair of Interplast's Clinical Governance Committee, Dr Philip Ragg, gave their perspective of Interplast's oversight of its programs, policy and governance frameworks.

The review team is very grateful for all who gave so generously of their time.

Taking a step back to review programs is an important and positive process in an organisation's growth, helping it to acknowledge its achievements, understand the lessons of the past and lift its gaze to the future. This review was made possible by funding from Interplast's Australia NGO Cooperation Program (ANCP) allocation, through the Australian Government's Department of Foreign Affairs and Trade.

## The Review Team

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Chimgee is the CEO and founder of COGNOS International, an Mongolian-based consulting company which focuses on research and evaluation, in the fields of health, socio-economy, agriculture, market and environment. She provides advice and support to national and international organisations to inform and contribute to evaluation and research projects. She has a Masters in Population and Reproductive Health Research, a Masters in Social Research Methods and is currently completing her PhD in Demography. Prior to setting up COGNOS, she had gained extensive experience working in the field of research and monitoring and evaluation in Mongolia and in the UK, for a range of local, national and international organisations.

### **Interplast key staff:**

Director of International Programs – **Jess Hill**

Coordinator – International Programs – **Matthew Blanks**

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## EXECUTIVE SUMMARY

### Country context

Mongolia is one of the least densely populated countries in the world, with its population of 3.1 million sparsely distributed (2 people per square kilometre). A large percentage of the population resides in the capital Ulaanbaatar (1.584 million); with 68.7% of the total population living in urban areas, and this has an annual rate of change of 1.63%. The median age of Mongolians is 29.8 years; 28.8 years for males, 30.7 years for females. Life expectancy at birth is 70.8 years; 66.6 years for males, and 75.2 years for females. The rate of population growth is 0.99%; and the birth rate is 16.6 births per 1,000 people.

Mongolia has made improvements in achieving better development outcomes for its citizens, and made progress in achieving the Millennium Development Goals (MDGs), and the Sustainable Development Goals (SDGs). Mongolia has made substantial improvements in maternal and child health; progress toward universal coverage of basic preventive services; a decline infant mortality under five mortality rates of, and a significant reduction in maternal mortality. Mongolia continues to perform better than other resource rich countries with a similar per capita GDP, and its low health expenditure is achieving much more effective and strong health outcomes than resource rich peer countries.<sup>1</sup>

It does face challenges; such as a rise in non-communicable diseases, and its ageing population will place increasing pressure on the health system. Mongolia's primary healthcare sector is weak, and its health system is hospital centric with little integration between the various levels of health, hindering prevention and early treatment, increasing the burden on the system, leading to more expensive interventions and a need for acute care, particularly in rural areas.

### Interplast's Mongolia Program

Since 2008, Interplast's Mongolia country program has largely focused on a partnership with the Mongolian Society of Anaesthesiologists (MSA), with funding and technical support through the Australian Society of Anaesthetists (ASA) and its members, and from the Australian Government (through the ANCP). The funding supports the MSA Annual Scientific Conference (the Annual Conference), which provides access to annual educational and capacity development opportunities for anaesthetists throughout Mongolia, and institutional support to the MSA for the operation of its office and administration costs. The intended outcome of the partnership and support has been to improve residency training and the continuing education of anaesthesia specialists.

In more recent years, Interplast volunteers have also delivered burns surgery mentoring and clinical services focused primarily in Murun, in remote Mongolia. At the time of writing, there is currently a new burns hospital being built in Ulaanbaatar, and once it is operational, Interplast expects it will provide support there. Interplast delivers annual allied health training programs, in burns rehabilitation and occupational therapy, at the National Trauma Orthopaedic Research Centre of Mongolia (the Trauma Hospital) in Ulaanbaatar. In response to requests from one surgeon and anaesthetists to deliver an Interplast program in provincial areas, in October 2019 Interplast delivered a surgical program at the Umnugovi Regional Diagnostic and Treatment Centre, in Dalangadzad.

Interplast has also partnered with the Bright Blue Police Commissioner's Fund for Sick Kids, an Australian charity, which reached out to Interplast in 2014 to help with establishing surgical mentoring in Mongolia.

In 2014, Interplast conducted a review of its Mongolia country program, covering the period from 2008. That review found that the partnership between Interplast, and the MSA and ASA, had made a number of positive achievements in enhancing and advancing professional standards in anaesthesia practice, through improved training and ongoing professional development; that the MSA had a solid base of support from its members; and that it was moving toward being sustainable as an organisation. The review also found that, although it faced financial challenges, members of its steering committee were identifying potential funding opportunities.

From 2014 to 2019 Interplast has delivered: five surgical programs; screened over 660 patients; provided 95 surgeries; provided therapy services directly to at least 43 patients, and assisted local therapists to treat dozens of additional patients through hands on training and mentoring. Interplast has continued to contribute to institutional capacity building of the MSA and professional development through the Annual Conference and its related seminar programs.

Interplast's Country Strategy Mongolia 2019-2021 vision is that:

**MONGOLIA HAS A SUSTAINABLE, LOCALLY-DRIVEN PLASTIC AND RECONSTRUCTIVE SURGERY SERVICE, PROVIDING QUALITY SURGICAL AND RELATED MEDICAL OUTCOMES TO THOSE REQUIRING THEM.**

and its goal is:

**TO CONTRIBUTE TO IMPROVING QUALITY ACCESS TO PLASTIC AND RECONSTRUCTIVE SURGERY AND THERAPY SERVICES, PARTICULARLY RELATED TO BURNS INJURY, IN MONGOLIA.**

Mongolia's country strategy objectives aim to contribute to:

**Improved basic plastic and reconstructive surgical skills, in particular those related to burns reconstruction**

**Improved anaesthetic capacity**

**Improved nursing skills, including pre and post-operative care**

**Improved allied health (rehabilitation) services, in particular in relation to burns reconstruction**

**An improved 'whole of team' approach to surgical outcomes**

In delivering on the above objectives, Interplast has undertaken a number of activities; including burns surgery and mentoring; building the skills of nurses in pre and post-operative care through on the job training and mentoring; and building capacity of allied health staff, which is leading to improvements; in patient care, particularly relating to post-burns reconstruction. The partnership with the MSA and ASA has made a significant contribution to improving professional development and has helped lift the standards of anaesthetic practice and improve patient safety, and been instrumental in moving the MSA forward, having a significant and long term impact on developing the training and skills of the profession.

## Mongolia Country Program Review 2014-2015 to 2019-2020: Terms of Reference

The purpose of this review is to examine the impact of Interplast's program from 2014-2015 to 2019-2020, and progress in the implementation of the Mongolia Country Strategy; to monitor and examine progress toward achieving the vision for Mongolia, its program goals and objectives; and to communicate the results of Interplast's program activities in Mongolia to key stakeholders.

Its objectives are to identify the impact and outcomes of Interplast country program activities, and assess the extent to which Interplast is achieving its program goals and objectives for Mongolia.

### Findings

#### *Institutional support and capacity building*

This review has found that the primary outcome of the Mongolia program has been improved capacity, knowledge and skills of local anaesthetists, surgeons, nurses, and allied health workers. Volunteers and counterparts alike agree that this has been one of the most beneficial achievements of the program. Institutional and mentoring support for the MSA, and the formal lecture and interactive workshop program has focused on practical subjects relevant to surgery and patient care.

Members of the MSA explained that the partnership with Interplast and the ASA has improved capacity in their profession, and for the practice of anaesthesia in Mongolia. The professional development program, financial assistance and organisational capacity building is helping the MSA progress its institutional goals, moving it closer to becoming a teaching college, and lifting the standard of anaesthesia practice toward a level commensurate with developed countries. Improvements in capacity of the MSA had led to a more structured approach to anaesthesia training, and peers were sharing professional experience and knowledge. MSA Secretary and key counterpart, Dr Ganbold Lundeg pointed out that Interplast's program helps rural doctors with financial assistance which allows them to travel to Ulaanbaatar to attend the MSA Annual Conference, where they have the opportunity to meet other anaesthetists, learn from each other and exchange information.

The surgical program has provided on the job training and mentoring, boosting the skills and capacity of surgeons, nurses and allied health staff. Surgical mentoring has also improved access to treatment for patients, particularly those in the more remote regions of Mongolia, and has enhanced the skills of the surgical teams in these areas, something which has a lasting impact. Taking the surgical program to Murun and Dalanzadgad gave nurses access to training that would ordinarily only be available in Ulaanbaatar. Interplast volunteers observed that local teams were keen to apply new skills into their work practices, and that this has contributed to improved local capacity. Dr Kirstie MacGill commented on how the program was seeing changes in practice, giving the example of one surgeon that the team had mentored on the last trip to Dalanzadgad who was very enthusiastic to plan for up-coming surgeries and was bringing in patients to be part of the planning process: that is good practice and a success story.

***By the end of the third year (in Murun) the locals were doing things themselves, we weren't seeing as many catastrophic patients, we have met the need but they're not yet competent to do everything. We go back to reinforce the training.***

(Dr Kirstie MacGill; Plastic and Reconstructive Surgeon)

Both volunteers and counterparts agreed that on the job training is achieving some of the best results of the program, providing practical knowledge and technical information on the latest developments in surgical and anaesthesia practice. Some surgeons who have accessed on the job training are now undertaking more complex surgery, and are training their colleagues. Others noted that Interplast is making a major contribution to not only anaesthesia training, but also intensive care, resulting in improved practice.

A contributor to capacity building and sustainability is that Interplast's volunteers are a multidisciplinary team, with anaesthetists, surgeons, nurses and therapists delivering the in-country program, and modelling the benefits of a whole of team approach. Counterparts see that while each team member makes an important contribution, it's the collective effort of the team that achieves the best outcomes for patients, and is a more sustainable way to work. This was commented on by Australia's Ambassador to Mongolia, HE Mr Dave Vosen, who witnessed the surgical team working together in Dalanzadgad. He noted that Interplast's strength is its teamwork, with each individual having an important role to play in supporting the work of the surgical program.

Nurse respondents to the review saw the commitment to capacity building made Interplast one of the most effective of volunteer organisations in this field. Some noted that many medical professionals of all disciplines saw the benefit not only for their own skills development, but the impact that the program has for patients, who would otherwise have missed out on treatment and care. One nurse noted that prior to Interplast's surgical program in rural and regional locations, burns surgery was not available to patients close to where they lived. Counterparts said that taking the program to aimags outside of central areas has particularly helped children access treatment only available at tertiary hospitals in the city.

When volunteer teams deliver programs in these areas patients are spared the lengthy journeys to seek treatment. This is an area where most who were interviewed felt that the impact on individuals was greatest; not only has this improved the quality of life for those receiving treatment, training during surgeries has increased the skills of anaesthetists, surgeons and nurses. Since Interplast's first burns treatment and training program, doctors outside of the main centres are performing burns surgery independently.

## **Unmet need**

Research for this review has highlighted areas of unmet need where Interplast is well placed to make an ongoing contribution. Some areas are perennial issues identified by program reports and during interviews, and are at an operational level; such as assisting local teams and facilities with access to better equipment and supplies, ensuring that training is extended to those who work outside of the main centres, and maintaining a focus on capacity building. Others are more systemic or strategic in nature, and require further research and analysis to gauge the extent of the challenges to be addressed, and whether Interplast is well-placed to make a contribution. The current research that Interplast is undertaking in the area of gender and disability barriers falls into this category. Gender and disability barriers in Mongolia are areas where Interplast's ability to influence is relatively small; and whilst there are opportunities to partner with local organisations, its direct influence is limited to examining its own structures to ensure that its programs are accessible to all. Interplast has commissioned research into this area, which will potentially assist it and its partner organisations to look at structural barriers within their institutions.

### ***Burns prevention and treatment***

Interplast, its volunteers and counterparts have identified burns as an area of significant unmet need, where the learnings from Australia's experience of the past decades has much to offer Mongolia, and where Interplast and local partners can make an impact. Burns in Mongolia are not very well treated or managed, and burn injuries are often seen as inevitable, and a low priority. Anecdotally, the numbers of burns injuries in children suggests that as many as one in four children under the age of 5 have accidents in the home resulting in burns. There is some evidence in peer reviewed journals which support this estimate.<sup>2</sup> Some hospitals lack basic equipment to treat burns, and during winter (often when most injuries occur in the home) there is little access to treatment, possibly exacerbated by isolation and remote locations.

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2 Of total 1154 children, 291 (25.2%) had burn injury in their life-time.  
<https://pubmed.ncbi.nlm.nih.gov/22342177/>  
One survey revealed that 27% of children had a history of burn injuries.  
<https://onlinelibrary.wiley.com/doi/pdf/10.1111/tmi.13034>



A new Burns Rehabilitation Hospital being built in Ulaanbaatar could provide Interplast with an opportunity to assist Mongolia mount a concerted effort to address burns; potentially helping it develop a national strategy encompassing prevention and education campaigns, access to quality treatment and workforce skills development. Remote populations are particularly affected by a lack of capacity in burns treatment and management, and there is a need to train more medical personnel in early treatment of burns to avoid life long consequences for those with burns injury. Interplast has engaged local expertise to undertake a Burns Gap Analysis, which will boost its knowledge and help it to understand the extent of burn injuries in Mongolia.

Continuing its contribution to training is an important area for Interplast in influencing and addressing future capacity in Mongolia, in surgery and anaesthesia practice, nursing and allied health. This review has found that Mongolia faces challenges in service provision for its more remote locations, and in many areas there is a need for better access to training and mentoring. In some locations, newly qualified doctors work with little access to support for what they do. Interplast sees that it has an ongoing role in helping meet the training needs of these more isolated professionals, through its outreach capacity building program.

## Conclusion

There are many achievements that Interplast's Mongolia program has achieved between 2014 and 2020; improvements in anaesthesia, surgical and nursing, and therapy practice. There are ongoing challenges which Interplast's program will continue to address. The burns surgery and mentoring program that has taken place in Murun and Dalanzadgad, and at the Trauma Hospital in 2015, is reaping benefits for both surgical teams and patients. Volunteers and counterparts alike agree that more needs to be done, particularly in skills development. Interplast acknowledges the ongoing role of the MSA in providing strategic and logistical support for its burns surgery and mentoring programs, as well as those programs focused on anaesthetic development.<sup>3</sup>

Despite the disruptions brought about by the Covid19 pandemic, Interplast's ongoing work with the MSA has continued in an online capacity. In the absence of an in-country presence, many respondents to the review were grateful for Interplast's rapid switch to the online program, and expressed the hope for remote mentoring to continue even when an in-country program resumes. The travel restrictions have forced a lengthy pause in all of Interplast's in-country programs, but has also given the organisation a window to think about how to best use its resources for future programming. Through the input of the many respondents, both in Australia and in Mongolia, this review has been able to highlight areas where the Mongolia country program is achieving significant outcomes for surgical and allied health teams, and for patients. It has identified where efforts need to be continued, but also new and emerging areas that will provide opportunities for Interplast to continue making a substantial contribution to individuals, and to health systems, in Mongolia.

## Recommendations

### Ongoing Program Delivery

- 01** Continue the current support for the MSA office and Annual Conference, and support MSA members to identify and implement measures that will progress the organisation achieving its ambition for financial sustainability.  
*(Interplast/MSA/ASA)*
- 02** To safeguard the continuity and sustainability of the Mongolia program, Interplast to explore options to extend the pool of volunteers suitable to the Mongolia program, so that it is less susceptible to disruption from potential changes in key volunteers.  
*(Interplast)*
- 03** Support and facilitate training in areas identified by allied health partners; such as training physiotherapists in scar management, pressure garment making, orthopaedic exercises in therapy programs, contracture and joint management and post-surgery management.  
*(Interplast/allied health partners)*

### Clinical Education and Skills Development

- 04** Interplast, along with the MSA and ASA, identify opportunities for anaesthetists and surgeons to undertake overseas training placements to better develop professional skills and to boost professional capacity.  
*(Interplast/MSA/ASA)*
- 05** Consult with nurses to identify skills development needs, and ensure that nurses have access to practical skills development, through on the job training and mentoring.  
*(Interplast/nursing counterparts)*
- 06** Interplast to facilitate the translation of education packages for nurses, and make these packages accessible remotely so that nurses outside of the main centres have access to the materials.  
*(Interplast)*
- 07** To address the difference in access to training between regional staff and their city colleagues, Interplast should consult with surgical, nursing and allied health staff who work in rural and remote regions to identify their specific training needs, identify opportunities to extend training to those areas, and/or facilitate participation by support for travel to locations where Interplast training is available.  
*(Interplast/regional surgical teams)*
- 08** Interplast and partners to identify training deficits in allied health and rehabilitation practice, focussing on skills development for physiotherapists and occupational therapists.  
*(Interplast/National Research and Orthopaedic Centre-the Trauma Hospital)*
- 09** To maximise opportunities for professional development that Interplast, the MSA and the ASA contribute to through the MSA Annual Conference, explore the feasibility of using modalities such as online learning and other computer/internet based applications.  
*(Interplast/MSA/ASA)*

- 10** Interplast and partners to identify opportunities for sponsored visits by Mongolian anaesthetists to participate in observerships in Australia to boost capacity in the profession.  
*(Interplast/MSA/ASA)*

## **Strengthening partnerships**

- 11** Interplast to engage the assistance of the Australian Embassy, the MSA and other relevant partners to advance finalising and signing of the Memorandum of Understanding with the Government of Mongolia.  
*(Interplast/Australian Embassy/MSA)*
- 12** In consultation with the Australian Embassy, consider opportunities for participating in its public diplomacy initiatives to showcase the work of Interplast and other Australian organisations involved in capacity building in Mongolia.  
*(Interplast/Australian Embassy)*
- 13** To ensure equitable access to its programs, and to identify any barriers in its capacity building and surgical program, Interplast explore opportunities to work with local disabled peoples' organisations and gender equity organisations to develop a targeted strategy to address barriers to its programs based on disability status and gender.  
*(Interplast)*
- 14** To enhance the effectiveness and promotion of the surgical capacity building program in Murun, work with surgical counterparts to identify a local surgeon to take on the role of a local champion for the program.  
*(Interplast/surgical counterparts in Murun)*

## **New programming activities to consider**

- 15** To support the new Burns Rehabilitation Hospital in Ulaanbaatar, Interplast and partners work together to assess skills needs of Hospital staff; including surgeons, nurses and therapists, and develop a tailored program to support training and skills development in burns treatment, surgery and therapy.  
*(Interplast/Burns Rehabilitation Hospital management and senior surgical, nursing and therapy staff)*
- 16** Through the in-country research, commissioned by Interplast, to identify the scope of burn injuries in Mongolia, Interplast and partners identify opportunities to help Mongolia develop a national burns prevention, awareness, skills development and treatment strategy.  
*(Interplast/National Trauma and Orthopaedic Research Centre-the Trauma Hospital-/Mongolian Burns Association)*
- 17** In partnership with the Trauma Hospital and the new Burns Rehabilitation Hospital, explore the specific training needs of allied health staff to improve skills in preparing and tailoring ongoing therapy plans and treatment for patients following burns surgery, and coordinate with partners to ensure that these opportunities are also extended to allied health staff in regional and remote healthcare facilities.  
*(Interplast/Burns Rehabilitation Hospital Allied Health Department)*

## INTRODUCTION

### 2.1 The Mongolia Program

### 2.2 Program Goals and Objectives

### 2.3 Mongolia Country Program Review 2014-2015 to 2019-2020: Terms of Reference

#### Overview

Interplast has been providing plastic and reconstructive surgical services and training in countries across the Asia Pacific region since its first program in 1983. Interplast's mission is:

*To enhance people's health and well being by enabling access to life-changing reconstructive surgery and related medical services.*<sup>4</sup>

Interplast's purpose is *Repairing bodies, Rebuilding lives*<sup>5</sup>. It does this by facilitating surgical services and training opportunities that are otherwise not available to people in the countries where it works, and by supporting the development of local capacity so that partner countries are better equipped to provide these services, at a country or regional level. Surgical, anaesthetic, allied health and nursing services and mentoring programs are delivered by Australian and New Zealand volunteers who have expertise and experience in surgery, nursing and allied health. Interplast administrative and program staff provide logistical support, undertake program design, monitoring and evaluation, and manage relationships with key partners. Interplast is accredited with the Department of Foreign Affairs and Trade, and is a signatory to the Australian Council for International Development's Code of Conduct.

Interplast's development philosophy is underpinned by the fundamental principle that solutions, changes and impact are determined by local needs, and that these should be sustainable and enduring.<sup>6</sup> The following key concepts and guiding principles inform Interplast's development philosophy and theory of change:

4 Interplast Annual Report 2018-19, p.1

5 ibidem

6 ibidem

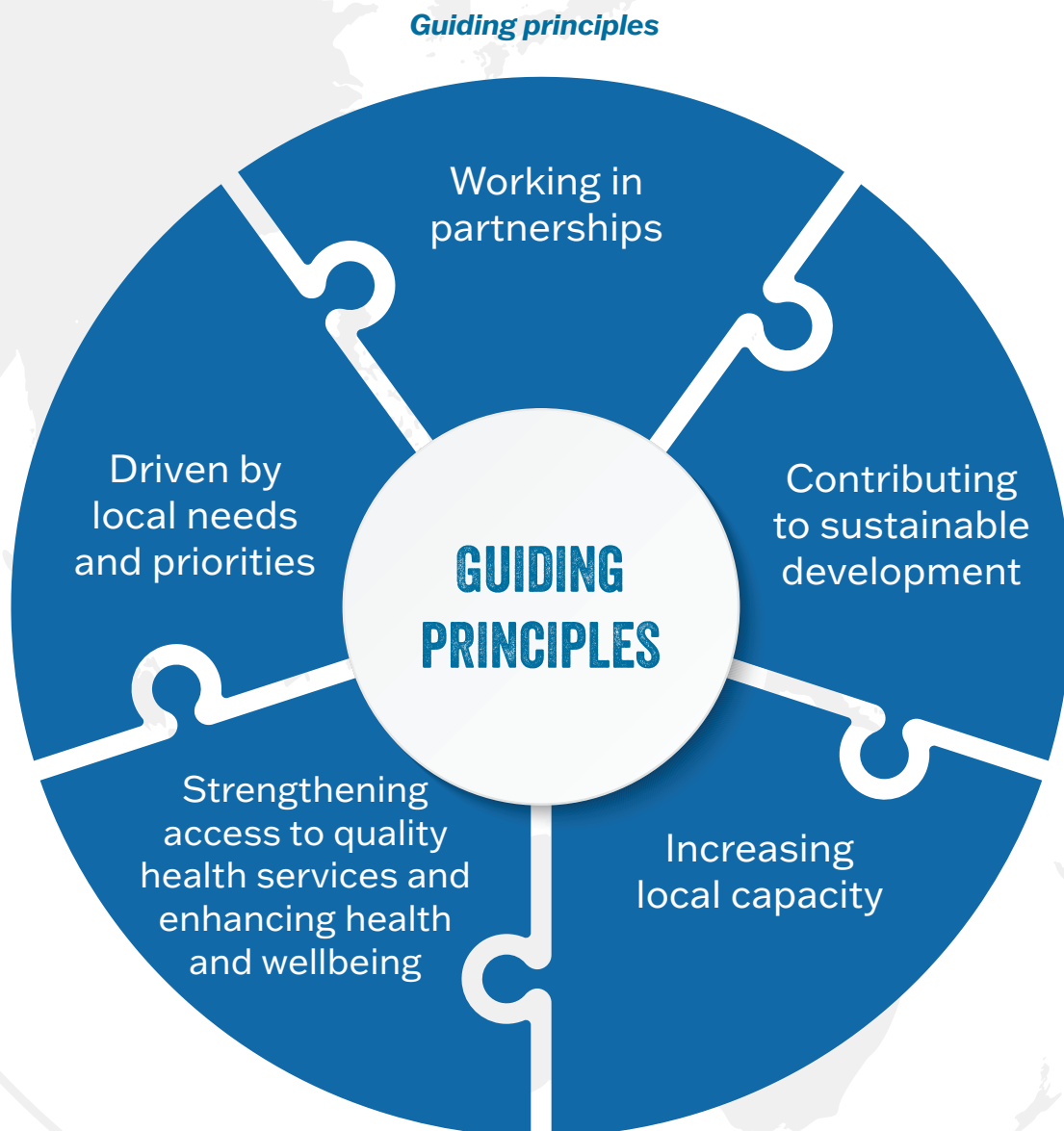
### **Key concepts**

**IMPACT:** The longer-term effect and broader change that occurs within communities and society as a result of program outcomes.

**OUTCOMES:** The medium-term and longer-term changes that occur as a result of specific programs and activities. Outcomes are often described in different time-bound ways, such as short-term, medium-term and long-term.

**OUTPUTS:** The results which are achieved immediately after implementing an activity or project.

**INPUTS:** The key contributions that enable the development of the outputs.



This review of Interplast's Mongolia program from 2014-2015 to 2019-2020 describes the inputs (volunteer medical teams, local partners, Interplast organisational support, equipment) and outputs (patients treated, professionals trained) to assess and analyse outcomes (improved processes, up-take of skills, patient lives changed) of each activity, and the impact (helping Mongolia to have its own sustainable, locally driven plastic and reconstructive surgery service, strengthened anaesthetic training).

Across its programs, Interplast works with local partners to achieve the primary aim of building capacity and improving the effectiveness and sustainability of local health systems; through training and mentoring health care professionals in partner countries, so that they can build their skills and contribute to delivering safe and effective surgery, post-operative care and rehabilitation in their own communities.<sup>7</sup>

In addition to stakeholders in partner countries, Interplast has partnerships with the private and corporate sector in Australia and overseas to support its work. Some of these partners provide resources to establish scholarships for medical practitioners from partner countries so that they can develop their skills and capabilities, all of which contributes to the impact of Interplast's programs.

Interplast is committed to the Sustainable Development Goals adopted at the United Nations Sustainable Development Summit in 2015. Specifically Interplast's work contributes to Sustainable Development Goal 3:

*'Ensure healthy lives and promote wellbeing for all ages, in particular:*

*3c: Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States and;*

*3d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks<sup>8</sup>*

As well as providing surgical services and training, Interplast programs support nursing and associated allied health services, to ensure the best possible patient outcomes following plastic and reconstructive surgery. This includes services and training in general and specialist nursing, occupational therapy and physiotherapy (in particular, focused on hands and burns), essential pain management and the emergency management of severe burns.

In the 2019-2020 financial year, Interplast undertook 47 program activities across its 17 partner countries (13 countries visited in this period, which was fewer than planned due to COVID-19 restrictions). Of these activities; 38 were training and mentoring, five were primarily surgical, seven related to planning and evaluation, and four provided system strengthening. Interplast volunteers completed 733 patient consultations; 333 medical procedures, and provided 987 training and mentoring opportunities for medical personnel (in-person) and an additional 279 opportunities for participation in online education and mentoring. Included in the in-person training and mentoring opportunities was support for participation in professional development opportunities in Australia, or at regional workshops outside of their own country for nine participants.

Interplast programs would not be possible without the support of its volunteers. Each year volunteer health professionals from Australia and New Zealand give their time and expertise to provide free medical treatment to adults and children, and support local medical personnel through training and mentoring.

7 ibidem

8 <https://www.un.org/sustainabledevelopment/health/> accessed 14 August 2020

## 2.1 The Mongolia Program

Since 2008, Interplast's Mongolia country program has largely focused on a partnership with the Mongolian Society of Anaesthesiologists (MSA), with funding through the Australian Society of Anaesthetists (ASA), and from the Australian government. The funding supports the MSA Annual Scientific Conference (the Annual Conference), which provides access to annual educational and capacity development opportunities for anaesthetists throughout Mongolia, and institutional support to the MSA for the operation of its office and administration costs. The intended outcome of the partnership and support has been to improve residency training and the continuing education of anaesthesia specialists.

In addition to supporting the development of Mongolia's anaesthetic capacity, Interplast has also been delivering burns surgery mentoring and clinical services focused primarily in Murun, in remote Mongolia. Interplast also delivers annual allied health training programs, in burns rehabilitation and occupational therapy, at the National Trauma Orthopaedic Research Centre of Mongolia (the Trauma Hospital) in Ulaanbaatar.

Interplast has partnered with the Bright Blue Police Commissioner's Fund for Sick Kids, an Australian charity, which reached out to Interplast in 2014 to help with establishing surgical mentoring in Mongolia. At that time, the demand for acute and reconstructive burns surgery services for patients in Mongolia could not be met by local services, and there was no formal burns training for surgeons, who had to learn these skills during a brief rotation as part of their surgical training. Furthermore, Mongolia's physiotherapy profession was in its infancy, with formal training being only recently available, and there was no specific burns therapy training. As a consequence, many patients were not receiving adequate therapy services to support their treatment and give them the best chance for functional outcomes.

In 2014, Interplast conducted a review of its Mongolia country program. Findings from the review are summarised in **Section 5-Interplast Programs in Mongolia-Overview**. In 2015, Interplast undertook the first burns mentoring and needs assessment in the Burns Unit of the Trauma Hospital in Ulaanbaatar, Mongolia.

### Current program

Interplast's program activities have continued to focus on capacity building for anaesthetists, and support for the MSA through:

- the implementation of a burns therapy program in Ulaanbaatar and a surgical mentoring program Umnugovi Regional Diagnostic and Treatment Centre, in Dalanzadgad (South Gobi)
- support to the MSA to deliver training in the administration of safe anaesthesia
- efforts to build capacity across Asia in the anaesthetic, surgical, nursing and allied health fields, and involve Mongolian medical professionals in Interplast's regional training programs.

Throughout 2018-2019, Interplast achieved or partially achieved its objectives around burns therapy mentoring and support to the MSA Annual Conference. A postponement of the regional training program to 2019-20 meant that Mongolian medical professionals were unable to access regional training opportunities. It is anticipated that this will be delayed even further due to broad ranging global travel restrictions which have been in place in 2020 and into 2021 due to Covid19.

From 2014 to 2019 (the timeframe for this review) Interplast has delivered: five surgical programs; screened over 660 patients; provided 95 surgeries; provided therapy services directly to at least 43 patients, and assisted local therapists to treat dozens of additional patients through hands on training and mentoring. Interplast has continued to contribute to institutional capacity building of the MSA and professional development through the Annual Conference and its related seminar programs.

### **Covid19-program implications**

At the time of writing, global travel restrictions due to the Covid19 pandemic have forced a pause in all of Interplast's in-country programs. Interplast is providing remote support to Mongolia during this time. Once travel restrictions have eased, Interplast expects it will resume programs similar to its pre-Covid model.

A detailed summary of Interplast's Mongolia program is at **Section 5: Interplast Programs in Mongolia.**

## **2.2 Program goals and objectives<sup>9</sup>**

Interplast's Country Strategy Mongolia 2019-2021 vision is that:

*Mongolia has a sustainable, locally-driven plastic and reconstructive surgery service, providing quality surgical and related medical outcomes to those requiring them.*

and its goal is:

*To contribute to improving quality access to plastic and reconstructive surgery and therapy services, particularly related to burns injury, in Mongolia.*

Mongolia's country strategy objectives aim to contribute to:

**Improved basic plastic and reconstructive surgical skills, in particular those related to burns reconstruction**

**Improved anaesthetic capacity**

**Improved nursing skills, including pre and post-operative care**

**Improved allied health (rehabilitation) services, in particular in relation to burns reconstruction**

**An improved 'whole of team' approach to surgical outcomes**

Responding to changes in Mongolia, and as objectives are achieved, program objectives have evolved over the life of the program. **Section 7: Findings and Recommendations** provides an analysis of how the program has achieved its objectives from 2014-2020.

### **Monitoring and evaluation**

Interplast has a robust culture of monitoring and evaluation, which helps it ensure that it meets program goals and objectives. It is accredited with the Department of Foreign Affairs and Trade, and is a signatory to the Australian Council for International Development's Code of Conduct.

Interplast undertakes comprehensive reporting on programs and program outcomes. These are complemented by clinical information, captured through patient records, and documentation of training programs and participants. Information is validated by feedback from local partners and program participants.



Following each surgical and mentoring program, Interplast volunteer teams provide detailed reports, and make recommendations for future planning. Program participants from partner countries also report on program outcomes, and, in the case of training and workshops, complete evaluations, which help inform future training, and assess the sustainability of Interplast's training programs. This range of reporting assists Interplast to examine the impact that its programs are having, and where necessary, make appropriate adjustments to ensure intended outcomes are being met. Each year, working closely with local partners and volunteers, Interplast designs a comprehensive country program for each partner country. Interplast's 2018-2019 Annual Report provides information on its monitoring, evaluation and planning processes.

## 2.3 Mongolia Country Program Review 2014-2015 to 2019-2020: Terms of Reference

The purpose of this review is to examine the impact of Interplast's program from 2014-2015 to 2019-2020, and progress in the implementation of the Mongolia Country Strategy; to monitor and examine progress toward achieving the vision for Mongolia, its program goals and objectives; and to communicate the results of Interplast's program activities in Mongolia to key stakeholders.

### Objectives

The objectives of the review are to identify the impact and outcomes of Interplast country program activities, and assess the extent to which Interplast is achieving its program goal and objectives for Mongolia. The findings of the review will contribute to the development of relevant, effective and sustainable Interplast program activities in Mongolia. Specifically, the objectives aim to:

- 01** Identify and analyse the extent to which the program is meeting the objectives as set out in the Mongolia Country Strategy 2019-2021
  - a. examine the objectives in Mongolia's annual plans, and review whether the objectives have been met, and undertake an analysis of areas of, if any, shortfalls
  - b. specifically, undertake an analysis of Interplast activities that support capacity building in the area of burns surgery and therapy, and the professional development of anaesthetists
  - c. examine the extent to which the formal agreements that Interplast has in place with key partners are contributing to outcomes for patients and trainees in Mongolia
- 02** Examine the extent to which the objectives and scope of the Mongolia program are clearly identified and understood by stakeholders.
- 03** Identify the impact and outcomes that Interplast training initiatives have on strengthening local capacity within partner organisations and their ability to train others in the future
  - a. establish baseline data on numbers of local plastic surgeons, anaesthetists, allied health therapists and nurses
- 04** Investigate the sustainability of Interplast programs (including local ownership and capacity) where appropriate.
- 05** Examine and report on progress toward achieving a regional approach to capacity building across Asia in the surgical, anaesthetic, nursing and allied health fields
  - a. identify any barriers to progressing the regional approach
- 06** Collate and update baseline data on disability and gender of patients, and of medical personnel, who participate in Interplast programs.
- 07** Discuss the role and relationship of Interplast with partners moving forward.
- 08** Explore potential new program activity opportunities to expand and strengthen the country program, if appropriate and in keeping with Interplast's vision for Mongolia, and the priorities of stakeholders.

## Review questions

- 01 What are the key impacts and outcomes of Interplast program activities since 2014-2015?
  - a. How have the agreements with partners contributed to this?
- 02 What progress has been made towards achieving Mongolia's country program and strategy objectives?
- 03 What measurable improvement has there been to:
  - a. the local capacity of local plastic surgeons, anaesthetists, allied health therapists and nurses
  - b. capacity building across Asia
- 04 In what areas do local partners see that Interplast could contribute to local and regional capacity in the future?
- 05 What have been the key challenges, and how has Interplast applied that understanding to program delivery in Mongolia?
- 06 What do stakeholders in Mongolia see as the features that make the program a success?
- 07 Do Interplast partners see the Mongolia program as successful and relevant?
- 08 Collate and update de-identified data on gender and number of people with a disability accessing Interplast programs, as either medical trainees, or patients, and provide an analysis on:
  - a. Gender of the person who has benefited from Interplast programs (patients and medical professionals)
  - b. Whether there are different opportunities and challenges for men, women, girls and boys to access Interplast services, and what could be done to improve the program in this regard
  - c. Whether people with a disability have had difficulty accessing Interplast services, and what could be done differently to better support their access (this could apply to patients and medical trainees)
  - d. How has the program improved the lives of patients with a disability?
- 09 How are Interplast programs viewed by the Mongolian health system and broader health sector? What has worked well, and are there areas for improvement?
- 10 How sustainable are the program impacts and outcomes moving forward?
- 11 How can Interplast support local partners to take ownership and independently continue to ensure that the program impact is sustainable?
- 12 What are training and mentoring priorities for partners moving forward, and if/how Interplast might support these priorities?

### Review informants and review team

The key informants for the review and the review team have been selected to bring to the review a mix of skills in surgery, training, hand therapy, and project management, and, in the case of the review team, skills in program management and evaluation. It is important that key informants to the review have experience with Mongolia and are familiar with Interplast's programs and practices.

### Methodology

There are two key components to this study

- Desk review of historical records (program activity reports and annual reports);
- Interviews with volunteers; and
- In-country meetings and interviews with program partners, program participants and patients.

### **Timing and duration**

This review activity will take place during the 2020 calendar year. Completing within the expected timeframe will be influenced by the ability of Interplast's consultants to conduct aspects of the research phase in environments which are potentially impacted by Covid19 restrictions.

### **Intended outputs**

- a)** Program Review Report – which will highlight findings regarding impacts and outcomes of program activities in Mongolia; sustainability of training and capacity development with partners; future priorities for partners; identification of potential new opportunities for Interplast, and capacity for certain partners and programs moving forward to function independently of Interplast. Review findings will be shared with partners who contributed to this review, and this report will be used to help plan future Interplast program activities in Mongolia.
- b)** A modified version of the key report – will be tabled for the reading of Interplast's Board of Directors and its Surgical Committee, and submitted to the Australian Department of Foreign Affairs and Trade which is providing funds for the review, and
- c)** Sections of the modified key report will be used where relevant and appropriate for Interplast communications purpose; including website, Annual reports, newsletters, along with relevant and appropriate images, for which Interplast has obtained consent for use.

### **Risks and limitations**

Interplast will work with all local partners to ensure they have an opportunity to participate in the review, and will communicate to partners its objectives and purpose. This should minimise the risk of insufficient local participation. It is possible that some key stakeholders who should ideally be included may either be no longer contactable or may not wish to participate. Interplast will work with local partners to try to ensure full and open participation.

### **Ethical considerations**

Research involving human participation is a fundamental component of this study and therefore ethical considerations are paramount. However, any identifying patient data which is accessed through internal Interplast documentation will not be included in the review and will be treated according to the privacy and confidentiality policies of Interplast Australia and New Zealand. If any patient stories or partner stories are developed during the review, patients and partners will only be identified by first name, and if they so request, a pseudonym will be used, unless they give permission for their name/s to be used. All patient stories have been used with permission of each individual.

Participation in this study is completely voluntary and participants can withdraw at any time without consequence. A limitation of confidentiality is that members of the local partner organisations will likely be aware of the participants in the review.

The review has been conducted by an assessment of historical data and records, in-country meetings and interviews with partners, interviews with Interplast volunteers and staff from the Mongolia program. Statistics about Mongolia that inform the background and context to the review, such as those relating to the economy, population and health status of its citizens, have been sourced from the Interplast website, Government of Mongolia documents, from United Nations and World Health Organisation program documentation, and other multilateral development organisations, such as the World Bank. Where statistics appear without being attributed, they have been sourced from historical data and program documentation compiled and held by Interplast.

The review has been made possible by funding from the Australian Government's Australian NGO cooperation program, Department of Foreign Affairs and Trade.

## COUNTRY CONTEXT

### 3.1 Overview: political system, demography, economy

### 3.2 Mongolia's development outcomes: Progress in achieving the Sustainable Development Goals

#### 3.1 Overview: political system, demography, economy

Mongolia is a north Asian country, located between the People's Republic of China and Russia. Mongolia is a land-locked country with a total land mass is just over 1,564,000 square kilometres, of which 10,560 square kilometres is water; and 73% agricultural land, the majority of which is given to pasture (72.6%), with a very small proportion (0.4%) of arable land. Its terrain consists of semi-desert and desert plains, grassy steppes, mountains in the west and southwest of the country, and the Gobi Desert in south-central area. Mongolia has vast mineral wealth, with copper and coal exports making a significant contribution to the economy. The modern country of Mongolia is only a part of the Mongol's historical homeland, as more ethnic Mongolians live in the Inner Mongolia Autonomous Region in China than in Mongolia.<sup>10</sup>

#### Political system

In 1921 the Mongolian Revolution ended Chinese dominance, and in 1924 a communist regime, the Mongolian People's Republic, established power. In 1990 Mongolia underwent a democratic revolution, and since then the ex-communist Mongolian People's Revolutionary Party, which took the name Mongolian People's Party in 2010, has competed for political power with the Democratic Party, and with other smaller parties. In the June 2016 parliamentary elections the Mongolian People's Party won control of Parliament, largely pushing out the Democratic Party, which had overseen a sharp decline in Mongolia's economy during the preceding years. In 2017, Mongolians elected a Democratic Party member, Khaltmaa Battulga as its president. Mongolia's system of government is described as a semi-presidential republic.<sup>11</sup>

#### Population and demography<sup>12</sup>

Mongolia is one of the least densely populated countries in the world, with its population of 3.1 million sparsely distributed (2 people per square kilometre); however, around six million ethnic Mongolians live in inner Mongolia, in China. A large percentage of the population resides in the capital Ulaanbaatar (1.584 million); with 68.7% of the total population living in urban areas, and this has an annual rate of change of 1.63%. The median age of Mongolians is 29.8 years; 28.8 years for males, 30.7 years for females. Life expectancy at birth is 70.8 years; 66.6 years for males, and 75.2 years for females. The rate of population growth is 0.99%; and the birth rate is 16.6 births per 1,000 people.

#### Mongolia's population profile

Age	Percentage	Male	Female
0-14	26.96%	435,596	418,524
15-24	14.93%	239,495	233,459
25-54	45.29%	694,481	740,334
55-64	8.04%	115,560	139,129
65 and over	4.78%	60,966	90,482

<sup>10</sup> World Bank Group Mongolia Public Expenditure Review (PER), June 2018 p.32

<sup>11</sup> The World Factbook, Mongolia. Central Intelligence Agency (CIA) <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/mg.html> accessed 21 April 2020

<sup>12</sup> ibidem

## Economy

In the decades since the democratic revolution of 1990, Mongolia has undergone a major political and economic transformation; from a socialist country to a multiparty democracy, and from an economy based on a tradition of livestock herding, to one driven by mining and resources. In 2011, Mongolia's economy grew by 17.3%, compared with 6.4% in 2010, and between 2013-2017, the World Bank projected that Gross Domestic Product (GDP) would continue to grow at double digit rates, as foreign direct investment (FDI) in the extractive industries grew.<sup>13</sup> At the time of drafting its 2013-2017 Country Strategy for Mongolia, the World Bank reported that mining accounted for 20% of Mongolia's GDP, twice the rate of the previous decade; and on projections, by 2016 was expected to contribute to more than half of GDP.<sup>14</sup> However, growth slowed between 2014 and 2016 due to a decrease in commodity exports and a slowing of demand from China. A weaker export sector and drop in FDI reduced GDP growth to 7.9% in 2014, and 2.4% in 2015. During 2016, GDP growth further weakened, to 1.2%, with a slight improvement in the last quarter helping maintain 2% growth for that year.<sup>15</sup> Mongolia's economy recovered somewhat, with GDP growth reaching 5.3% in 2017, and 7.2% in 2018; however in the second half of 2019, economic growth slowed, from 7.3% in early 2019 to 6.3% in the latter part of that year, with an expectation that the final year result would be 5.8%. The World Bank notes that the Mongolian economy, although in a better position than following the previous downturn, is vulnerable to external shocks, and given its strong economic links with China, growth is likely to be affected due to the effects of the novel coronavirus outbreak.<sup>16</sup>

## Employment

As Mongolia's economy has evolved, the labour market has undergone structural changes; with more Mongolians in waged employment between 2010 and 2018; an increase of 8% of the workforce had waged employment as the primary type of employment, and rural waged employees increased from 29% in 2010 to 39% in 2018. New employment opportunities in the services sector (tourism and hospitality, finance, administration, education and health) accounted for an additional 131,000 waged employees between 2010 and 2018. Between 2016 and 2018, although the mining sector added an additional 62,000 wage paying jobs, growth in this sector benefited a limited number of mining workers, and the upward trend is unlikely to be sustained as mining projects tend to have fewer job opportunities after the construction phase.<sup>17</sup> Largely driven by expansion in the industrial sector, the national unemployment rate fell from 10% in 2017, 8.8% in 2017, to 7.8% in 2018.<sup>18</sup>

2018 estimates showed that young people aged 15 to 24 experienced higher than the national average rate of unemployment, at 16.8%; and that female rates in this age group, 18.4%, were higher than males, 15.8%.<sup>19</sup>

Mongolia's demography will have an impact into the future on employment trends. In 2018, the median age in Mongolia was 27 years; and children between the ages of 0-14 made up one third of the population. As a large proportion of young people will enter the workforce in the coming years, Mongolia's economy will need to create sufficient job opportunities to secure economic growth, and to continue to reduce poverty, and it will need investment in education and training to increase productivity.<sup>20</sup>

13 World Bank Country Partnership Strategy Mongolia 2013-2017 Executive Summary

14 *ibid* p.1

15 *op.cit* World Bank PER p.32

16 World Bank Economic update p.9

17 World Bank Mongolia Poverty Update 2018 p.41-43

18 *op.cit* World Bank Mongolia Economic Update January 2020 p.15

19 *op.cit* CIA

20 *op.cit* World Bank Poverty Update p.36

## Gender participation and wage gaps

Mongolia has had a persistent gender gap in labour force participation, with the rate for female participation consistently declining from 2006 to an historically low level of 54% in 2018, compared with 72% for males in the same year.<sup>21</sup> Social norms influence participation; women are primary caregivers for children, and bear responsibility for domestic work, reducing the amount of time available they have to participate in the labour market, as well as the sectors where they can work outside of the home. Female participation in employment is higher in rural areas, where participation in agricultural work affords flexibility to work and maintain caring responsibilities. Participation rates for females in urban areas is lower, mainly because available employment is in services and industry, and are in locations where maintaining family responsibilities whilst working is more difficult. In these settings women are less likely to participate in paid employment outside of the home, and when they do, it is more likely to be in low paying service jobs. Women's income is 18% lower than male counterparts. Access to the labour market is also dependent on economic circumstances; wealthier women can afford childcare services, which means they are more likely to participate in employment, and as they are often more highly educated, they tend to work in better paying, skilled employment.<sup>22</sup>

## 3.2 Mongolia's development outcomes: Progress in achieving the Sustainable Development Goals

### Millennium Development Goals

In September 2000, world leaders came together at the United Nations Headquarters in New York to adopt the United Nations Millennium Declaration.<sup>23</sup> The Declaration committed nations to a new global partnership to reduce extreme poverty, and set out a series of eight time-bound targets – with a deadline of 2015 – that are known as the Millennium Development Goals (MDGs).

The MDG 2015 Report found that in the period 2000-2015 developing regions made significant progress in meeting the goals; declining rates in the number of people living in extreme poverty; the proportion of undernourished people falling by almost half; enrolment rates in primary education improving, with many more girls in school; gains in the fight against diseases such as HIV/AIDS, tuberculosis and malaria; a decline in the under five and maternal mortality rate; and an improvement in access to improved sanitation and drinking water.<sup>24</sup>

### Sustainable Development

In order to build on global progress, in 2015 all UN member states adopted the 2030 Agenda for Sustainable Development, and in 2016 the eight original MDGs were broadened into a set of 17 Sustainable Development Goals (SDGs). The SDGs seek to reduce inequality in many forms; not only between and within countries (SDG 10) but also envision an absolute end to poverty in all its forms (SDG 1) and hunger (SDG 2). They seek to extend some basic conditions to all people: healthy lives (SDG 3), quality education and lifelong learning opportunities (SDG 4), gender equality and empowerment for all women and girls (SDG 5), sustainable water and sanitation (SDG 6), sustainable reliable energy (SDG 7), access to decent jobs (SDG 8) and to justice (SDG 16). Other goals aim to advance the provision of global public goods, such as climate stability.<sup>25</sup>

The 2030 Agenda for Sustainable Development acknowledges that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge, and critical to sustainable development. The 17 SDGs build on and continue the work of the MDGs, and seek to achieve the human rights of all, gender equality and the empowerment of all women and girls. The goals are integrated and balance the three dimensions of sustainable development: economic, social and environmental.<sup>26</sup> Using Agenda 2030 as a basis, in February 2016, Mongolia's Parliament adopted the Sustainable Development Vision 2030 as its national plan for meeting the SDGs.<sup>27</sup>

21 op.cit World Bank Economic Update pp. 16-17

22 op.cit World Bank Poverty Update p.45

23 [https://www.undp.org/content/undp/en/home/sdgoverview/mdg\\_goals.html](https://www.undp.org/content/undp/en/home/sdgoverview/mdg_goals.html) accessed 02 April 2020

24 <https://www.undp.org/content/undp/en/home/librarypage/mdg/the-millennium-development-goals-report-2015.html> accessed 02 April 2020

25 Human Development Report 2019, UNDP p.25

26 <https://sustainabledevelopment.un.org/post2015/transformingourworld> accessed 15 April 2020

27 <https://www.mn.undp.org/content/mongolia/en/home/projects/supporting-the-implementation-of-the-2030-agenda-in-mongolia.html> accessed 27 April 2020

## Poverty

Mongolia's Household Socio-economic Survey of 2018 estimated that 28.4%, or over 904,000 Mongolians, were living in poverty, based on a monthly income of Mongolian tugrug 166,580, or USD59, per month. In addition, there is a substantial percentage of people who exist at rates just above the poverty line (15%), or over 474,000 people, and who are vulnerable to falling below the poverty line, due to a range of potential scenarios including rising prices, illness, unemployment and natural disasters.<sup>28</sup> These estimates are based on 2018 data, and, as with many countries the world over, the numbers of those living in poverty has the potential to rise due to economic slowdowns following the impact of Covid19.

Poverty rates vary between regions; with rates in the capital Ulaanbaatar and Central region being at 25-26%, and the Western Khanghai and Eastern regions having a relatively high incidence of poverty with rates at 30-37%. The Eastern region is home to 7% of Mongolia's population, but has the highest proportion of poor, with close to two out of five people living in poverty. It does, however, account for less than 10% of the total poor in Mongolia. Although there is a higher incidence of poverty in rural areas (30.8%), two thirds of Mongolia's population lives in urban settings, where poverty is becoming more concentrated, accounting for 63.5% of the poor.<sup>29</sup>

## Reducing poverty

In the decade from 2010, the key driver of poverty reduction was growth in wages, stronger farm incomes and social protection measures. Between 2010 and 2014 Mongolia's demographic, and labour and non-labour incomes, contributed to a 17.2% reduction in the rate of poverty; with wage income the biggest driver leading to a 7.4% reduction, and social transfers and farm income contributing to a 5.7 and 3.4% reduction respectively. Between 2016 and 2018, the rate of poverty reduction slowed. Key drivers during this period were growth in farm income, and enhanced social protection programs, leading to a reduction in the rate of poverty by 0.8 and 1.3% respectively. Social protection programs included measures to address food security, and income support to mothers with young children. However, a reduction in wage, business and capital incomes – particularly incomes of poorer households- offset improvements in other areas and added a 0.5% increase, so that the overall result for 2016-2018 was a slight fall in the rate of poverty.<sup>30</sup>

## Education

Mongolia's Sustainable Development Vision has as one of its ten goals an enrolment rate of 100% for primary and vocational education, and a lifelong training system. In the past decade, Mongolia has achieved close to universal coverage in basic education. UNESCO defines a basic education as being education undertaken at primary and lower secondary levels.<sup>31</sup> Despite almost universal coverage, many young Mongolians do not finish their education equipped with relevant workplace skills, and 20% report that the biggest obstacle to securing employment is related to their education. A number of factors contribute to this:

- poor access to quality early childhood education which leads to differences among children in school readiness
- a lack of standardised assessment data which hinders a robust assessment of the effectiveness of Mongolia's education system in producing learning outcomes
- data to measure early grade literacy and numeracy foundations are of a low quality, which undermines the efficiency of investment in education at the secondary and higher levels
- higher, technical and on the job education and training is not seen as relevant to labour market needs.

28 op.cit World Bank Poverty Update pp.18-19, p.24

29 ibid p.20

30 ibid pp.62-63

31 <https://www.google.com/search?q=basic+education&oq=basic+education&aqs=chrome..69i57.4147j0j8&sourceid=chrome&ie=UTF-8>  
accessed 27 April 2020

Mongolia's total and public education spending is at average levels compared with other countries, with overall education spending increasing from 4.6% of GDP in 2005-2006, to 6% in 2012-2014, but with a slight decline in 2015-2016, of less than 5% of GDP. Government spending on public education increased from 14-16% of total government expenditure between 2006-2010, to 18-19% in 2013-2014, but declined to 13% in 2016.<sup>32</sup>

Enrolments in pre-primary education have grown rapidly. The number of children enrolled in early childhood education programs doubled between 2010 and 2017, with basic education enrolments also rising. In 2017, girls accounted for 49% of enrolments in early childhood education, and 50% in basic education. Despite gains in coverage and access to education, with the exception of primary education, access is largely influenced by ethnicity, household wealth, nomadic status and geographic status, with urban children more likely than non-urban children to be enrolled in primary education. Children in the greatest need of early childhood education are less likely to have access, and those from the poorest households are less likely to access secondary education. Socioeconomic differences have a significant impact on enrolments; with 11% of children from herder families enrolled in early childhood, and 19% of the same group of children enrolled at the school level.<sup>33</sup>

Compared with neighbouring countries, Mongolia has a high level of education among young people. In 2018, nearly 50% of 25-29 year olds completed a university or equivalent level of education, compared with 20% of those aged 45-49, giving Mongolia the highest education amongst its young people than any other country in the region. In 2018, Mongolia's gross tertiary enrolment rate was 66%, compared with the regional average of 44%.<sup>34</sup>

## Health outcomes

Improved outcomes in maternal and child health can be an indicator of a successful health system and an improvement in the health status of a population. Mongolia's improved maternal and child health outcomes demonstrate its commitment to achieving the SDGs, and its progress indicates that close to universal coverage of basic preventive services, such as skilled attendance at births and immunisation, are contributing to better health outcomes for mothers and children under five. Infant mortality rates declined, from 33.4 per 1,000 in 2005, to 15.4 per 1,000 in 2016; while under five mortality rates for the same period declined and 49 to 23.5 per 1,000. Mongolia's maternal mortality ratio for the same period declined from 93 per 100,000 live births in 2005, to 44 by 2016.<sup>35</sup> The World Health Organization reported that Mongolia was able to achieve a 47% reduction in maternal mortality in a period of seven years, from 169 to 89.6 deaths per 100 000 live births, between 2001 and 2007, and that, at the time of reporting, Mongolia was well on track to achieve the MDG target of 75 maternal mortality per 100,000 live births.<sup>36</sup>

While the rates of maternal and child mortality were quite low when compared with middle income peer countries, by 2014 some are performing better with much lower figures than Mongolia. However, Mongolia continues to perform better than other resource rich countries with a similar per capita GDP, and its low health expenditure is achieving much more effective and strong health outcomes than resource rich peer countries.<sup>37</sup>

The rise in non-communicable diseases, which have been the leading cause of mortality and morbidity for the last two decades to 2018, places stress on Mongolia's health system. In 2016, heart disease, stroke, cancers, hypertension, diabetes, chronic lung disease, and injuries, accounted for 64.3% of the disease burden, and 85.9% of deaths. Combined with this, projected growth in the population aged 65 and over, from 7% of the population in 2030, to 14% over a subsequent period of 25 years, will place increasing pressure on the health system. Mongolia has a weak primary healthcare sector, and its health system is hospital centric with little integration between the various levels of health, hindering prevention and early

32 op.cit World Bank PER p.107

33 ibid pp110-112

34 op.cit World Bank Poverty Update p.37

35 op.cit World Bank PER p.119

36 <https://www.who.int/bulletin/volumes/88/3/08-061747/en/>  
accessed 28 April 2020

37 op.cit World Bank PER p.124



treatment, increasing the burden on the system, leading to more expensive interventions and a need for acute care, particularly in rural areas. Given it will face a number of health system challenges over the coming decades, Mongolia will need to strengthen its primary and secondary sectors, and apply effective strategies to prevent chronic disease.<sup>38</sup>

Although public spending has been increasing between 2005 and 2016, it has been slower than overall government spending, of which per capita government health expenditure increased on average, in nominal and real terms by 7% and 9% respectively per year, between 2005 and 2015. However, when compared with government expenditure on education, which increased at an average rate of 14% per year over the same period, health expenditure growth is low, and given that health expenditure is not always adjusted for inflation, in some years actual expenditure on health declined.<sup>39</sup> In 2016 expenditure on health services was 3.8%, and the number of physicians per 1,000 people was just under three.<sup>40</sup>

In 2015, Mongolia had 13 tertiary level hospitals and centres, 33 regional diagnostic centres, six rural general hospitals, 39 inter-soum (district) hospitals and 291 soum and village health centres. Between 2005 and 2015, the private sector expanded significantly, offering inpatient and outpatient services, with the number of hospitals growing from 160 to 224, and clinics from 523 to 1,006. During the same period, the number of family health centres declined from 228 to 218.<sup>41</sup>

38 *ibid.* p.119&p.126

39 *ibid.* p.119

40 *op.cit* World Fact Book, CIA

41 *ibid* p.121



## HEALTH SERVICES IN MONGOLIA

### Health system overview <sup>42</sup>

Health care in Mongolia is provided at three service levels; primary, secondary and tertiary. At 2016, the system comprised 3,500 state-owned, private and mixed (private and state-owned) organisations. These include facilities that manufacture medicines, and organisations delivering the broad range of services; including public health, medical, pharmaceutical, medical education, research and training services.

During the last decade, Mongolia revised a number of key health sector laws, including the Health Insurance Law in 2015, and a new Law on Medical Services in 2016; both of which have been approved by Parliament. Mongolia's Ministry of Health is revising the law on medicines and medical devices, and is aiming to establish a national regulatory authority tasked with strengthening medicine quality and safety.

### Health goals and sector planning

As noted in **Section 3: Country Context**, under *Sustainable Development*, the *Mongolia Sustainable Development Vision 2030* is the national plan for meeting the SDGs. Among other areas related to its development, the vision includes four health-care system objectives for Mongolia, which aim to:

1. Create a national disease prevention system, increase access to diagnostic services and increase life expectancy.
2. Reduce factors affecting preventable maternal and child mortality by improving the quality and accessibility of reproductive health-care services, and decrease maternal and child mortality and malnutrition.
3. Reduce the burden of non-communicable diseases and reduce health risk factors and preventable deaths through an active and inclusive partnership of individuals, families, communities and organisations.
4. Decrease the spread of communicable diseases through prevention, early detection and preparedness to treat communicable diseases, by improving the rapid response capacity of health services, and by ensuring access to priority vaccines for everyone.

Mongolia is taking a phased approach to achieving its development vision. Between 2016-2020, phase one aimed to reform the health insurance system; improve disease detection and response capacities; increase the life expectancy of Mongolians to 71 years; achieve a further reduction in the rate of maternal, child and infant mortality; improve the lifestyle habits of its population; increase vaccination coverage; and reduce the prevalence of hepatitis and tuberculosis.

The goals and objectives of Mongolia's vision have been advanced through an *Action Program of the Government of Mongolia for 2016-2020*; and the *State Policy on Health, 2017-2026*, which was adopted in 2017, and focuses on eight key areas, covering public health, medical care, human resources, health financing, health technology, pharmaceuticals, information technology and management, and health sector management.<sup>43</sup>

42 Mongolia WHO Country Cooperation Strategy 2017-2020, pp 4-7

43 *ibid.* p.7

Mongolia's health system faces a number of challenges, including the need for improved human resource planning, improved databases and systems for licensing, and strengthening competencies.<sup>44</sup> Mongolians face barriers to accessing quality health care, particularly rural populations, who face geographical barriers. The need to travel long distances to reach health facilities can delay access to services and increase overall costs. One study found that urban and rural areas were significantly different in the distribution of physicians per population, and that while health care resources per population were adequate for the population size, there were striking differences in the distributions per area, meaning that those in more sparsely populated areas had less access to services. In addition, all specialist centres were located in the capital, Ulaanbaatar. The study concluded that due to the nomadic lifestyle among rural and remote populations in Mongolia, geographical imbalances need to be taken into consideration when formulating policy, rather than simply increasing the number of health care resources.<sup>45</sup>

To address the barriers that Mongolians face in accessing healthcare, in 2013 the Office of the World Health Organization Representative in Mongolia piloted a program to strengthen subnational health systems. Pilots were undertaken in Umnugovi aimag and Songinokhairkhan districts, with plans to roll the pilot programs out over a few years to another 20 aimags<sup>46</sup> and eight districts. All aimag and district health departments were in the process of developing local health plans, in line with state policy, and the principle of 'leaving no-one behind', a key commitment to achieving universal health coverage and meeting the SDGs.<sup>47</sup> The WHO has partnered with the Government of Mongolia to implement a strategic agenda to reform the health system with the goal of the highest attainable standard of health and quality of life for Mongolians, and to support the priorities of the Government's 2017-2026 health agenda.<sup>48</sup>

## Health financing

Before 1990, Mongolia's government financed the social sectors, with about 40% of government expenditure allocated to social development; covering health, education and social protection measures. Mongolia's economic transition from a centrally planned system to a market economy led to a sharp contraction in the economy.<sup>49</sup> The transition adversely affected the Government's capacity to finance and deliver essential social services, and social expenditure as a percentage of GDP suffered a significant reduction. Between 1991 and 2006, expenditure on health contracted, from 5.3% of GDP in 1991, to 3.1% in 2006.<sup>50</sup>

2017 data<sup>51</sup> showed that financing for Mongolia's health sector was from several sources; government accounts for 62.1%; health insurance for over 24%; user fees for 3.2%, with other sources providing 9.8% of funding. Almost 61% of the health budget is allocated to secondary and tertiary level hospitals. In 2014, out of pocket expenses were high; with out of pocket payments representing 42% of total health expenditures, despite government budget allocations for health care and over 90% of Mongolians covered by health insurance. As such, reforms of health insurance and health financing form part of the Government's agenda in achieving its vision for sustainable development. Health insurance has been expanded to cover outpatient services, high-cost diagnostics and treatments, and reimbursement for medicines; all of which has combined to push down the share of inpatient care covered by health insurance from 66.3% in 2011 to 47.1% in 2016.<sup>52</sup>

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44 *ibid*, p.4

45 Human Resources for Health: Distribution and health care resources in Mongolia, August 2017 <https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-017-0232-1> accessed 17 June 2020

46 'aimag' refers to administrative divisions within Mongolia

47 *loc.cit* WHO

48 *ibid*, p.8

49 Asian Development Bank. Mongolia: Health and Social Protection, October 2008. pp 1-2

50 *ibid*, Appendix 2, p.41

51 *loc.cit* WHO

52 *ibidem*

## Health workforce

At 2017, Mongolia's health sector employed 48,173 people; with ratios per 10,000 people of 32.4 physicians, 37.2 nurses, 24.5 other medical professionals, and technical education staff. The national medical doctor to nurse ratio is 1:1.18, of which the ratio in primary health care is 1:1.45.<sup>53</sup> Mongolia's specialist surgical workforce was relatively high (2014), when compared with other countries in the region, estimated to be 45.51 per 100,000 people.<sup>54, 55</sup>

Data on Mongolia's health workforce as a proportion of its population is as follows:

- Physicians per 1,000 people: 2.9 (2016)<sup>56</sup>

By comparison<sup>57</sup>, other countries in the region, and Australia:

- o Bhutan: 0.4 (2018)
- o India: 0.9 (2018)
- o Nepal: 0.7 (2018)
- o Sri Lanka: 1.004 (2018)
- o Australia: 3.7 (2017)

- Hospital beds per 1,000 people: 7.0 (2012)

By comparison, other countries in the region, and Australia:

- o Bhutan: 1.7
- o India: 0.7 (2011)
- o Nepal: 0.3
- o Sri Lanka: 2.78
- o Australia: 3.8 (2014)

- Midwives and nurses per 1,000 people: 3.9 (2018)<sup>58</sup>

By comparison, other countries in the region, and Australia:

- o Bhutan: 1.9
- o India: 1.7
- o Nepal: 3.1
- o Sri Lanka: 2.2
- o Australia: 12.6 (2017)

- Specialist surgical personnel per 100,000 people: 45.51 (2014)

By comparison, other countries in the region, and Australia<sup>59</sup>:

- o Bhutan: 2.84
- o India: 6.82
- o Nepal: 2.96
- o Sri Lanka: 2.96 (2015)
- o Australia: 63.9 (2016)

53 ibidem

54 Our world in data, University of Oxford <https://ourworldindata.org/country/mongolia> accessed 2 June 2020

55 By comparison, in 2016 Australia has 63.9 surgical specialist personnel per 100,000 people; Bhutan has 2.87 (at 2014); Myanmar has 2.37 (at 2013). <https://ourworldindata.org/> accessed 17 June 2020

56 <https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=LK> accessed 29 June 2020

57 Year that data relates to for other countries is bracketed if different to Mongolia

58 <https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=LK>

59 op.cit <https://ourworldindata.org/> accessed 17 June 2020

In contrast to most other countries in the Asia-Pacific region, women play a major role in Mongolia's health system, at all levels; and in 2014 the WHO reported that 82.3% of health sector workers were women, accounting for 79% of all practitioners (that is, generalist medical practitioner, specialist medical practitioner, traditional medical practitioner and dentist), 98% of nurses, 80% of medical imaging and therapeutic equipment operators, and 95% of medical and pathology laboratory technicians.<sup>60</sup> This could be explained by long standing gender disparities which have existed in basic education in Mongolia; the ratio of boys to girls in primary and secondary schools has long favoured girls, due to rural demands for boys' labour,<sup>61</sup> and a high proportion of women accessing tertiary education; 91.2 percent of adult women have reached at least a secondary level of education compared to 86.3 percent of their male counterparts.<sup>62</sup> A high proportion of health workers practicing as physicians, nurses and midwives were in the 30 to 40 year old age bracket, with health technicians having a higher representation of older workers.<sup>63</sup>

In terms of planning for future needs, in 2014 the WHO reported that that by 2020 Mongolia would need: 7,991 general practitioners, doctors of traditional medicine, dentists and other medical specialists; 1,013 pharmacists; and 14,881 nurses. Some specialty areas experienced human resources shortages, and low salaries and excessive workloads can work as a strong disincentive, making retention of staff challenging. Mongolia's Government is working to address the supply, and standards, of its health workforce, and as part of its health sector human resources policy, the Ministry of Health has introduced measures, such as standardising medical training programs and curricula, to improve medical education and training systems.<sup>64</sup> As noted in the section *Health goals and sector planning*, Mongolia faces challenges in not only ensuring it has an adequate size and appropriately trained medical workforce, but also in ensuring that access to medical services across the country, particularly in more remote locations, is as equitable as possible.

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60 WHO Human Resources for Health, Mongolia. 2014. p.9

61 Mongolia: Education Sector, Rapid Sector Assessment 2008, Asian Development Bank, p.19

62 Human Development Report 2019- Mongolia. UNDP, p.5-6

63 ibidem

64 ibid pp12-13

## INTERPLAST PROGRAMS IN MONGOLIA 2014-2015 to 2019-2020<sup>65</sup>

### 5.1 Interplast's Mongolian Country Program 2014-15 to 2019-20

#### Overview

Since 2008, Interplast's Mongolia country program has largely focused on a partnership with the Mongolian Society of Anaesthesiologists (MSA), with funding through the Australian Society of Anaesthetists (ASA), and from the Australian government. The funding supports the MSA Annual Scientific Conference (the Annual Conference), which provides access to annual educational and capacity development opportunities for anaesthetists throughout Mongolia, and institutional support to the MSA for the operation of its office and administration costs. The intended outcome of the partnership and support has been to improve residency training and the continuing education of anaesthesia specialists.

Anaesthetists have an extensive role in Mongolia; they are responsible for all critical care areas including intensive care, resuscitation, emergency care and anaesthesia for surgery and operative obstetrics. Despite this important role, Australian anaesthetists visiting Mongolia have found a significant lack of consistency in training anaesthetists across the country.

In addition to supporting the development of Mongolia's anaesthetic capacity, Interplast has also been delivering burns surgery mentoring and clinical services focused primarily in Murun, in remote Mongolia. At the time of writing, there is currently a new burns hospital being built in Ulaanbaatar, and once it is operational, Interplast expects it will provide support there. Interplast also delivers annual allied health training programs, in burns rehabilitation and occupational therapy, at the National Trauma Orthopaedic Research Centre of Mongolia (the Trauma Hospital) in Ulaanbaatar. In response to requests from one surgeon and anaesthetists to deliver an Interplast program in provincial areas, in October 2019 Interplast delivered a surgical program at the Umnugobi Regional Diagnostic and Treatment Centre, in Dalangadzaad. The team was joined by Australian Ambassador to Mongolia, HE Mr Dave Vosen, who was able to see first-hand the work of Interplast.

Interplast has also partnered with the Bright Blue Police Commissioner's Fund for Sick Kids, an Australian charity, which reached out to Interplast in 2014 to help with establishing surgical mentoring in Mongolia. At that time, the demand for acute and reconstructive burns surgery services for patients in Mongolia outstripped locally available services. With no formal burns training available, surgeons learned these skills during a brief rotation as part of their surgical training. Furthermore, the physiotherapy profession was in its infancy, with formal training being only recently available for therapists in Mongolia, and there was no specific burns therapy training. This meant that many patients were not receiving adequate therapy services to support their treatment and give them the best chance for functional outcomes. Interplast established a Memorandum of Understanding (MoU) between Bright Blue, which provided financial assistance, and the Burns Unit of the Trauma Hospital. Interplast works closely with its Mongolian partners; the MSA, the Trauma Hospital and the Khovsgol United Hospital, to implement the program.

<sup>65</sup> Unless otherwise stated, the information in Section 5.2 is sourced from Interplast outcome reports, its Annual Country Program, and from the Mongolia Country Program Review 2008-2014.

## 2014 program review

In 2014, Interplast conducted a review of its Mongolia Country Program, covering the period 2008-2014. Whilst undertaking the review, Interplast met with senior medical personnel from the Burns Unit of the Trauma Hospital in Ulaanbaatar, who were very supportive of a new partnership in mentoring for burns surgery and burns therapy. The review found that, since the commencement of its partnership with Interplast and the ASA, the strength and capacity, outputs and impacts of the MSA had grown over the life of the partnership.

MSA Steering Committee members identified that the shared goals of the partnership, Australian volunteers and Interplast's support, are to:

1. strengthen local anaesthetic capacity and improve health services and outcomes for the people of Mongolia
2. strengthen financial sustainability of the MSA so that in the long term the organisation may function and deliver activities independent of international funding support.

The review made a number of important findings and conclusions about the effectiveness of Interplast's partnership with MSA, and the profession of anaesthetics in Mongolia, including that:

- The profession of anaesthetics gained increasing respect and improved capacity, through improvements to training and ongoing professional education.
- The MSA is sustainable, and is well placed to continue its critical work.
- MSA members demonstrate a lifelong level of commitment and dedication to their profession, and to its sustainability.
- The MSA faces challenges with its financial sustainability and independence, an issue which the members of its Steering Committee are committed to addressing, and who have identified a number of potential short and long-term funding and income generation opportunities.
- The MSA Annual Conference is an important, ongoing professional educational event, which provides a key opportunity to further develop the skills and knowledge of anaesthetists in Mongolia, giving them support and mentoring.
- The Annual Conference was an important gathering of members, allowing for annual planning for the MSA.

Another important finding from the review was the need for strategic planning which would ensure that the MSA would develop and secure a stronger future, one which could be supported by Interplast, where appropriate, and if requested. Local participants in the review felt that the MSA had a positive impact upon reducing anaesthesia related morbidity and mortality throughout Mongolia, as most Mongolian anaesthetists use the knowledge and skills they acquire, through participation in the Annual Conference, on a daily basis in their hospital practice. Positive outcomes for patients have helped with growing trust and respect for the profession. Senior Mongolian anaesthetists were increasingly confident in taking on a mentoring and teaching role with younger participants, and local anaesthetists were presenting and facilitating workshops at the Annual Conference.

The review found that the majority of Australian anaesthetists who volunteer at the MSA Annual Conference were willing to continue involvement in supporting its continuation, with increased local ownership, as it provided the profession with essential learning.

The review made a number of recommendations, that Interplast should:

- 1 Continue to financially support the msa office and the annual conference for the next two years (until the end of 2016)
- 2 Provide mentoring support during this time to the msa where requested, to help develop financial sustainability of both the organisation and the annual conference
- 3 Review financial support to the msa office and annual conference in the beginning of 2017

As part of the 2014 review, Interplast held meetings and conducted interviews with stakeholders, observed a number of sessions at the Annual Conference, and met with the new Director of the Burns Unit of the Trauma Hospital. This meeting was a good opportunity to discuss future training opportunities for staff; surgeons, anaesthetists, nurses and allied health professionals. The Director and staff at the Burns Unit agreed on the need for training in the emergency management of severe burns (EMSB), noting that often visiting medical teams (other than Interplast) did not incorporate training into their visits. The review team assessed that the commitment by Burns Unit staff to EMSB meant it would be a good partner for training and other Interplast activities in Mongolia.

In recognition of a lack of access to acute and reconstructive burns surgery services in Mongolia, in April 2015, Interplast undertook the first Burns Mentoring and Needs Assessment in the Burns Unit of the Trauma Hospital in Ulaanbaatar, Mongolia.

### **Challenges and lessons learnt**

Mongolia's health system has a large physical infrastructure, and much of its health budget is expended on maintenance; with investment in infrastructure also supplemented by donor countries, including Australia. Professionals working in anaesthetics in Mongolia face a number of challenges, including access to adequate resources, particularly in hospitals located in country areas, as anaesthetists are responsible for not only anaesthetic services but also emergency and intensive care units, with generally only one or two anaesthetists working in the role. Wages for anaesthetists are comparatively low; long hours, a high level of responsibility and working in facilities with poor infrastructure causes many to leave the profession.

Since the ASA partnered with the MSA, both have been working on better training for the profession and on advocacy with the Ministry of Health; with the ASA providing materials and textbooks translated into Mongolian. The Annual Conference is an opportunity for members of the profession to meet, share experience and discuss challenges, and access ongoing professional education; with the result that more people are interested in pursuing anaesthetics as a career. The ongoing challenge for sustainability in anaesthetic services in Mongolia was to ensure that sufficient numbers of people were enrolling in training to become anaesthetists so that Mongolia's needs in this specialty area would be met.



## 5.1 Interplast's Mongolian Country Program 2014-15 to 2019-20

Program outputs from 2014-15 to 2019-20

Year	Patients consulted-surgical	Surgery conducted	Patients-allied health	Training/mentoring <sup>66</sup>
2014-15	84 (54 female/26 male/4 unknown)	7 (5 female/2 male)	Note: a burns needs assessment was conducted at the Trauma Hospital.	124 participants in MSA Annual Conference seminar. 2 days formal lectures. 10-30 participants.
2015-16	The surgical program was delayed until August 2016		Note: A Burns Mentoring and Needs Assessment was conducted in Murun.	75 participants in MSA Annual Conference seminar.
2016-17	106 (60 female/43 male/3 unknown)	32 (21 female/10 male/1 unknown)	22 (4 female/12 male/6 unknown)	150 participants in the MSA Annual Conference seminar. Over 50 participating in one on one mentoring, and workshops.
2017-18	63 (34 female/29 male)	19 (11 female/8 male)		150 participants in the MSA Annual Conference seminar. Training: 12 staff in Murun.
2018-19	59 (33 female/27 male)	22 (11 female/11 male)	7 (6 female/1 male)	150 participants in the MSA Annual Conference seminar. Training: 17 in allied health; 11 in surgical, anaesthetic and nursing mentoring.
2019-20	57 (29 female/28 male)	17 (13 female/4 male)	14 (6 female/8 male)	Due to Covid19, the MSA Annual Conference did not go ahead as planned. Training: 11 surgeons at Dalanzadgad. Therapy training to: 17 physiotherapists, nurses, surgeons and doctors.
<b>Total</b>	<b>669</b>	<b>95</b>	<b>43</b>	<b>797</b>

The following sections summarise program activity reports from 2014-2015 to 2019-2020. To guide the summaries, for each financial year the program goal and specific program objectives are listed at the beginning of each program. **Section7: Findings and Recommendations** includes an analysis of program outcomes against each year's objectives.

## 2014-2015

In 2014-2015, Interplast's country program goal for Mongolia was:

*To continue to support the development of a sustainable anaesthetic training program, specific to the needs and capabilities of Mongolia, and to investigate surgical program potential for Interplast in Mongolia*

The program objectives were to:

1. Support the anaesthesia education centre and training coordination office.
2. Assist the MSA to coordinate and deliver anaesthetic training for the MSA Annual Conference.
3. Sign partnership agreements with relevant local partners.

### **MSA Annual Conference**

The June 2015 combined MSA/ASA Annual Conference seminar covered the theme of Anaesthesia and Medical Disease, focussing on topics related to managing anaesthesia to patients with diseases and co-morbidities.

The Annual Conference seminar is part of the continuing education program for Mongolian anaesthetists. The seminars run by the MSA and the ASA have been conducted for Mongolian anaesthetists since 2001, and play a vital and continuing role in their professional development. The ASA supports the attendance of an international contingent, who travel to Mongolia at their own expense to interact with their Mongolian counterparts, sharing knowledge and experience, and delivering the teaching program at the conference. In 2015, 124 participants comprising anaesthetists and anaesthetic trainees from across Mongolia, registered for the two day series of lectures and small group discussions.

The 2015 program was gauged to be a success by both participants and presenters, with the international team and the Mongolian team working together to deliver the program. Feedback on evaluation forms indicated that the complexity of the topics suited most participants, and the workshops delivered in English with a Mongolian interpreter worked well. Participants rated the lectures and workshops as 'very good' and 'excellent', and pre and post-seminar questionnaires showed that participants improved their knowledge of the topic by 18%.

### **Recommendations for future conferences included:**

- shorter lectures which allow for case discussions
- increased opportunities for active small group learning allowing participants to ask questions
- other modalities, such as computer based learning and the use of apps, should be explored
- opportunities for on-line education should be considered.

Following the conference, ongoing communication was established with participants via Facebook, opening the opportunity for anaesthetists from Mongolia and other countries to post relevant material, discuss experiences and put questions.

A number of anaesthetist residents expressed interest in anaesthesia education outside of Mongolia, and possibly in Australia, and it was noted that options to enable this could be pursued through the ASA or the College of Anaesthetists.

## **Surgical program**

The Interplast team, comprising a surgeon; two nurses; and a hand therapist, who undertook a needs assessment and provided education sessions, conducted a program at the Trauma Hospital in April 2015. The team delivered a number of key activities; including relationship building with the local burns team; undertaking a needs assessment; participating in an outpatient session; conducting formal lectures; two days of operating on acute and reconstructive burns cases with an emphasis on education and supervision of the local surgeons; providing education to local therapists through one-on-one training with outpatients. The team screened 84 patients and selected seven for surgery. Patients were treated for burns and burns reconstruction.

Volunteers met with the medical director of the Hospital who informed them that there were plans to build a new burns hospital; however, at the time there was no government budget allocation for this. They reported that essential treatment for burns was often delayed, which influenced good outcomes for patients. Interplast's volunteer surgeon, Dr Mark Duncan-Smith explained to counterparts that early intervention would reduce problems that could arise from later intervention.

Surgical team volunteers found that the local burns team had sound fundamental training, were committed to their own professional development, and were keen to improve patient outcomes, with a notable desire to participate in education, teaching sessions and receive guidance. One Interplast volunteer commented that the local teams adopted and applied new skills, techniques and protocols to which they had been exposed, making it more likely that Interplast's approach, which aimed for local sustainability, would pay dividends into the future in developing capacity.

As well as providing surgical services and mentoring, the Interplast team took the opportunity to build on existing relationships, holding a number of meetings with representatives of the Bright Blue Foundation; and with senior hospital staff, including the head of the local burns team.

## **Allied health**

During April, Interplast allied health volunteer, hand therapist Ms Diana Francis, conducted a burns mentoring and needs assessment at the Burns Unit of the Trauma Hospital in Ulaanbaatar. The assessment examined physical and human resources, particularly as they relate to allied health; patient needs; training for allied health workers; and constraints in access to training. The Burns Unit had 80 beds, and although the Hospital lacked a plastics department, it did have a chief burns surgeon, and plastic surgeons.

The assessment found that physiotherapy at the Trauma Hospital had a small treatment area for burns, orthopaedics, trauma and paediatric patients; with a qualified physiotherapist, four rehabilitation doctors, and 20 allied health staff, including nurses and assistants. Although the Unit had a burns therapist, it did not provide specialty training. Facilities were poor and run-down, with no budget for maintenance and repairs, and inadequate facilities for hand hygiene. Patients were mainly treated for flame burns, with 75% being paediatric patients. The assessment found therapy assessment processes were minimal, materials for treatment were lacking or in short supply, there was a paucity of educational materials for professional development, and very few training opportunities for allied health staff.

A number of areas were identified as possibilities for Interplast to deploy its expertise for intervention and to inform Interplast's future planning; including developing a two to three year education program with input from therapists in Mongolia, focussing on scar management, pressure garment manufacture, and treatment for acute care patients; patient assessment and record keeping; and wound healing education.

### **Capacity building**

Local staff, including nurses, allied health staff, medical students, doctors and surgeons, participated in capacity building activities. A formal lecture program, discussions and question and answer sessions attracted 10, and at times, up to 30 people, over two days. The lecture series focused on practical subjects relevant to surgery, nursing and allied health, with surgical topics focussing on acute surgery; burns, including chemical and electrical burns; burns care, wounds and reconstruction; assessment and dressings; nutrition; fluid and pain management. The nursing component of the lecture series comprised an intra-operative approach to nursing principles; whilst the allied health component included positioning and splinting; scars and scar management; and the use of pressure garments. Interplast's volunteer occupational therapist conducted two lectures for local staff, and facilitated a discussion between themselves, a burns therapist and burns nurse.

In addition to the formal lecture series, two days were dedicated to conducting surgery, during which supervision of local surgeons afforded opportunities for mentoring and teaching in special techniques; which, in one case, extended the local surgeon's skills and boundaries through hands on training. In addition to surgical mentoring, Interplast's hand therapist was able to conduct one-on-one training with local paramedic staff; covering scar management and assessment, splinting, hand therapy, pressure garment manufacture and use.

### **Challenges and lessons learnt**

During the 2015 visit, the Interplast team faced communication challenges, most notably with surgeons and the local burns teams with whom they communicated through interpreters. However, they also noted that two local medical students, who were able to provide interpreter services, contributed very positively to the team's work as they had a strong understanding of medical terminology.

Other challenges related to supply of adequate products, local organisational arrangements and protocols. For example, the team noted an apparent lack of robust screening systems, as they saw an absence of formal or routine follow-up of patients; and a constant trickle of patients presenting for review in the week following one of the outpatient clinics, making it hard to manage patients appropriately and efficiently.

As detailed above, the first burns mentoring and needs assessment took place between 18-25 April 2015. During the assessment period the team also provided lectures and workshops for surgeons, nurses and burns therapists, as well as in-theatre teaching on seven acute and reconstructive burns cases. At the end of this period, staff of the Unit reiterated their commitment to the partnership, and that they were interested in continuing with in-theatre teaching for burns surgeons and nurses, as well as training for physiotherapists in burns therapy.

Dr Galbadrakh, the Director of the Burns Unit said;

*Training and lectures were very effective. Scar management was a new topic to study for many people. One important thing we appreciate most about the Interplast team's visit was their attitude. They were always ready to help us with what we want.*

Dr Galbadrakh was confident that the skills of the team were improving through the practical training and support of Interplast, and thanked Interplast volunteers for their visit, inviting them to return in the following year to continue mentoring in burns management.

## 2015-2016

Interplast's country program goal for Mongolia remained the same as the previous year.

The program objectives for 2015-2016 were to:

1. Provide institutional support to the MSA and to provide mentoring in financial sustainability.
2. Assist the MSA to coordinate and deliver anaesthetic training for the MSA Annual Conference.
3. Implement burns surgery and therapy mentoring activities in central and regional Mongolia.
4. Undertake a Needs Assessment to investigate plastic and reconstructive surgical mentoring in a regional hospital.

### **MSA Annual Conference**

In June 2016, a number of Australian surgeons and anaesthetists presented at the 2016 MSA Annual Conference seminar, covering topics related to the theme of Pain Management. Seventy five participants attended the two day program, which consisted of five lectures and 13 workshops, and a hands-on workshop on ultrasounds and scans. Many Mongolian participants had travelled from the regional areas, with their attendance supported by ASA funding.

The seminars covered a comprehensive range of topics related to acute pain; such as pain management services and treatment, obstetric analgesia, paediatric pain, patient controlled analgesia, local anaesthetic toxicity and complications of regional anaesthesia. Presenters prepared materials for seminar participants; including a comprehensive manual on pain management, a USB drive with electronic versions of the lectures, and the Acute Pain Management Scientific Evidence book produced by the Australia and New Zealand College of Anaesthetists.

The venue for the seminar, the library of the University of Medicine in Ulaanbaatar, was conducive to the format of the program, allowing for lectures and facilitating break-out sessions. Local Mongolian anaesthetist members of the MSA translated the sessions, with visual material (such as slides), which were translated prior to the seminar.

### **Surgical program**

The surgical program scheduled for 2015-2016 was delayed until August 2016, due to changes in travel arrangements and seasonal challenges which necessitated that the visit take place during the Mongolian summer.

### **Burns needs assessment; February 2016, Murun**

In February 2016, the Mongolian country program coordinator, Dr David Pescod, and Interplast volunteer nurse and equipment coordinator, Ms Leonie Simmons, travelled to Murun to conduct an assessment at the Khovsgol United Hospital to determine its capacity to host an Interplast burns program.

The assessment made a number of findings; including:

- travel to Murun by road posed significant difficulties
- the Khovsgol United Hospital was well resourced, with
  - o an emergency room, a well equipped five bed intensive care unit, had an anaesthetist on its staff
  - o three operating theatres which were in a satisfactory condition
  - o a well staffed ward space, with a surgical ward and a paediatric ward.
- there was no plastic surgery practice in Murun as most patients were referred to Ulaanbaatar, although many couldn't make the journey due to financial constraints.

Local doctors were supportive of the involvement of an Interplast team, and were willing to seek patients suitable to be referred for plastic and reconstructive surgery in advance of an Interplast visit.

Dr Pescod and Ms Simmons recommended that a program based in Murun would be feasible, with a team consisting of a general plastic surgeon, one anaesthetist, one scrub/scout nurse and one post-anaesthesia care unit/ward nurse. They also recommended; a smaller team as the operating room facilities were small and would not accommodate an expanded team; that supplies be locally sourced, especially drugs; and taking instrument sets, as the local hospital did not have plastic surgery instruments.

## 2016-2017

In 2016-2017, Interplast revised its country program goal for Mongolia to have a strong focus on sustainability and partnerships:

*To contribute to the strengthening and sustainability of anaesthesia care and burns treatment in Mongolia through working in partnership with local organisations.*

The earlier program goal had a focus on investigating a surgical program potential for Interplast in Mongolia. This had been achieved and by 2016-2017 the program was established with annual visits to the Trauma Hospital, and visits to Murun for the surgical and mentoring program.

The program objectives for 2016-2017 were to:

1. Provide institutional support to the MSA and to provide mentoring in financial sustainability
2. Assist the MSA to coordinate and deliver anaesthetic training for the MSA Annual Conference
3. Implement burns surgery and therapy mentoring activities in central and regional Mongolia

### MSA Annual Conference

As in previous years, Interplast supported the 2017 MSA Annual Conference, held in June 2017, at which a number of surgeons and anaesthetists from Australia and other countries presented. The Conference theme was Surviving sepsis, and keeping up to date. Over 150 local medical professionals attended, including doctors from regional Mongolia. Participants attended lectures, and interactive workshops where skills were demonstrated and practiced. Prior to the seminar, five of the doctors who presented at the seminar also gave clinical skills workshops and hands-on experience to local anaesthetists at the Trauma Hospital, in ultrasound guided regional anaesthesia techniques, helping them to improve their own understanding and skills.

### Surgical program

Interplast conducted its first full surgical program in Mongolia during August 2016. The volunteer team comprised a surgeon, anaesthetist, two nurses and a hand therapist, with the aim of delivering a surgical program in Murun and Ulaanbaatar, with a focus on assisting with the case load of reconstructive surgery cases, particularly in the area of burns management. The team worked with partners, including Bright Blue, and established a new partnership with the Khovsgol United Hospital in Murun.

The key activities for the trip included:

- relationship building with the local surgeons, nurses and anaesthetists, particularly in Murun, as this was the first time Interplast had sent a surgical team there
- clinic and outpatient sessions
- in-theatre teaching operating on acute and reconstructive burns
- allied health education – lectures and one on one mentoring

The team undertook 106 consultations, and performed 32 operations; treating acute and reconstructive burns cases, lower and upper limb, head and neck, and training nurses, anaesthetists and allied health therapists.

A social event held at the beginning of the program was an opportunity for relationship building, when the team met a range of stakeholders and dignitaries; including Australia's ambassador to Mongolia, members of Mongolia's diplomatic community, Mongolia's Minister for Health, representatives from the World Health Organization, anaesthetists and surgeons from the Trauma Hospital, and representatives of the National University of Medical Science.

At the Khovsgol United Hospital in Murun, publicity generated around the Interplast visit resulted in over 100 people arriving for the clinic, the majority of whom were children. Unfortunately, the Interplast team wasn't able to treat everyone due to time constraints. The team was fortunate to have the assistance of a number of local doctors, including local anaesthetist, Dr Tumendjaradal, who used good English skills to assist in the process of recording patients' medical histories, examining patients and updating their notes. Dr Tumendelger, Head of Surgery, was also in attendance, and the team was assisted by Dr Unurzaya Lkhagvajav, the past president of the MSA, who accompanied them to Murun.

The Interplast team had access to three theatres for the duration of the visit, one being a large theatre with good lighting and ventilation. Local nursing staff were competent and keen to learn from the team. There were ongoing communication challenges around explaining important concepts and protocols, such as maintaining a sterile field during surgery, and ensuring that instruments were properly sterilised. Instruction in appropriate instrument sterilisation procedures was identified as requiring further attention.

The team noted a number of other challenges, which included a lack of dedicated nursing staff to monitor patients in recovery, a function fulfilled by the Interplast volunteer nurse. The team learnt that until recently, Mongolian hospitals did not have rooms allocated for post-operative recovery, leading to complications and, at times, the death of the patient due to a lack of appropriate monitoring. The team observed that other facilities in Murun, such as the wards, were clean and spacious; patients had access to appropriate post-operative pain management; and, as common in the region, patient care was provided by family members.

The Interplast team felt that the clinic in the Trauma Hospital in Ulaanbaatar was well run. While the team had access to the theatre complex at the hospital, they encountered similar problems to those experienced in Murun; namely, issues around appropriate sterilisation procedures, and an apparent lack of protocols to avoid cross-contamination. The instruments available were not appropriate to the type of surgery that the team was undertaking. On the positive side, a recovery room with allocated local staff was available for care of post-operative patients.

### **Allied health**

During the August 2016 visit, the allied health program focused on delivering capacity building at the Trauma Hospital, aiming to increase education on scar management, pressure garment manufacturing, patient education and self-management; knowledge of splinting, and patient interventions in burns therapy. Interplast allied health volunteer, Ms Diana Francis delivered lectures and one on one instruction to therapy staff, rehabilitation doctors, burns surgeons and nurses in patient care, scar management, and on ward care for burns patients. Ms Francis also provided therapy to over 22 patients, some with whole body and localised burns, and some with injuries. Local therapists and the rehabilitation doctor had noticeably improved in their knowledge and were applying this to their practice since the visit the year before.

## Interplast volunteers help to restore hand function to a five year old boy

Interplast volunteers worked with local surgeons to treat a five-year-old boy, dubbed 'Superman' because of his T-shirt. The boy had burns contractures on both hands, meaning they were barely functional. In a three hour operation at the Khovsgol United Hospital in Murun, a team of six surgeons worked on his injuries. Two surgeons worked on one hand, with one taking skin grafts from his stomach, while three worked on his other hand. Surgeons reported that the little boy was recovering well and the surgery was a success.

The little boy now has greater function of both of his hands, meaning that he can eat, play and learn much easier than before. Interplast and partners Bright Blue not only touch the lives of individuals and their families just like this little boy, but the broader community through training and mentoring local partner medical staff in plastic and reconstructive surgery procedures, nursing care, anaesthesiology and allied health techniques.





# Post injury therapy and education helps burns patient better manage injuries

A final year law student suffered whole body burns following a gas explosion at home, in the month prior to the Interplast visit. The patient, whose injuries were still healing, was referred to the physiotherapist at four weeks post the burns injury.

The patient and therapist were given instruction on mobilisation exercises and appropriate positioning. An elbow extension splint was made for the patient, with the aim to prevent contractures of already stiff joints and contracting joints and scar tissue. The patient was also provided with wound care, and a change of moisturising cream to improve comfort of wounds and wound healing.

Interplast volunteer therapist Ms Francis was able to educate the local therapist regarding the patient's regular attendance at therapy, monitoring of joint movement and overall function, something which was not normally undertaken.

## **Capacity building**

During the visit, the Interplast team provided local medical professionals with education and mentoring, covering post-operative care in the short and medium term, dressings, donor site care and rehabilitation. Local nursing staff were trained in personal protection, particularly the handling of sharps, accountability of recording atraumatic needles, care of patients with hand trauma, the need for shoulder and elbow exercises for hand trauma patients, and guidance on using appropriate products and procedures to protect the instrument table during an operation. The importance of protocols in relation to sterilisation and hygiene was an area requiring ongoing mentoring.

As noted above, in Ulaanbaatar, Interplast's allied health therapist built upon training from previous years with local therapists from the physiotherapy department. This included training on scar management, scar assessment, splinting, hand therapy and pressure garment manufacture and use.

In Murun, local nursing staff were instructed in personal protection; accountability in appropriate equipment recording, and care of instruments during surgery; care of patients with hand trauma; and shoulder and elbow exercises for hand trauma patients.

The surgical component of the visit not only benefitted patients, but also provided an opportunity for the Interplast team to teach and mentor local surgeons and nurses, demonstrating techniques that local surgeons were then able to use under supervision. One senior surgeon in Murun was particularly enthusiastic to learn about management of burns from the Interplast team, and was identified as a suitable candidate for mentoring in treating burns cases. After three days of in-theatre training, the surgeon was taking on the role of primary surgeon with Interplast assisting. An example of the value and power of mentoring, this surgeon was scheduled to spend three months in Ulaanbaatar at the Burns Unit of the Trauma Hospital, where he would be able to apply knowledge acquired and continue to develop his skills.

## **Challenges and lessons learnt**

Communication and the need for interpreters remained a major challenge. As noted in previous years, some of the local medical staff were able to assist with interpreting, with the added benefit that they had a good understanding of medical terminology.

Inadequate resourcing had led to a lack of equipment and appropriate supplies, such as splinting material, for patients receiving therapy, and this remained an ongoing challenge. Patients purchase their own creams for therapy, and are required to source appropriate gel for their treatment. There was also difficulty in sourcing pressure garments. As observed during the needs assessment of the previous visit, the Burns Therapy Unit is located in cramped and inadequate conditions. Limited funding for training made it difficult to improve burns therapy practice.

In Murun, the team found that the process of recording patients' medical histories, examining patients and updating their notes was made more difficult due to the slow and cumbersome computer data entry system, leading them to use the Interplast Patient Record, particularly during the clinic, when time, and accuracy was of the essence. In Ulaanbaatar, technical issues around the use of the computer record system created additional after hours efforts by one member of the Interplast team so that the required data could be captured.

## **2017-2018**

Program objectives for 2017-2018 were to:

1. Implement a burns therapy mentoring program activity in Ulaanbaatar.
2. Implement a burn surgery mentoring program in Murun.
3. Support the MSA to deliver training in the delivery of safe anaesthesia.
4. Build capacity across Asia in the anaesthetic surgical, nursing and allied health fields and involve Mongolian medical professionals in Interplast's regional training programs.

## **MSA Annual Conference**

In June 2018, Australian medical volunteers (the visiting faculty) comprising a number of volunteer anaesthetists, and a midwife, attended MSA's Annual Conference, with some presenting at the Conference. Ahead of the Conference, a number of the visiting medical team presented at a three day series of seminars, with the theme of SAFE Obstetrics. One hundred and fifty participants, including 21 from provincial capital cities, received instruction, attended lectures, and were provided with supplementary materials including a handbook.

The MSA Annual Conference following the seminar series had one day dedicated to scientific paper presentations. The papers were delivered by Mongolian anaesthetists and covered a variety of research topics and audit activity. Mongolian anaesthetists and the visiting faculty gave a presentations on topics including; ante and pre natal conditions; maternal mortality; safe anaesthesia; pre-caesarean section assessment; early warning signs; and the benefits of deploying a rapid response team.

The visiting faculty also presented on a range of topics covering anaesthesia and obstetrics. The Interplast team was encouraged to see a large proportion of the program presented by local experts, an indication of the transition to local ownership of the MSA seminar series and Annual Conferences.

## **Surgical program**

In August 2017 Interplast volunteers treated 63 patients and performed 19 procedures. They also conducted Interplast's second surgical program in Murun. The team was of a similar composition to that of the previous year, comprising a surgeon, anaesthetist and nursing staff. Twelve patients in Murun presented for surgery, and the team worked with local surgeon Dr Chuulunbatar, who was keen to treat and manage burns of patients who had had surgery, and take on the role of lead surgeon, while Interplast surgeon, Dr MacGill, provided support. Unfortunately the number of people presenting for treatment was beyond the scope of the visit. Hospital management appreciated the Interplast program and were keen to see it continue.

During the visit, the team learned that the Australian Embassy was very supportive of Interplast entering a Memorandum of Understanding with the Mongolian Ministry of Health, which would consolidate the relationship between Interplast and the Ministry, and guide future programs.

## **Allied health**

In October 2017, two volunteer occupational therapists conducted a comprehensive treatment and mentoring program in Ulaanbaatar at the Burns Unit. This was the third year of Interplast involvement in the unit, with local doctors and therapists expressing an ongoing need for rehabilitation skills development and education.

The aim of the allied health program was to:

- continue to increase burns therapy education and early intervention for acute and outpatient burns patients
- continue to encourage early intervention for acute burns patients
- increase the Doctor of Rehabilitation's confidence in being involved as part of the burns team
- assess the therapy regime for burns outpatients and improvements in intervention
- assess the increase in patient education and written information provision to patients
- monitor scar management and manufacturing of pressure garments with new staff member.

The allied health team observed that as local staff had varying levels of expertise and knowledge there was an ongoing need for Interplast involvement in training and mentoring, and that hospital management supported the ongoing program. Areas that the team identified as priorities were:

- knowledge and involvement in the early intervention of acute burns patients
- access to education for medical staff
- confidence in acute burns management and rehabilitation of burns
- little or no resources for therapy staff; e.g. splinting materials, therapy supplies
- knowledge of splinting to prevent contractures. The team noted, however, that staff had good technical splinting skills.

## Working as a multi-disciplinary team pays dividends in improved patient care

During the October visit, Interplast volunteer therapists met a three year old girl who, after falling into a large pot of boiling water, had sustained serious burns to the upper half of her body. The little girl had already been through two operations for split skin grafts to the deeper burns. As she had received no therapy to help improve her after surgery, she spent all her day lying in the bed with no exercises or correct positioning.

Volunteer therapist, Ms Chloe Wirth, provided education to her carer regarding exercises and positioning to help prevent scar contractures of her neck, shoulders, upper limbs and hands. Discussions were held with her surgeon to show local therapy staff what information is required before therapy involvement, and when the surgeon is happy for skin grafted areas to be mobilised. Not only would this help the young patient, but it also demonstrated to local staff that working as a team can bring great benefits to their work, and to the patients in their care. Following the training and mentoring, local therapy staff were now keen to see their young patient daily and help her family prevent burns scar contractures.

## Capacity building

As mentioned above, during the visit to Murun, Dr Chuulunbatar was mentored by the team in management of burns. Along with treating patients, the allied health team also delivered a comprehensive education program to Burns Unit medical staff, surgeons, nurses and physiotherapists. The team conducted education, mentoring and on the job training sessions in a number of formats:

- one on one mentoring sessions
- two mentoring sessions during ward rounds, demonstrating the role of the therapist, reaching three to six participants per session
- a therapy intervention workshop to six participants
- instruction in acute burns dressing changes with four to five participants per session
- formal lectures reaching over 30 and 50 participants at a time.

The sessions covered a range of topics, including rehabilitation of burns; splint manufacture and splint pattern making; scar management and pressure garment manufacture; and therapy interventions for burns and other trauma patients.

At the close of the program, it was apparent that the confidence of Burns Unit staff had improved in areas such as; better evidence based scar management; improved recording of patients notes; an increase in referrals for rehabilitation, including in country areas; an increase in prescribing interventions by the Doctor of Rehabilitation; and improved management of patients with less complex conditions.

## Challenges and lessons learnt

As noted above, the surgical team was unfortunately not able to treat all who presented for treatment. Amongst those who could not be treated due to time constraints were children brought to the program seeking management of burns, and people requiring surgery.

Although the Trauma Hospital has five physiotherapists, with no allocated physiotherapy staff for the Burns Unit, treating burns patients with appropriate therapy remains a challenge. Physiotherapists will see burns patients if requested, but a lack of dedicated staff in this area meant that it is difficult to integrate therapy as standard into patient care.

A number of other challenges were identified:

- The Burns Unit lacked dedicated funding for therapeutic materials.
- A reticence for early intervention, possibly due to a lack of confidence by local staff, meant that patients were not getting adequate care in a timely manner.
  - o The team observed that there were signs that this situation would improve if they could get the local medical team on board, as well as the surgical team.
- There was a perceived risk that some information passed via interpreters during education and mentoring sessions may not be entirely accurate.
- There was a tendency to keep materials that were donated for the most needy and poorest patients, rather than using as needed by patients attending the clinic. While care to not squander resources is good practice, it could hinder early intervention.
- One local doctor was rationing the use of materials in situations where prompt use would be better from a prevention perspective.
- A lack of space available for treating and assessing patients presented challenges.
- Generally, rehabilitation skills amongst local medical professionals in Mongolia is still developing, with a low level of awareness of the role and benefits of allied health in some instances.
  - o This may change as the first cohort of occupational therapists were due to graduate in 2017.

## 2018-2019

Program objectives for 2018-2019 were to:

1. Implement a burns therapy mentoring program activity in Ulaanbaatar.
2. Implement burn surgery mentoring program in Murun and Ulaanbaatar.
3. Support the MSA to deliver training in the delivery of safe anaesthesia.
4. Build capacity across Asia in the anaesthetic, surgical, nursing and allied health fields and involve Mongolian medical professionals in Interplast's regional training programs.

### MSA Annual Conference

In June 2019, the theme of the MSA Annual Conference was Anaesthesia and Trauma. Over 150 anaesthetists, 60% of Mongolia's anaesthesia workforce, and coming from the 21 provinces and the capital Ulaanbaatar, were in attendance. The Conference included refresher lectures and presentations by Mongolian anaesthetists, and a visiting faculty of Australian anaesthetists. Local anaesthetists gave presentations on a number of areas of local interest, which included; current status of trauma management; future planning; the types of child injuries presenting at emergency facilities in Ulaanbaatar; trauma presentations in aimag hospitals; and a range of conditions of interest.

The visiting faculty's presentations also covered a range of topics on the Conference theme, including; obstetric trauma; cervical spine, and other fracture injuries; obstetric haemorrhage; damage control resuscitation; and neurotrauma. Some of the Mongolian attendees provided interpreter services during the English language presentations, and assisted with dual translations for the Mongolian and English slides accompanying presentations.

Preceding the Conference was a two day *Leadership in Anaesthesia* workshop (an interactive program aimed at aspiring leaders in anaesthesia) which had been presented as a pilot program in Fiji in 2018. The workshop was held at the University of Health Sciences, Ulaanbaatar, for 42 participants who had been selected by the MSA as current and potential anaesthesia leaders.

Interplast volunteer participants in the workshop noted that the support provided by the MSA for the presentations was outstanding. The MSA had arranged for translators to prepare material and to provide interpreting, and dual language powerpoint presentations with live translations provided by senior Mongolian anaesthetists. The volume of work and effort in preparation of materials and live translations was greatly appreciated by all participants and instructors. Participants in the workshops found the interactive discussion sessions relevant and useful, noting that there had been improvements in training opportunities, research, improved safety and an improvement in the numbers of the anaesthesia workforce in Mongolia.

A panel session, led by Interplast volunteer Dr David Pescod, with panel members including the MSA President, Dr Odgerol Boldbaatar, and Professor Ganbold Lundeg, looked at the workforce challenges facing the practice of anaesthesia in Mongolia, and led to a discussion which culminated in the development of a five year strategic plan for the MSA. Issues to be addressed included:

- improved advocacy
- representation by the MSA in the Ministry of Health
- rotation of anaesthesiologists to remote areas to address burnout
- improved data collection to measure and improve perioperative morbidity and mortality.

## **Surgical program**

The third surgical program in Murun was undertaken during August 2018, giving the Interplast team an opportunity to consolidate the outcomes from previous surgical and mentoring programs. The team observed that capacity building for local nurses and surgeons was paying dividends, and found that in the time since the last Interplast program, those who had been mentored in burns management were providing good management of many burns contractures. One surgeon, Dr Chuka, had undertaken a few burns contracture cases. An example confirming that the local team had begun to consolidate their skills, and demonstrate confidence was when a patient with an acute burn was admitted during the Interplast team's visit, and was treated successfully by the local team, without the visiting team being asked to consult regarding this patient.

The Interplast team assessed over 59 patients, most of whom would benefit from surgery, with only a few assessed as 'category 1', indicating that patients had been categorised as being a priority for treatment during the visit, and performed 20 procedures. The clinic was well organised by the local team. The visiting team noted that it was pleasing to see patients return for secondary surgery, despite the challenges of travel, with many patients travelled vast distances to attend the clinic.

## **Allied health**

Volunteer occupational therapist, Ms Diana Francis, accompanied the surgical team. Ms Francis had previously undertaken a needs assessment and provided training to local therapy staff. She found that there was limited access to education for medical and allied health staff, and an ongoing need for education and skills development, particularly in acute management of burns and hand injuries, and a need to mentor the team approach for patient care.

Ms Francis provided training in basic hand therapy and oedema management, and recommended a future program of one on one training for the Doctor of Rehabilitation, and that for future education programs, case studies and practical demonstrations were a good approach.

## **Capacity building**

In August, the surgical program in Murun was an opportunity for mentoring and teaching the local nursing staff in a range of theatre skills. Interplast volunteer nurses instructed local nurses and mentored in skills for setting up the theatre, safety procedures relating to instruments, surgical safety checklists, and in-theatre hygiene practices. Photographs recording procedures acted as prompts for local nurses, reinforcing correct protocols and procedures; interpreters were used to explain procedures, and volunteers worked one on one with local nurses to demonstrate and explain processes.

In Murun, a total of twelve local medical staff (seven females and five males) participated in training and capacity building, which took place in theatre and on ward visits. Topics presented to the local team of nurses, surgeons and anaesthetists were: safe instrument handling, dressing changes and surgical time-out.<sup>67</sup> Other on the job training covered burns contracture surgery, anaesthesia management, scar steroid injection and hand therapy; all of which were provided to surgeons, anaesthetists and a physiotherapist. The Interplast team gave educational presentations which became a useful resource, updated daily, covering the teaching messages conveyed during surgeries, including surgical planning and management of complications. Encouragingly, the team identified five local medical professionals that would benefit from further training and who were keen to develop themselves professionally; and these included surgeons, anaesthetists and a senior nurse.

Interplast's volunteer hand therapist delivered a successful hand therapy burns mentoring program in Ulaanbaatar, at the Trauma Hospital. The program included a one day course, Introduction to Hand Therapy, which the Australian Hand Therapy Association made available to Interplast to use in training. Although the program was shorter than previous programs, it was well received by participants. It consolidated what participants had learned in earlier training and were implementing in their therapy practice, and assisted in bolstering support for the role that allied health has in all patient care.

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<sup>67</sup> 'Surgical time-out' refers to the process where operating theatre teams take time at the beginning of a procedure to ensure each surgical team member is clear on their role, and to confirm who the patient is, and the procedure to be undertaken. Time-out occurs in three stages: pre-anaesthesia, pre-skin cut and post surgery.

In the June 2019 country program appraisal report, country coordinator Dr David Pescod noted a number of outcomes that the program was achieving:

- Interplast's ongoing support to the training activities of the MSA was highly successful
  - o at June 2019, 87.5% of Mongolia had access to anaesthesia, and over 200 anaesthetists trained since introduction of a new training program and the support that Interplast had given to the MSA.
- burns surgery mentoring in Murun was showing results, with the surgeon there using the surgery skills learnt from the mentoring program
- evidence that burns hand therapy mentoring was resulting in changes in therapy practice
- outcomes for burns mentoring at the Trauma Hospital in Ulaanbaatar had been partially achieved, as there was not as much enthusiasm for burns mentoring by a senior hospital official.

### **Challenges and lessons learnt**

As in previous visits, language barriers were identified as a constant challenge; however, the visiting team was able to draw upon the interpreting skills of one of the local surgeons whose medical understanding, knowledge of local medical care and excellent organisational skills made him an important asset to the team.

Despite the local staff in Murun having the ability and skills to do more complex surgery and treatment, one of the biggest challenges they face is inadequate resources to do their jobs. Despite the limitations, local surgeons, the anaesthetist and nurses remain committed to their work, enjoy good working relationships and have a very good morale.

## **2019-2020**

The program objectives for 2019-2020 are to:

1. Implement a burns therapy mentoring program activity in the Umnugobi Province.
2. Deliver hand therapy education in Ulaanbaatar.
3. Assess ongoing options to deliver burns training in Ulaanbaatar.
4. Support the MSA to deliver training in the delivery of safe anaesthesia.
5. Build capacity of medical professionals and develop networks by supporting surgeons, nurses, anaesthetists or allied health staff to join Interplast regional surgical programs.
6. Sign an MoU with the Ministry of Health.

### **MSA Annual Conference**

Following the MSA Conference held in June 2019, Interplast, the MSA and ASA commenced planning for the June 2020 Conference. Unfortunately, planning was suspended, as global travel restrictions due to the Covid19 pandemic meant that the 2020 Conference could not go ahead.



### ***Surgical program***

The Interplast team undertook a surgical program in October 2019, and for the first time conducted a program at the Umnugobi Regional Diagnostic and Treatment Centre in Dalanzadgad, where the Interplast surgical team assessed over 50 patients who presented for treatment at the local hospital, and performed 17 procedures. The team also used the visit to assess the capacity of the local surgeons, and the surgical burns needs at the hospital. The visit created the opportunity to extend burns surgery mentoring to another province with a surgeon from Murun, with whom Interplast has an existing working relationship, as a lead educator in partnership with the Interplast surgeon. Accompanying the team was recently appointed Australian Ambassador to Mongolia, HE Mr Dave Vosen, who was able to see the work of Interplast by observing surgery, pre and post-operative patient consultations, and training that Interplast delivered to surgeons and nurses of the Centre's surgical department. This trip helped Interplast to form a positive relationship with the new Ambassador, and has opened up opportunities for Interplast to be part of Australia's public diplomacy via Australia's international development program.

A surgical program did not take place at the Trauma Hospital in 2019, as local partners requested to not have surgical visits to the existing hospital while the new burns hospital was being built. Despite this pause in the program, there is support from the therapy department (which is located in the Burns Unit) at the Trauma Hospital, the MSA, and local surgeons, to resume the surgical program when the new burns hospital is completed. The Australian Embassy in Mongolia has also expressed support for the resumption of programs once an assessment of the new hospital is undertaken.

Transitioning the program to the new hospital may pose challenges, as Interplast could potentially lose some existing connections if the new hospital has a new staffing structure.

### ***Allied health***

The hand therapy burns mentoring program at the Trauma Hospital in Ulaanbaatar in September 2019 was beginning to achieve results, with local therapists being enthusiastically engaged in professional development, with Interplast volunteers seeing the benefits of a consolidation of the previous years' programs. Burns surgery mentoring and hand therapy training in Murun saw improved skills and confidence in the local medical teams. Local partners in Ulaanbaatar requested that Interplast not undertake surgical visits until the new Burns Hospital was built.

The allied health team treated 14 patients at the Trauma Hospital, ranging in age from ten months to 75 years, with some being treated on ward rounds, and others being treated and receiving instruction in self-management of their condition. Conditions were varied, and included burns, injuries from accidents and over-use, and treatment for older injuries.

During this visit, the allied health team hoped to assist in planning for the new Burns Hospital and department, to ensure from the outset the establishment of good work practices and communication; proper record keeping and patient records documentation; and the adoption of a multidisciplinary team approach.

Given their case-load of inpatients and outpatients, the five physiotherapists at the Trauma Hospital see burns patients on an ad-hoc and rotational basis, and were able to provide very little coverage for burns inpatients. The Interplast allied health team was hopeful that allied health staffing levels would improve once the new Burns Hospital opened, with anticipated staffing of five physiotherapists, one occupational therapist, two to three social workers and psychologists.

### ***Capacity building***

Interplast's volunteer allied health team conducted a capacity building program at the Trauma Hospital, focussing on burns and hand therapy. The program aimed to encourage early intervention and therapy for acute burns patients; continue burns therapy education; and monitor progress by the local therapists in skills in record taking, patient assessment, and early therapy interventions. The team identified an ongoing need to continue with the education and skills program for the local Doctor of Rehabilitation, the surgical team and therapists, in acute burns management, hand injuries and rehabilitation.

The volunteer allied health team conducted lectures and informal teaching with physiotherapy and medical staff during patient therapy sessions at the Trauma Hospital. Some sessions had 17 participants, and the patient therapy sessions included five participants who were learning on-the-job skills. Physiotherapists, nurses, surgeons and rehabilitation doctors attended the sessions, learning about exercise programs appropriate for burns patients, treating patients from intensive care through to rehabilitation, and scar management.

In Dalanzadgad the surgical team provided in-theatre training in surgical and anaesthetic capacity to the local team of 11 surgeons, nurses and anaesthetists through hands on involvement in patient treatment. Capacity building activities included burns surgery, scrub processes and the administration of anaesthesia.

Despite travel restrictions in the 2019-20 financial year, Interplast has continued to build its strong partnership with the MSA, supporting the education centre, and the MSA Annual Conference. During 2019, Interplast engaged in extensive partnership discussions with the MSA to gauge a greater understanding of MSA capacity, policies and processes, and to build MSA capacity around Interplast's key compliance areas.<sup>68</sup> Interplast met with key representatives of the MSA, in Melbourne and in Bangkok, to discuss ongoing planning and partnership issues.

### **Challenges and lessons learnt**

As in previous years, the volunteer team noted a number of ongoing challenges, including a lack of funding for resources in both acute and outpatient care; low staff to patient ratio for physiotherapy, with therapy staff not always able to meet the needs of patients; reticence on the part of some surgeons in referring patients for therapy; a high turnover in medical administrative staff and subsequent loss of corporate knowledge; a loss of information when using interpreters, whom, although excellent, sometimes missed passing on context and nuances in patient care.

Despite the challenges, it was apparent that the long term involvement of Interplast's team was reinforcing important and productive relationships. This was shown by the good relationships with administrative and medical staff at the Trauma Hospital, who saw Interplast as a reliable partner with a commitment to ongoing capacity building for the hospital's medical professionals.

The surgical team found that the local surgeons in Dalanzadgad had good foundational skills, were very enthusiastic and learned new skills quickly, and that they would benefit from a continuation of the program.

At the time of writing this review, Interplast teams were unable to conduct planned surgical and allied health program in Mongolia, due to global travel restrictions as a result of the Covid19 pandemic. A scoping visit to the new Burns Hospital, and a series of meetings to finalise the MoU with the Ministry of Health, planned for 2020, was delayed. As already noted, the MSA Annual Conference has also been postponed until the lifting of international travel restrictions. Despite the change to program delivery, Interplast continues to support the:

- MSA education centre and staff costs for 2020-21 (as in previous years)
- development of guidelines on the safe practice of anaesthesia, to be approved by the Mongolian Ministry of Health
- publishing of the book 'Rural Emergency Care and Transportation of Critically Ill patients'
- access to publications and other educational material to the MSA.

In lieu of delivering a regular in-country program, Interplast is providing online mentoring for local partner personnel, including the areas of surgical, anaesthetic and allied health; and access for medical staff to journals and other training resources. Interplast volunteers in Australia are also providing remote support and have remained in contact with counterparts. Should travel restrictions be eased in the latter part of 2019-20 and some form of in-country program re-commences, an addendum could be added to this review to reflect outcomes for the remainder of the year.

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68 Interplast's key compliance principles can be found at <https://interplast.org.au/transparency-and-accountability/>

## Volunteers to the Mongolia country program. Many of these volunteers have participated in multiple programs over a number of years.

2014-2015 to 2019-2020

### Country program

**Ms Angela Doherty**; Nurse

**Dr Mark Duncan-Smith**; Surgeon

**Ms Diana Francis**; Hand and Occupational  
Therapist

**Ms Mary Gow**; Nurse

**Ms Tanya Karal**; Nurse

**Dr Kirstie MacGill**; Plastic and Reconstructive  
Surgeon

**Dr Pieter Peach**; Anaesthetist

**Dr David Pescod**; Anaesthetist and Country  
Coordinator

**Mr Thao Phan**; Nurse

**Ms Rebecca Scott**; Nurse

**Ms Leonie Simmons**; Nurse and Equipment and  
Supplies Coordinator

**Ms Lynne Sullivan**; Nurse

**Mr Woodrow Wilson**; Observer/Photographer

**Ms Chloe Wirth**; Occupational Therapist

### Mongolian Society of Anaesthetists; Annual Conference participants

*(unless otherwise stated, all participants are anaesthetists)*

**Dr Tipu Amir**

**Dr Allysan Armstrong-Brown**

**Dr Amanda Baric**

**Dr Michelle Chan**

**Dr Yuan Chang**

**Dr Jason ChungSingMa**

**Dr Debra Devonshire**

**Dr Roger Goucke**

**Dr Sian Griffiths**

**Dr Alison Jarman**

**Ms Rhonda Keenan**; Midwife

**Dr Sam Kennedy**

**Ms Elizabeth Kyle**; Observer

**Dr Kirryn Lowe**

**Dr Max Majedi**

**Dr Fional Merritt**

**Dr Anthony Merritt**

**Dr Christopher Mitchell**

**Dr Anna Negus**

**Dr Craig Noonan**

**Dr Yayoi Ohashi**

**Dr Anna Pederson**

**Dr David Pescod**

**Dr Jennifer Reilly**

**Dr Moira Rush**

**Dr Stefan Sabato**

**Dr Amutha Samuel**

**Dr Saathi Seevenayagam**

**Dr Rodney Wilson**

**Dr Mark Zammit**



## KEY STAKEHOLDER INTERVIEWS KEY STAKEHOLDER INTERVIEWS

### 6.1 Patients and family

### 6.2 Anaesthetic and surgical, nursing and allied health counterparts in Mongolia

### 6.3 Australia's Ambassador to Mongolia

### 6.4 Volunteer and Interplast responses

#### Overview

A crucial component of any program review is to represent the views of key stakeholders. For Interplast, its stakeholders are multiple. Patients and their families whose lives have changed; medical professionals in-country who have access to training, mentoring and career development; volunteers, the front line implementers and in-country face of the program; Interplast's management and its staff, whose work involves layers of complexity in managing expectations, logistics, policy frameworks and accountability, and intergovernmental relationships, in Australia and in partner countries; and its Board of Directors which has ultimate responsibility for all that Interplast does. The Australian Government, through its international development programs, particularly the Australian NGO Cooperation Program, which supports non-government organisations to undertake programs in developing countries; and members of the public who support Interplast financially and through advocacy for its work, are also important stakeholders who have an interest in understanding Interplast's effectiveness and impact.

#### *Stakeholder interviews: Mongolia*

To reach a cross section of stakeholders in Mongolia, Interplast engaged local evaluation consultant, Ms Erdenechimeg Ulziisuren; CEO and Founder, Cognos International LLC. Ms Ulziisuren interviewed senior hospital administration, anaesthetists, surgeons, nurses and allied health professionals; patients and their families. Ms Ulziisuren also made several approaches to Ministry of Health contacts, but was unfortunately unable to secure an interview to gauge its experience of Interplast programs. Interplast would like to acknowledge the efforts Ms Ulziisuren made in trying to secure this perspective, and in seeking the views of stakeholders in Mongolia.

Feedback from local medical stakeholders helps to illustrate the impact that Interplast's program has on Mongolia's capacity in anaesthesia practice, plastic and reconstructive surgery; including treatment for burns; allied health and nursing practice. Patient feedback, which is presented as a series of case studies, illustrates the personal impact that Interplast has on the lives of individuals and their families. These in-country interviews give unique insights into experience at the personal level of Interplast's Mongolia program, and its impact, and provides an evidence base for recommendations that will guide future programs.

## Stakeholder interviews: Australia

To understand Interplast from the perspective of Australian volunteers, an anaesthetist, a surgeon, an occupational therapist and a theatre nurse were interviewed. In addition to volunteers, members of the Interplast management team gave their perspectives. To present a general governance and management perspective of Interplast, a representative of its Board of Directors and Chair of the Clinical Governance Committee, Dr Philip Ragg, and its Chief Executive Officer, Mr Cameron Glover were interviewed together. Their views are presented as an attachment to the end of this report. These interviews were conducted by an external consultant.

In September 2020, all members of the evaluation team and Interplast staff members held a video meeting with Australia's Ambassador to Mongolia, HE Mr Dave Vosen, and Program Officer, Mr Urnukh Khuujii, also from the Australian Embassy. Interplast would like to thank Ambassador Vosen and Mr Khuujii for their participation.

Responses from local stakeholders, volunteers and Interplast's program staff fall into the broad categories of *Capacity Building, Impact, Sustainability, and Challenges*. Conclusions and recommendations stemming from all stakeholder feedback are documented in **Section 7 – Findings and Recommendations**. Some, but not all, had comments on gender barriers, and these can be found at the end of interviews with Mongolian counterparts.

Interplast thanks all stakeholders who gave so generously of their time to inform this review. Their input has given Interplast a sound basis for progressing the program, for building on its successes and learning from its experiences.

A list of all interviewees is at the end of **Section 6**.

## 6.1 Patients and families

In late 2020, on behalf of Interplast, Ms Ulzisuren interviewed patients in Dalanzadgad and in Murun. A total of 10 patients and their families told their stories. Patients ranged in ages from four to 27 years of age; with seven females and three males being interviewed.

The interviews document the experiences of patients who had received treatment during an Interplast visit to Mongolia. It should be noted that many were previously treated by local medical personnel, and that all treatments undertaken by Interplast were done in partnership with local surgeons, nurses and therapists.

Patient interviews were conducted in accordance with Interplast's Privacy Policy, and Child Protection Policy, and patients were selected to represent a range of ages and conditions. However, while those interviewed represent as much as a cross-section of patients as possible, selecting patients to interview was limited by individual circumstances and their availability. Interplast is grateful to every one of these patients and their families for recounting their experiences for this review.



## Patients interviewed in Murun, September 2020.

### PATIENT 1.

*Four year old boy; from Khovsgol aimag, Murun soum*

This patient is the youngest child in a family of four. His mother accompanied him to the interview.

The boy's mother described the effects of a serious burn injury that he sustained, and where his fingers fused while healing. As a consequence, he was unable to hold anything in his left hand, and experienced difficulties with movement. She explained how her son required constant care.

Five months after the injury, the young boy received treatment for his burns. In 2017 he was treated by Interplast surgeons, and this treatment restored movement to his injured hands and arms.

“

**NOW HE HAS NO PROBLEMS AND IS COMPLETELY HEALED. I AM THANKFUL THAT THERE IS NO HARM IN THE FUTURE...HE GOES TO KINDERGARTEN LIKE NORMAL CHILDREN. EVERY DAY LIFE IS NORMAL. THERE IS NO NEED FOR FURTHER TREATMENT.**

”



## PATIENT 2.

22 year old female; from Khovsgol aimag, Murun soum

This young woman is the eldest of two children, and has a younger brother. At the age of eight months, she was burnt by hot tea whilst crawling, suffering an injury to her right hand. This caused constant pain for many years, and the injury made it difficult for her study and to do everyday chores. As she grew older her arm became tighter, and the fingers of her hand were joined. Her constant pain made study difficult.

After suffering chronic pain for 20 years, in 2018 the young woman had surgery performed by Interplast volunteers. The surgery helped alleviate the pain and restored movement to her hands and arm. Her mother reports that her daughter no longer has problems with studying, and writing with her right hand. She is happy and completely healed. Her mother said:

*When my cousin's three year old daughter was burned, I told her about the Interplast program. But I couldn't get help, because the Interplast team hasn't come since.*

She went on to say how her daughter's life has returned to normal:

**“ IT'S GREAT IN MANY WAYS, SUCH AS HELPING WITH THE HOUSEHOLD CHORES, AND AESTHETICALLY. THERE IS NO NEED FOR FURTHER TREATMENT. I'M REALLY HAPPY THAT MY DAUGHTER'S HANDS ARE SO HEALTHY AND BEAUTIFUL. ”**



### PATIENT 3.

**27 year old female; from Khovsgol aimag, Shine-Ilder soum.**

This young woman is from a family of four; she has two sisters and a younger brother. She told her story of how, as a two year old child, she was badly burned in the abdomen area due to her nylon clothing melting after being exposed to a hot oven.

She described the effect on her life:

*Everyone said I was hopeless. When I was in school, I didn't go to physical education classes at all.*

She experienced pain from the severe scarring on her abdomen, and had burns from her navel to her thighs. Her injuries left her with an inability to have children, and her restricted movement meant that she was unable to lift heavy objects.

The young woman knew about the Interplast program from her work as a nurse. In 2018, she underwent surgery. Although she took four months to recover from the surgery, and it took a long time for the skin on her thighs to heal, she explained that she now has no problems stemming from her injuries, and is completely healed.



**“ THE PEOPLE AT THE INTERPLAST PROGRAM WERE REALLY GREAT DOCTORS AND NURSES. THEY EXPLAINED THE WHOLE PROCESS TO ME. MY ABDOMEN IS NOW HEALED AND (I AM) WITHOUT ANY PROBLEMS WITH CHILDBIRTH. I TELL PEOPLE WITH BURNS ABOUT THIS PROGRAM. IT ... GAVE ME A NEW HOPE AND LIFE. WE ARE SINCERELY GRATEFUL. ”**



## **PATIENT 4.**

**14 year old female; from Khovsgol aimag, Murun soum**

This young patient is the youngest in a family of three girls. For the interview she was accompanied by her older sister.

She described how she sustained injuries to her right hand and arm after being burned by boiling water. Following the accident, her right arm was numb, and she suffered convulsions.

She explained the extent of her injuries:

*I've been in pain for ten years...Before my surgery, my right arm was not stretched at all.*

The young girl explained the effect that her injuries had on being able to do simple things, describing how she could do things with her right hand but favoured her left hand. As a teenage girl she said she felt ashamed as she couldn't wear certain clothes.

Her grandmother saw information about an Interplast program coming to the area where she lives. In following up on this information, she was able to be listed for surgery, which she had in July 2018. She says after the surgery, she is fully healed; the pain has gone and she can now stretch her arm. She is no longer overwhelmed by physical activity and can take on household chores.

**“ I AM NOW FULLY HEALED, WITH MY ARMS OUTSTRETCHED, HELPING WITH HOUSEHOLD CHORES, AND NOT BEING OVERWHELMED BY SHORT-TERM CHORES. THERE WAS NO NEED FOR (FURTHER) SURGERY BECAUSE THERE WAS NO MORE PAIN. ”**

## **PATIENT 5.**

**Four year old boy; from Khovsgol aimag, Murun soum**

The young patient is one of three children. He was accompanied to the interview by his mother.

The boy's mother explained that her son was badly burned on the face by a hot oven when he was fourteen months old. The injuries meant that he was unable to sleep with his eyes closed, and later his nose began to droop. On one side of his face the skin was completely gone and he was suffering great pain. Following the injuries, he required a great deal of personal care to keep the skin clean, and the skin around the affected eye had healed which meant he could not close it.

In July 2018, the young boy was able to have surgery undertaken by the Interplast team.

**“ BEFORE (THE SURGERY) HE COULD NOT SHUT HIS EYE WHILE SLEEPING. NOW MY SON SLEEPS WITH HIS EYES COMPLETELY CLOSED. MY SON'S NOSE HAS IMPROVED SINCE THE OPERATION, BUT HE STILL HAS SOME CHANGES...THIS SUMMER HE HAD AN INJECTION TO RELIEVE THE SCARS...NOW MY SON'S SCARS ON HIS HARDENED SKIN ARE MUCH BETTER. ”**

## Patients interviewed in Dalanzadgad, November 2020

### PATIENT 1.

*Ten year old girl; from Ulaanbaatar*

*When I first approached the Southgobi Central Hospital and Interplast team, they welcomed us without any hesitation. We are very grateful for the surgery and the healing of my daughter. I hope that Interplast will come back to Mongolia to perform these important surgeries for many needy children of Mongolia.*  
(Mother of ten year old patient)

This patient is the youngest of two girls. She was accompanied by her mother her for this interview.

Her mother describes the accident leading to her injury. When her daughter was a one year old, she fell into a hot pot and suffered severe burns to the right side of her body. The accident resulted in injury to her right arm, which she was unable to straighten, leaving it shorter than her left arm. This had a negative effect on her life; she was experiencing difficulty with writing and homework, and this affected her schooling. She was also limited in lifting and holding objects, particularly if they were heavy.

The young girl underwent her first surgery in June 2011, at the National Trauma and Orthopaedic Research Centre (the Trauma Hospital) in Ulaanbaatar. Surgeons performed a skin graft to her right arm, using skin they had removed from her groin area. After the operation, she was able to straighten her right arm, and the length of both of her arms became the same.

In the years following the surgery, the young girl's arm was still causing her problems. Her mother saw a news report about Interplast's visit to Mongolia, and travelled to Ulaanbaatar, hoping that her daughter could be helped. In 2019, she was seen by Interplast surgeons for an operation. Her mother was very happy with the results from the surgery, both in restoring function and an improved aesthetic outcome for her daughter. Her daughter said:

**“ BEFORE THE SURGERY, I USED TO NOT BE ABLE TO ATTEND PHYSICAL ACTIVITY CLASS, BUT NOW I CAN...I AM VERY HAPPY ABOUT THIS. NOW THERE IS NO PAIN, NO PROBLEM DOING HOMEWORK OF ANY OTHER THING. ”**

Her family were very grateful for access to the surgery as they would normally have not been able to afford the treatment the young girl needed. Her mother expressed her hopes that other families with children who have burn injuries could be seen by Interplast:

*There are a lot of people with burns around us. I tell them about Interplast.*

## **PATIENT 2.**

***Nine year old girl; from Manlai, Southgobi***

This young patient, an only child, was accompanied by her grandfather for the interview.

He described how at the age of three, his granddaughter was injured when she was trapped in a hotpot, and as result, the right side of her upper body and arm were burned. Since the accident, she had experienced pain in her right arm and armpit, and restricted movement and use of her right arm and hand.

Six years after her injury, in June 2019 Interplast surgeons performed surgery on her to address the injury. She now has more ability to hold and carry things in her right hand, and better movement in her affected arm.

Of her surgery, the young patient said:

**“ I USED TO HAVE SO MUCH PAIN THAT I COULDN'T MOVE MY RIGHT ARM, BUT AFTER THE SURGERY THE PAIN REDUCED. I WAS ABLE TO LIFT UP MY HAND. MY PAIN IS NOT COMPLETELY GONE YET, BUT I'M GLAD IT'S MUCH BETTER THAN BEFORE. I WAS NOT ABLE TO EXERCISE IN PHYSICAL EDUCATION CLASSES, BUT NOW I CAN DO SOME SMALL EXERCISE. TWO CHILDREN IN OUR CLASS HAVE BURNS AND I TOLD THEM ABOUT INTERPLAST. ”**

### **PATIENT 3.**

**22 year old male; from Dalanzadgad, Southgobi**

While working in the construction sector in 2018, the young man was injured in an on-site accident. He suffered burns to his back and arms, and his injuries were exacerbated as his clothes had stuck to the burnt skin. After being airlifted to the Trauma Hospital in Ulaanbaatar, he underwent surgery for the burns. After the initial surgery he was still experiencing pain and had difficulty walking. He was applying ointment to treat the wounds.

An acquaintance told him about Interplast, and he was able to have surgery to treat the burn injury.

**“ BEFORE INTERPLAST DOCTORS DID A TREATMENT FOR ME, I WAS NOT ABLE TO LIFT THINGS UP. BUT NOW I CAN LIFT THINGS UP A LITTLE BIT. MY COUSIN HAS BURNED HIS ARMS...I WILL TAKE HIM TO THE INTERPLAST TEAM FOR TREATMENT IF THEY COME TO MONGOLIA. ”**

Despite being unable to straighten his arm completely, the man reported that his condition has improved following the surgery. He wanted to thank the Interplast team for their help.

### **PATIENT FOUR.**

**Nine year old girl; from Dalanzadgad, Southgobi**

This young patient is the middle child in a family of three. She was accompanied by her mother for the interview.

The girl's mother described how, at the age of four, she sustained burn injuries to her left side and shoulder after falling into a boiling pot. She experienced tightening of her skin, and her constant pain made it hard to walk and concentrate on her studies. She met the Interplast volunteer team who provided non-surgical treatment for the scar tissue.

Her mother said the treatment was very effective, and improved how her skin looked. She said that she and her daughter were very grateful for the treatment.

## **PATIENT 5.**

**11 year old girl; from Dalanzadgad, Southgobi**

The young girl was accompanied by her mother for the interview. Her mother described how, as a ten month old infant, she was inside the ger (a traditional residential structure) when it caught fire. She suffered third degree burns to her arms and right leg. The resulting injury made it difficult for her to do basic things for herself, such as putting on shoes, as her fingers and toes were affected by the injury.

After spending time in a local hospital, she was transferred to a hospital in Ulaanbaatar, where she received treatment for two months. Prior to Interplast's visit in April 2019, the young girl had travelled to the USA three times for additional treatment.

During Interplast's visit the team performed surgery on the girl's hand and foot. Following the surgery, she was able to do things for herself, such as put on her shoes without pain, and her ability to walk improved.

The girl's mother noted that she wanted to ask the doctors advice about ongoing treatments for her daughter's skin, but that time and language barriers made that difficult. She is grateful for the improvements her daughter has made following surgery.

**“ I WANT TO SAY THANK YOU TO THE DOCTORS AND THE ORGANISATION FOR THEIR SUPPORT. ”**

## 6.2 Anaesthetic and surgical, nursing and allied health counterparts in Mongolia

As noted throughout this review, Interplast's Mongolia country program encompasses a surgical, allied health and nursing program focused on mentoring and training, and institutional strengthening, through the partnership with the Mongolian Society of Anaesthesiologists (MSA) and the Australian Society of Anaesthetists (ASA). Members of the MSA explained how Interplast and the MSA/ASA partnership had helped in improving the capacity in anaesthesia practice. MSA members and anaesthetist counterparts felt that the support Interplast gives to the MSA is making a significant contribution in progressing its institutional goals, helping the organisation progress its ambition to become a teaching college.

In-country interviews with anaesthetists, burns and rehabilitation surgeons and physicians, therapists and nurses found that the Interplast program is contributing to sustained change. As the basis for mentoring and training in the surgical, allied health and nursing program, the service delivery program is integral to sustainability.

In addition to anaesthetists, respondents in Mongolia include anaesthesia and surgical nurses; surgeons who treat burns cases; emergency, trauma and general surgeons; a doctor of rehabilitation therapy; and therapists.

### Capacity Building

#### *Anaesthetic and surgical perspective*

The MSA's main objective is to strengthen capacity of anaesthetists in Mongolia, through training and on the job experience. Interplast has contributed to this through its training programs and professional development for anaesthetists.

*The biggest goal of the MSA is to create a cohort of capable and responsible doctors.*

(Dr Unurzaya Lhagvajav, Anaesthetist)

Interplast's program to address anaesthesia practice in Mongolia is through capacity building and mentoring, and its partnership with the MSA. The program contributes to the MSA's goals, providing exposure to professional development for doctors and specialists. Interplast and the ASA have assisted the MSA toward becoming a sustainable and effective organisation, providing organisational mentoring and opportunities for anaesthetists to access training in and from developed countries.

Many MSA members have had a long association with Anaesthetist and Mongolia program Country Coordinator, Dr David Pescod; and have attested to his contribution to the practice of anaesthesia in Mongolia.

*When Dr Pescod first visited Mongolia, he found anaesthetists had a lack of access to training, and now the program has provided regular training.*

(Dr Altanzul; Anaesthetist)

*Dr Pescod first came to Mongolia in the early 2000s and assessed the state of anaesthesia in Mongolia, examining safety (in anaesthesia practice) and options to form linkages with international organisations.*

(Dr Odgerel Boldbaatar; Anaesthetist)

The MSA works with anaesthetists, and other professional organisations; such as, the Obstetrics and Gynaecology Association, to improve anaesthesia practice, training doctors at the sub-national level to improve professional skills.

*Along with the annual training program for anaesthetists; (it's) the quality of the material and the practical components.*

(Dr Lhagvajav)

Respondents listed a number of benefits of Interplast's program, including on the job training, which is providing practical knowledge and technical information on the latest developments in anaesthesia practice. The biggest advantage of Interplast's approach is that its volunteers work as part of a team; it brings anaesthetists, surgeons, nurses and therapists to participate in the Mongolia program.

Interplast's surgical program has facilitated doctors from Khovsgol province and the South Gobi to participate teaching and to work with peers from Ulaanbaatar. Most respondents also noted that sending overseas teams to regional areas, is something which other similar international organisations didn't do. Interplast provides training for doctors in the public, private and district hospitals. In addition to training, it provides treatment and one on one mentoring for medical professionals with their patients, covering theory and practical skills.

To capitalise on the mentoring program, a number of respondents were hopeful that in the future Interplast could broker internships and placements in Australia and other countries, to help improve the skills of anaesthetists and surgeons. The establishment of the new Burns Rehabilitation Hospital in Mongolia is an opportunity for Interplast to partner and contribute to improved capacity in burns treatment, surgery and therapy.

*We hope to be able to visit Australia to learn and master new techniques. We also hope that the new Burns Rehabilitation Hospital will operate at an international standard level, and that Interplast can help in (achieving) this.*

(Dr Tsermaa Sandag; Doctor of Rehabilitation Therapy)

There is a recognition of the need for training in burns treatment across the country, as Mongolia has a high number of burns cases, many amongst children. The Director-General of the Trauma Hospital, Dr Galbadrakh Erdenetsetseg, estimated that the incidence of burns in Mongolia is higher than the international average. Since 2012, burns injuries have increased by 40-50%. The need for treatment and training in burn care is great, and this is an area where Interplast has contributed to improving capacity.

### **Nursing perspective**

All nurses interviewed agreed that the benefit for them of Interplast's program is having access to on the job training, and that the program has helped health professionals of all disciplines with training and professional development. Being able to access training in this way helps in developing and improving nursing skills.

Improving practical skills is an area of need in nursing training, as access to on the job training was seen as how most learning is done.

*On the job training and practical skills is a huge advantage (of Interplast's program).*

(Nurse G. Ariunzaya; Surgical nurse)

One nurse said that Interplast had been the most effective of all organisations because of its training and mentoring program and, unlike other similar organisations, it works in cooperation with counterparts.

Another noted that before Interplast's program, burns surgery was not available in rural areas. Now surgery is done where patients live, which means that they are spared the lengthy travel for access to treatment. This reduces some of the challenges that patients experience.



### **Allied health and rehabilitation medicine perspective**

Dr Tsermaa Sandag is a leading rehabilitation physician and clinical professor with over 33 years' experience at the Trauma Hospital. She has been involved with Interplast's capacity building program for many years. She explained that there is a great unmet need for training for allied health, which now includes physiotherapists and occupational therapists, and is seeing the outcomes of Interplast's capacity building program from a range of perspectives. The training that Interplast conducts for doctors, nurses and therapists is helping improve patient outcomes. Interplast's one on one mentoring for medical professionals, with their patients, is giving them, whatever their role, improved practical skills and has addressed the theoretical aspects of their work.

For allied health professionals, Dr Sandag said that Interplast's capacity building program in allied health burns therapy training is improving access to rehabilitation for rural patients. She acknowledged the contribution of volunteer hand and occupational therapist, Ms Diana Francis.

(Interplast volunteer) Ms Diana Francis ... has helped address these challenges, bringing together all rehabilitation physicians in Ulaanbaatar, interviewing them, teaching classes and sharing practical knowledge and experience in the workplace.

Dr Sandag said that rehabilitation is integral to all areas of treatment. Bringing medical professionals from outlying provinces to Ulaanbaatar not only gives them access to training and mentoring, it also facilitates peers to link with and learn from one another. Dr Sandag sees opportunities for Interplast to help raise burns treatment to an international standard through the new Burns Rehabilitation Hospital and through training placements in Australia. The new Hospital will have dedicated physiotherapists and occupational therapists.

### **Impact**

*Regular training for Mongolian anaesthetists has helped them (in their goal) to reach international standards. Interplast volunteers are focused on developing, empowering, and providing on the job training.*

(Dr Altanzul; Anaesthetist)

### **Anaesthetic and surgical perspective**

Respondents felt that the safety and standard of anaesthesia practice in Mongolia has vastly improved, and acknowledged the substantial contribution of Country Coordinator Dr David Pescod, whose efforts in capacity building in Mongolia pre-dates Interplast's first program in 2008. Following Dr Pescod's early work, the MSA and Interplast have had a long term partnership, establishing linkages amongst professionals and facilitating support for anaesthetists in Mongolia. Support has been through professional development, and financial assistance for the MSA to enable it to administer the Association and hold its meetings. Interplast support also provides on the job training for medical professionals and professional development material.

Key counterpart, Dr Ganbold Lundeg, told the review that co-operation between the MSA and the ASA, Dr Pescod's long term commitment and Interplast's program have all been instrumental in moving the MSA forward, and is having a significant and long term impact on developing the training and skills of the profession.

*Dr David (Pescod) has been working with Australian and Mongolian anaesthetists for over twenty years. ... The long term continuous goal of the MSA is building capacity of doctors with training, and to continue the cooperation with Interplast. Continuous support from Interplast and the ASA is critical to the sustainability of the MSA.*

(Dr Gandbold Lundeg; Anaesthetist and MSA Secretary)

The MSA Annual Conference, supported by Interplast and the ASA, is a key contributor to the impact of the mentoring program. The conference format of focussing on one topic covering a number of angles, and surveying participants ahead of each conference ensures that topics are relevant for participants. Dr Lundeg also pointed out that Interplast's program is helping rural doctors with financial assistance which allows them to travel to Ulaanbaatar to attend the MSA Annual Conference, where anaesthetists learn and exchange information.

Anaesthetists noted that changes in improved capacity of the MSA has led to a more structured approach to anaesthesia training, a sharing of both professional experience and knowledge between peers in Mongolia and by visiting doctors, which in turn has resulted in improved knowledge and practice of anaesthesia in Mongolia. As well as the program with the MSA, counterparts noted that Interplast is a major contributor to anaesthesia and intensive care training, resulting in improved practice. Providing video tutorials to anaesthetists gives them a very good practical understanding; helps improve skills of younger doctors, and gives them access to good information. The importance of relationships is seen as being key, as well as regular contact.

*The main advantage of (Interplast) over other international programs is that it is continuous... they come every year and we have a regular relationship.*

(Dr Tumenjargal; Anaesthetist)

In addition to the MSA partnership, Interplast's rural outreach surgical program has changed the lives of children and adults receiving treatment for burns, and helped improve and build the skills of medical professionals in those locations. This is an area where most who were interviewed felt that the impact on individuals was greatest; not only has the program improved the quality of life for those receiving treatment, the training that Interplast conducts during surgery has helped increase the skills of anaesthetists in those regional areas, so that they can apply their skills and help improve the lives of their patients. Since Interplast's first burns treatment and training program, the improvement in skills of doctors in regional areas such as Khovsgol has meant that they are now performing burns surgery independently.

*Capacity building for doctors in the Khovsgol and Umnugovi aimags has meant that their skill, and ability to perform surgery on their own has improved.*

(Dr Boldbaatar)

Dr Lundeg said through its outreach program, no other organisation had done more to help with improved burns care than Interplast.

*Interplast differs from other organisations with its goal of improving burn care, and outreach to rural people who have not had access to burn treatment, surgery and scar removal.*

(Dr Lundeg)

Another said that Interplast was making a significant contribution in the area of burns treatment.

*Interplast enables children with burns to be treated. It is making a significant contribution to the development of rehabilitation and plastic surgery in Mongolia.*

(Dr Batsuuri Munkhbat; Emergency doctor)

A move toward working in aimags outside of central areas has been very effective in helping people in rural areas, particularly children, receiving treatment that they would normally receive by making the journey to a tertiary hospital in the city.

*In Khovsgol I worked as an interpreter (to the program) and observed that Interplast doctors worked to improve capacity of rural doctors, and contributed to the well-being of local people by performing surgeries. I am very grateful to the Interplast team for the many children who were treated.*

(Dr Munkhbat)

*Over the past eight years, Interplast has provided training on how to provide emergency medical care in about fifteen aimags.*

(Dr Lundeg)

*Giving children the opportunity to have surgery is the biggest contribution of the program...The main advantage of Interplast over other international programs is that it provides teamwork and on the job experience.*

(Dr Altanzul)

### **Nursing perspective**

Nurse respondents saw the main impact of Interplast's program as skills development, particularly through mentoring and on the job training. Giving rural patients access to surgery, which they would normally have done in a tertiary hospital in locations other than where they live, has contributed to the impact of the program. Nurses noted that many medical professionals of all disciplines saw the impact for patients, who would otherwise have missed out on treatment and care, but also on their own skills development. Taking the surgical program to Dalanzadgad gave nurses access to training that would ordinarily only be available in Ulaanbaatar.

Training has had other important impacts on the professional lives of nurses; some experiencing effective team work; and, like their surgical colleagues, nurses commented on the life changing benefits for children that the surgical program has had. Through the mentoring program nurses have improved their skills, learning about effective communication with patients, surgical instrument procedures and use of equipment, and pre and post-surgical management of patients. Undertaking 'joint' surgery with volunteers and surgical teams has proven to be a very effective way of learning.

*Patient recovery has improved due to the improved skills...from Interplast mentoring. One of our surgeons can now perform multiple burn scar surgery with knowledge and skills learned from Interplast.*

(Nurse Davaajargal; Surgical nurse)

Access to training has had significant benefits for one nurse.

*Following from the experience of access to Interplast training, one nurse was able to meet the criteria and became the first professor of clinical science in Mongolia.*

(Nurse Ch Tuya; Anaesthesia nurse)

### **Allied health and rehabilitation medicine perspective**

Apart from Dr Tsermaa Sandag, who has had a long professional relationship with Interplast volunteer hand and occupational therapist Ms Diana Francis, therapists interviewed for the review did not have direct experience of the program. It should be noted that Interplast allied health volunteers have held educational sessions for physiotherapy staff during each visit; including formal lectures, workshops and one on one training sessions.

Local allied health staff were able to report that they had observed Interplast's impact on allied health practice in Mongolia through working alongside Dr Sandag. They felt that Interplast had made a noticeable impact, and that there is much to learn from its allied health volunteers. One area identified is how therapists have been learning about long term treatment for patients following burns surgery. This will hopefully continue to improve with allied health staff dedicated to treating burns patients. Allied health staff at the Trauma Hospital explained that they are not employed to work in the Burns Unit, and that they are fully engaged in meeting the allied health care needs of all other hospital patients.

For Dr Galbadrakh Erdenetsetseg; General Director, the Trauma Hospital, and Dr Sandag, the partnership with Interplast has had a positive impact on training and experience for surgical practice.

*Since 2015 we have performed more than 60 joint surgeries at the NTORC (the Trauma Hospital), trained doctors with on-the-job training.*

(Dr Dr Galbadrakh Erdenetsetseg; General Director, the Trauma Hospital)

*I have been working with Interplast since 2014. In particular, I have been working with (Ms) Diana Francis for six years. She has been sharing her experience with me regarding burns rehabilitation and hand therapy abundantly.*

(Dr Sandag)

## **Sustainability**<sup>69</sup>

*The big advantage of Interplast is its long term and stable cooperation. In addition to organising training, Interplast also provides support and treatment to children in rural areas.*

(Dr Boldbaatar)

### **Anaesthetic and surgical perspective**

Those interviewed gave their observations on sustainability, discussing the impact that Interplast's and the ASA's partnership has had in helping the MSA's progression toward a sustainable association, and the emerging sustainability of the surgical training and mentoring program, outside of Ulaanbaatar.

*The main feature of our relationship with Interplast is that our doctors are regularly provided with skills through training...Dr David (Pescod) has developed a 17 module curriculum for the two years of training (for anaesthetist residents) and we follow that (training).*

(Dr Unurzaya)

MSA member and Anaesthetist Dr Batgombo Natsagdori outlined the MSA goal of building capacity of doctors and giving them the opportunity to keep pace with international knowledge and skills, to improve knowledge, and introduce safe anaesthesia into Mongolia. Implementing procedures and guidelines so that anaesthesia practice aligns with international standards is an important step toward that ambition. Dr Natsagdori saw a role for Interplast, and Mongolia's Ministry of Health, in achieving this aspect of the MSA's guidelines and procedures.

*The MSA is best placed to translate the ASA guidelines; it can do this with Interplast's help. The MSA is also seeking the Ministry of Health's assistance.*

(Dr Batgombo Natsagdori; Anaesthetist and MSA member)

Interplast's training programs which give exposure to professional development for doctors and specialists, and opportunities that Interplast and the ASA provide for anaesthetists to access training in developed countries are cited by MSA members as positive contributors to change. Translating text books that are suited to the environment in Mongolia for use in training has lifted the profession toward an international standard.

*Professional skills (of anaesthetists) improve every year.*

(Dr Lundeg)

As noted above under Impact, one of the MSA's most notable achievements is the Annual Conference and seminar, with anaesthetists from all over Mongolia attending. In some years over 150 anaesthetists from 21 aimags have attended and had the opportunity to discuss current challenges, solutions and future work plans. During recent years Interplast trainers have helped lead and present at the meetings, and this professional collaboration has been very effective.

*The MSA is very stable. Interplast is the key contributor to capacity and sustainability of the organisation. Anaesthetists need to have a broad range of skills and Interplast helps in that. Interplast wants the MSA to be an independent society.*

(Dr Altanzul)

<sup>69</sup> Comments on sustainability were made by surgeons and anaesthetists. As nurses and allied health professionals did not specifically address this issue, their comments are not reported in a separate category.

MSA membership is volunteer-based and it is financed by member fees. As these do not cover all of the MSA's running costs, Interplast support has helped it to operate efficiently, and to extend training opportunities across Mongolia. For example; as noted under Impact, Interplast's support gives rural doctors access to the annual conference and training in Ulaanbaatar.

MSA members are considering options for its future sustainability, and have been in discussions with Mongolia's Centre for Health Development to facilitate and centralise professional development for resident doctors. Whilst it is too early to claim that the MSA has achieved its goal of being a sustainable professional association, the partnership it has with Interplast and the ASA is helping it to move forward.

Interplast's commitment to capacity building goals have set it apart from other organisations. It's contribution to improved surgical, nursing and allied health capacity, particularly in the area of burns surgery, is contributing to future sustainability by helping the professional development of Mongolia's medical workforce.

*Other international organisations are short term; Interplast is different. It brings in surgeons, anaesthetists and nurses which creates opportunities to share knowledge, experience.*

(Dr Natsagdori)

*Interplast's support has helped us to perform burn surgery locally without needing to refer patients to tertiary (hospitals) in Ulaanbaatar...we have been able to solve problems in our aimags by giving us dermation or skin peeling equipment.*

(Dr Byambasuren; Anaesthetist)

As noted under Capacity Building and Impact, Interplast's whole of team approach and on the job training to aimag doctors and nurses, through working as a team conducting surgeries, is having a sustainable result in aimags where capacity to treat burns patients is improving.

*Interplast came to the province in 2019 and performed 10+ surgeries, I received training and can now treat burns and scars.*

(Dr Gansukh; General Surgeon)

As pointed out by a number of respondents, many doctors and nurses in Mongolia cannot afford to travel to upgrade their skills. Taking the program to them is helping them achieve improvements in surgical and nursing skills, and to treat patients locally.

*Doctors want to upgrade their skills but they are not able to do so due to financial constraints. Therefore, the fact that the Interplast team comes to Mongolia for (undertaking) surgeries with us is a great and effective way of learning from them.*

(Dr Battsengel; General Surgeon)

## Challenges

Respondents noted a number of different challenges in the practice of anaesthesia and in capacity for surgery and nursing care. The field of allied health and rehabilitation medicine identified similar challenges to effective service delivery and patient care. Many identified areas for improvements, priorities for Mongolia's healthcare and for Interplast's program. These are also discussed in **Section 7 – Findings and Recommendations**.

### *Anaesthetic and surgical perspective*<sup>70</sup>

A lack of adequate equipment and medicines in rural and aimag general hospitals was commonly cited as contributing to difficulties in providing appropriate patient care. Heavy workloads are seen as a disincentive for young medical professionals taking up roles in regional areas, and there is an inadequate level of human resources for all disciplines in urban and rural areas. A shortage of anaesthetists in urban areas, and qualified anaesthetists not taking up roles outside of urban areas add to the challenges to an adequate and equitable supply of medical professionals.

*Because of the heavy workload in rural areas, young professionals are not keen to work there... There is an insufficient supply of anaesthetists in urban areas, and a shortage of health HR in rural areas.*

(Dr Khurel-Ochir; Anaesthetist and MSA President)

*There is a shortage of anaesthetists, insufficient equipment and supplies, and a lack of interest by newly qualified anaesthetists to work at sub-national hospitals.*

(Dr Boldbaatar)

Whilst the challenges faced by Mongolia's health system are broadly experienced, the above observations highlight how they are felt more keenly in rural areas. The differences between rural and urban health facilities demonstrate that location can exacerbate problems experienced by both. Poor equipment often has no budget for maintenance. There are very few portable anaesthesia machines in rural hospitals. Rural areas often experience shortages of medicines, and health facilities have little or no allocated budget to address this. There is a general lack of human resources in rural areas and this has led to high workloads for specialists. Rural areas also lack some important specialties; such as skills and knowledge in cardiac anaesthesia which is generally limited to tertiary hospitals in cities. The low professional standing of anaesthesia as a specialty area, and human resource shortages, compound these challenges.

*Rural anaesthetists are more under pressure. (They experience) high workloads, and poor resourcing and working conditions.*

(Dr Lundeg)

Better treatment of burns is a priority area for Mongolia's health professionals, and one of the biggest challenges in addressing this is the lack of hospital infrastructure, appropriate equipment, and shortage of hospital beds allocated for treating burn injuries. Interplast has been able to help local surgeons treat patients who have suffered burns and other traumatic injuries, by training and hands-on instruction.

*In Khovsgol aimag a lot of trauma surgery is done and there are long waits for patients. We didn't have a skin peeling device for burns and scar surgery. With the help of Interplast they have been able to perform small area skin incisions.*

(Dr Chuluunbat; Trauma Surgeon)

*We are interested in working with Australian (volunteer) doctors in the field of burns and injuries. I'm really grateful to team leader David (Dr David Pescod) and all the doctors for doing a great job for the suffering of children of Mongolia because of burns.*

(Dr Battsengel)

Counterparts are looking forward to the new Burns Rehabilitation Hospital, scheduled for opening later in 2021, and the opportunities for alleviating the unmet need in burns treatment.

In Khovsgol aimag, the challenges associated with an increase in road trauma injuries and domestic accidents are exacerbated by long distances in travelling to understaffed rural soums, and insufficient human resources for surgical nursing.

*There are not enough surgical nurses, this would help with better patient care.*

(Nurse Davaajargal)

### **Allied health and rehabilitation medicine perspective**

The challenges to delivering appropriate allied health and rehabilitation services are similar to surgical challenges. Human resources, access to training and equipment and an insufficient number of qualified allied health professionals hamper effective rehabilitation services.

Respondents noted that training at the Trauma Hospital for allied health graduates is limited, lasting between three to six months. There is no dedicated burns school, and medical professionals only receive training as part of plastic and burns studies after graduating as a doctor.

As with surgical and nursing challenges, a lack of equipment and adequate human resources hinder the provision of appropriate post-operative care for patients. Access to technology is scarce, and training programs are limited. Some said that what therapists learn about current practices is gleaned from the internet, rather than by a formal training pathway. All of these challenges affect patient outcomes. The disruption to patients' post-operative program is, however, gradually improving.

*Challenges in rehabilitation medicine is the disruption of a patient's program once they leave hospital; but the emergence of occupational therapy and physiotherapy as a profession has helped patients in rural areas.*

(Dr Sandag)

In addition to these challenges, there is a lack of understanding by many doctors of the need for post-operative rehabilitation, and its role in recovery. With the opening of a dedicated Burns Rehabilitation Hospital with burns-focused staffing, this is a very important time for Interplast to continue its involvement and teaching in all areas of treatment for burns patients.

Although since 2011 there have been 180 physicians and specialists who train as physiotherapists, most work at tertiary hospitals; and of Ulaanbaatar's nine districts, physiotherapists work in only three of those district hospitals.

*This is exacerbated in rural areas. There is an acute shortage of physiotherapists in Mongolia, and they face a high workload.*

(Dr Lkhagvasuren Byambaragchaa; Physiotherapist)

Dr Byambaragchaa noted that the Mongolian Association of Physiotherapists, which has 180 members, contributes to the professional development of physiotherapists through training and seminars. The Association organises an annual scientific conference where participants gain knowledge and information. Professionals visiting from France, South Korea, China and Australia participate and share knowledge. Professional development events such as these, and Interplast's capacity building program, help to share expertise and ultimately address some of the many challenges facing allied health and rehabilitation practice in Mongolia.

## Gender

Respondents in Mongolia were asked their views about gender barriers facing their profession, and within the systems where they work. Most said that in their experience, they had not observed or been subject to, gender barriers. They did, however, offer some observations about the gender mix in their areas.

Trauma surgery was seen as a difficult area for women to work in; with approximately 85% of trauma surgeries performed by male surgeons. The reason offered for this was that trauma surgery is a difficult profession, and that women are less interested. Some felt women were better suited to specialising in plastic surgery, as female surgeons performed this surgery better than their male counterparts; and that general surgery is better done by men.

One surgeon who worked outside of Ulaanbaatar noted that in their aimag there were only male surgeons, but that recently more women have been working and studying as resident doctors in the field of trauma surgery. This surgeon was confident that the department in which they worked would soon have a female surgeon, adding that female surgeons were very well suited to working in the trauma specialty area. Another in the same aimag would like to see more female surgeons working in trauma, orthopaedics and surgery, but that it was up to individual doctors to pursue their preferred professional area.

At the Trauma Hospital, there is a 50:50 ratio of men to women. Despite this, one respondent said that female surgeons are less likely to work in this area due to other difficulties; it's an area which has an increasing workload, and for women there are too many family, marital and psychological pressures to make this an area to which they are suited.

In the specialty area of burns surgery, one surgeon observed that 60% of doctors in the Burns Department are women, and while burns surgery requires fine surgical skills, it is less rewarding financially than other surgical fields. One respondent said:

Most burns are treated by female surgeons-they have better sensitivity and detailed skills, male doctors are more suited to trauma related surgery.

Dr Sandag observed that there are many women in the field of rehabilitation, so gender is no obstacle.

Physiotherapy is an area where women outnumber men (80% of physiotherapists are women), but that the numbers of qualified males in this area are increasing. One noted that this gender gap could be explained by the fact that the physiotherapy program is taught at the School of Nursing – and nursing is a profession which is predominantly female.



## 6.3 Australia's Ambassador to Mongolia

As noted above in Overview, Australia's Ambassador to Mongolia HE Mr Dave Vosen, was interviewed for the review, along with Program Officer, Mr Urnukh Khuujii. Ambassador Vosen and Mr Khuujii shared their insights from an Australian Government perspective on Interplast's program, and their views on Interplast's key contributions in Mongolia.

Ambassador Vosen explained his perspective on the program, and how he had seen the benefits first hand. He noted there are challenges in evaluating the sort of work that Interplast does, and that he would like to see from the review an assessment of where Interplast should focus its future efforts. He said that Interplast's work does not neatly fit the Australian Government's development program model, and acknowledged that in his view, the success of the program relied on the suitability of the individuals delivering the Mongolia program.

Ambassador Vosen explained that from the Australian Government's perspective, the next few budget years will see a re-prioritisation of some expenditure areas, as the Government manages the fiscal challenges arising from its response to Covid19. He discussed the ongoing sustainability of the program, observing that outcomes are sustainable at the individual level, but sustainability needed to translate into longer term impact. He also cautioned against overselling the outcomes of Interplast's program, as it risked undermining local and national health leadership, and domestic efforts.

Both Ambassador Vosen and Mr Khuujii made a number of points about the context of Mongolia's health sector; the country has high literacy and education rates, and strong centralised planning capacity. However, health sector systems are not robust. Access to training for doctors in Mongolia is mixed, as most training opportunities are centred on the capital, Ulaanbaatar, with regional areas missing out.

Ambassador Vosen noted how he had witnessed the profound effect that Interplast programs had on people's lives, particularly when young people are the beneficiaries. The nature of the program also made it difficult to tell the story of its success; these are often highly personal outcomes and respecting the dignity of the individual meant that it is not always appropriate to tell these good news stories.

In identifying future opportunities for Interplast, Ambassador Vosen noted that the draft Memorandum of Understanding with Mongolia's Ministry of Health could be an important mechanism to help get equipment and supplies into Mongolia for each visit, and that this could assist in Australia's public diplomacy efforts. Australian businesses are becoming more active in Mongolia, and this is another potential avenue to help promote and advance Interplast's work. He also spoke about Interplast's underlying ethos of volunteering, that this is consistent with Australia's tradition of volunteering, and named several prominent institutions in the areas of emergency responses; such as rural fire service organisations that are well established in each Australian State and Territory, and Royal Australian Life Saving Associations. He noted that some of Australia's rural fire service organisations had assisted Mongolia in building capacity for emergency responses. Ambassador Vosen saw potential for Interplast to join efforts of the Australian Embassy in Ulaanbaatar to showcase the work of volunteer organisations. Interplast's local evaluation consultant, Ms Erdenechimeg Ulziisuren, cautioned about perceptions around volunteerism in Mongolia; as there was a view that volunteers are equated with inexperience, and not fully qualified. When doing the in-country research for this review, Ms Ulziisuren said she emphasises the work that teams do, and not so much that they are volunteers.

Mr Khuujii felt that the impact Interplast has at the local and national government level were significant, and the partnership with the MSA is important as it is based on local leadership and ownership. The training and skills development with hospitals was making a significant contribution to improvements in capacity. For doctors, access to practical skills development that was otherwise not available to them is helping to strengthen surgical services. For patients, the program had been life-changing. He noted the importance of working with local government systems to strengthen the capacity of local hospitals. He also pointed out the likely delays that Interplast would have in negotiating the Memorandum of Understanding; as, unfortunately, due to Covid19, the Government of Mongolia was not currently able to give it the attention it required.

## Australia's Ambassador to Mongolia sees Interplast's surgical and mentoring program in action

In October 2019, Australia's Ambassador to Mongolia, HE Mr Dave Vosen, travelled from Mongolia's capital, Ulaanbaatar, to Dalanzadgad to observe first hand Interplast's capacity building and surgical program. Once in Dalanzadgad, Ambassador Vosen hosted a dinner for the team in Ulaanbaatar so he could meet the volunteer team, led by Interplast's Country Coordinator for Mongolia, Anaesthetist Dr David Pescod.

Ambassador Vosen joined the team at the Umnugobi Regional Diagnostic Treatment Centre in Dalanzadgad. The team, which included Dr Pescod and Plastic and Reconstructive Surgeon, Dr Kirstie MacGill, Anaesthetist Dr Pieter Peach, and nurses Mr Thao Phan and Ms Mary Gow, held the daily morning meeting with the local medical team, to conduct pre and post-operative patient consultations. Ambassador Vosen was able to observe the meeting and Interplast's clinical training program for surgeons and nurses from the Centre's surgical department. He was also able to see the work of the volunteer surgical team and the local medical team as they undertook surgical procedures in the operating theatre.

***From the visit to Dalanzadgad, I could see that Interplast's strength is its teamwork, with each individual having an important role to play in supporting the work of the surgical program. The visit demonstrated to me the profound impact that access to surgery has on individuals, but also the value in Interplast's approach to capacity building, and working with individuals where they are at in their professional development. So the benefits are at those levels-the individual patients, the training for medical staff, but also more broadly to Mongolia's health system.***

(Australia's Ambassador to Mongolia, HE Mr Dave Vosen)



## 6.4 Interplast Volunteers and staff

Four volunteers gave their perspectives on the experience of volunteering in Mongolia for Interplast through interviews conducted during August and September 2020. All had participated in at least one program to Mongolia, with some completing over five, and several had volunteered on other Interplast country programs, or for other organisations, such as in emergency responses following natural disasters.

In addition to volunteers, three of Interplast's program and management staff were interviewed in November 2020 and March 2021; Ms Jess Hill, Director, International Programs; Mr Matthew Blanks, Coordinator, International Programs; and Ms Leonie Simmons, Equipment and Supplies Coordinator. Ms Simmons has a unique perspective, as she has been a volunteer nurse and an Interplast staff member, with responsibility for coordinating equipment and supplies for each visit, and for conducting assessments of facilities. The coordination role involves ensuring that correct procedures are followed so that volunteer teams are able to take the necessary equipment and supplies to Mongolia. The latter involves visiting hospitals and assessing the facilities to ensure that a program can be delivered, and what the limitations might be in running a program. Ms Simmons perspective is included with those of Interplast's program management perspectives.

Interplast's Board of Directors representative and Chair, Clinical Governance Committee Dr Philip Ragg; and Chief Executive Officer, Mr Cameron Glover, also participated in the interviews. They gave a governance, policy and organisational overview. Their comments are largely general, and are summarised in an attachment at the end of the review report.

As with in-country responses, this section is also arranged in the broad categories of *Capacity Building, Impact, Sustainability and Challenges*. Comments on unmet need inform Interplast's Mongolia program implementation and appear in **Section 7 – Findings and Recommendations**. While many respondents acknowledged the progress made since the first program in Mongolia in surgical, anaesthesia practice, allied health and nursing; and that Mongolia still has a way to go to be self sufficient in these areas; without exception, each said that Interplast should continue its work in mentoring and training local counterparts, and to support more broadly continuing medical education for Mongolia, through its partnership with the MSA and through the surgical and capacity building program.

### **Capacity Building**

*It's not hard teaching in Mongolia-people are keen to learn.*

(Mr Thao Phan, Theatre nurse)

*I do like the teaching side and I hope that comes across in my work.*

(Dr Kirstie MacGill, Plastic and Reconstructive Surgeon)

Each volunteer sees their role first and foremost as educators, working alongside their Mongolian counterparts and contributing to capacity building through training and mentoring.

### **Anaesthetic and surgical perspective**

Interplast's and the ASA's partnership with the MSA has enabled it to become one of the primary avenues for educating anaesthetists in Mongolia, and in lifting the professional standards of anaesthesia practice. Over the years of collaboration with the MSA and ASA, progress in improving education for anaesthetists has been steady, and the MSA has established itself as the primary educational body for training in this specialist area. The MSA advises the Minister for Health on all medical planning issues.

Interplast volunteer and Country Coordinator for the Mongolia program, Anaesthetist Dr David Pescod, has a long history of volunteering in Mongolia, and his primary role on Interplast's program has been one of capacity building through education and partnerships with the MSA. His work has lifted the standard of anaesthesia practice and the profession in Mongolia. Fifteen years ago, Dr Pescod wrote a training program for anaesthetists, aiming to educate the first generation of new anaesthetists. Through his close collaboration with the MSA in Mongolia, he has been a key role in the Annual Conference, contributing to its seminar program. Dr Pescod sees sponsoring visits by a Mongolian anaesthetist to participate in an observership Australia as one of the most effective ways to build capacity. Observerships are relatively easy to arrange, as the visiting anaesthetist would not require registration. He also sees a role for Interplast with the establishment of the new Burns Rehabilitation Hospital.

*An Interplast program (in burns) would raise the profile of burns surgery and treatment in Mongolia. The new Burns Hospital is an opportunity to educate across the whole discipline. Building expertise across Mongolia could help to reach more remote populations.*

(Dr David Pescod; Anaesthetist and Country Coordinator for Mongolia)

Volunteer Plastic and Reconstructive Surgeon, Dr Kirstie MacGill said that in her experience of volunteering in Mongolia, local surgeons had good skills, are well trained, and are also very keen to learn. To harmonise their efforts with their local counterparts, and for minimal disruption, the volunteer team tries to include only one surgeon so that the visit does not interfere with local access to theatre time.

### **Nursing perspective**

Mr Thao Phan is a theatre nurse who has undertaken two programs in Mongolia. His role has been to train nurse counterparts in theatre, and demonstrate practices such as appropriate in-theatre hygiene processes, the use of personal protective equipment and instrument preparation. In his experience the training he provides is well received; local nurses are receptive, learn very quickly and are committed to their professional development. Using interpreters assists with explaining concepts, allowing him to demonstrate and then stand back so that counterparts can apply their new skills.

### **Allied health perspective**

Interplast volunteer Hand and Occupational Therapist, Ms Diana Francis, has volunteered as a trainer and educator, training and mentoring therapists, nurses and a rehabilitation doctor. She has also provided therapy services to patients which give opportunities to train and upskill local therapists. With every program in which she participated, Ms Francis has delivered education through formal lectures and workshops; to nurses and patients on contracture management, and provided on the job training covering a range of areas such as burns care, and mobility and exercise programs for patients following injury or surgery. Ms Francis has also assisted patients with independence training, to help increase their functionality, and has educated patients along with their families to help them learn how to do things for themselves, and contribute to their own recovery. She has worked with local therapists to develop a therapy practice and demonstrate that encouraging patient independence has an important role in recovery.

Ms Francis has seen improvements in therapy practice during the time she has volunteered; and noted that the new Burns Rehabilitation Hospital will have a dedicated therapy area. This is an improvement on the previous hospital, which had little uptake on the use of therapists, and lacked a dedicated therapy area where staff could see patients. With the new Hospital scheduled for opening in 2021 comes the need to educate a new cohort of therapy staff. Ms Francis has begun an education program with one of Mongolia's rehabilitation doctors and her staff, and noted that there is a bright and motivated community of therapists ready to work at the new Hospital who are keen to develop their skills and access training, which she believes will make a difference to patient outcomes.

## **Program administration perspective**

Equipment and Supplies Coordinator and nurse, Ms Leonie Simmons noted that efforts of Interplast volunteers were starting to influence systemic change. The capacity building program in Murun has begun to reap rewards, and this has allowed the surgical team to move its focus to Dalanzadgad where it could undertake a greater surgical and mentoring program.

Director; International Programs, Ms Jess Hill, explained that the history of involvement of the ASA and Dr David Pescod in Mongolia was critical in setting up Interplast's Mongolia country program. The ASA has been able to call upon its resources and membership to provide volunteers who have contributed to building the professional capacity of the MSA, making it a strong local partner for Interplast. This has worked well for Interplast as the program has been able to build with the help of the MSA, and it has made a significant contribution to Interplast's surgical capacity building program.

*The MSA has been fundamentally involved in getting the surgical mentoring program in Murun and Dalanzadgad up and running; it helped in brokering the program.*  
(Ms Jess Hill; Director, International Programs)

The surgical mentoring program has shifted over time so that the focus is now on treatment of burns, an area where Interplast volunteers are successfully developing the skills of their surgical counterparts.

While the connections that the MSA has with the hospitals where Interplast volunteers deliver the capacity building program have been critical, Coordinator; International Programs, Mr Matthew Blanks, cited volunteers and their long term commitment as the key to the success of the program. This commitment has been integral to the strong working relationships that they have established with counterpart teams, and has driven the success of the capacity building program. There are several examples of how volunteer and counterpart relationships have driven, and more recently, sustained the program as it has switched to remote mentoring. Mr Blanks noted that Interplast is well-respected, and that this has come from years of this commitment to relationship building between professionals. He cited the close working relationship between volunteer Hand and Occupational Therapist Ms Diana Francis, and Mongolian Rehabilitation Specialist, Dr Tsermaa Sandag, which has been one of respect and sharing of expertise.

Mr Blanks said one of the most satisfying things about the Mongolia program is the recognition and respect by the Australian Embassy of the strength of the capacity building program and the relationships that volunteers had worked hard to establish. Ms Hill noted that the achievements of Interplast's volunteers was recognised by Australia's Ambassador to Mongolia, HE Mr Dave Vosen.

*It's the people to people connections that make the program a success...but it's also a risk if we rely heavily on a small group of individuals.*  
(Ms Hill)

## **Impact**

*David (Pescod) has changed how they do anaesthetics in Monogolia. It's a massive change.*  
(Mr Thao Phan)

*Seeing the joy on the parents' faces; a mother whose child has had surgery...the cases and lives changed; that's where the impact is.*  
(Ms Leonie Simmons, Equipment and Supplies Coordinator)

### **Anaesthetic and surgical perspective**

Dr David Pescod sees the most important outcome of the program is the large scale impact that creating a local training program in anaesthetics is having on the profession in Mongolia. Interplast's long term involvement in advancing professional development has helped the MSA to move forward and realise its ambition to become the equivalent of a medical specialty college or association, and to support the training and professional status of Mongolia's anaesthetists. The impact of the strengthening role of the MSA role is not only securing its position as the primary educational body for anaesthesia training in Mongolia, but its role in advising the Minister of Health on medical and planning issues gives it credibility and a greater capacity for longer term influence and impact.

*Local counterparts are exceptionally dedicated to their work, and to improving health care for their country. Ganbold (Dr Lundeg) is an extraordinary leader; he is very well respected. There is a cohort of health professionals in Mongolia who are dedicated to improving care for all Mongolians. Whatever training we offer, they take it and improve their own practices.*

(Dr Pescod)

Dr Kirstie MacGill described how continuity of teams has been important in gaining an understanding the culture in Mongolia. She had treated many patients over three years of visits to Murun, and described how, by the end of the third year, she found the local surgeons had gained in skills and confidence, many doing surgical procedures themselves.

*We weren't seeing as many catastrophic patients; we've met some of that need. Local surgeons are doing things themselves, but they're not yet competent to do everything. We go back to reinforce the training.*

(Dr MacGill)

### **Nursing perspective**

Volunteer Theatre Nurse, Mr Thao Phan, felt that being a part of a multi-disciplinary team has made the greatest impact; it shows counterparts that while individuals each have an important role, it's the collective effort of the team that achieves the best outcomes for patients. What has been most satisfying about the impact of the work is seeing the combination of a number of small achievements, and seeing local counterparts pick up the skills that the team has shared and applying it to their ongoing nursing practice, which in turn has helped patients.

### **Allied health perspective**

Ms Diana Francis echoed Mr Phan's observations outlined above, noting that there were signs that the allied health and nurse mentoring aspects of program were beginning to have an impact on improving skills. Volunteers have been modelling how multidisciplinary teams work, and training staff in the use of appropriate procedures; such as the correct application of dressings, and in post-operative care, all of which are improving outcomes for patients. There has been a discernible improvement in standard practices; infection rates for patients in the hospital have decreased, and theatre staff have improved their skills. Ms Francis also observed improvements in the skills of professionals working in rehabilitation, and better patient management skills in general, noting that the Head of the Rehabilitation Department showed her how staff skills had improved.

### **Program administration perspective**

In her experience, Ms Leonie Simmons said seeing the change that surgery had on individual patients is the greatest impact of the program. She acknowledged that capacity building and mentoring created a significant opportunity to build local skills, but that seeing how a patient's life had changed was, for her, the greatest impact of the program. She also found it satisfying when going back to Mongolia to see how nurses had integrated what they had learnt from her into their nursing practice; such as instigating time-out in surgery, and using documentation to better manage patients; these achievements seem minor but they have improved outcomes for patients.

In considering the impact that Interplast is having in Mongolia, Ms Jess Hill explained that progress in anaesthetic practice has been one of the strengths of the program. There is genuine recognition by partners of the impact that Interplast and the ASA partnership has had on anaesthetic practice, and Mongolia now has a functioning anaesthetic profession. Ms Hill acknowledged that a key element in the success of Interplast's work in this field is the advocacy of local champion Dr Ganbold Lundeg.

Dr Lundeg is a huge part of why the program works.

Mr Matthew Blanks felt that the MSA has progressed to the point where it was making a significant contribution to the profession in Mongolia. The anaesthetic capacity building program has progressed to the point where the approach could become a model for the region, and the lessons learned to be applied in other countries. While progress has been strong, Interplast has an ongoing role in supporting the MSA in its role of lifting the profession.

*The MSA is sustainable, and even if we stay away, there's been an impact. There is room for continuing support; we can always do more.*

(Mr Matthew Blanks; Coordinator, International Programs)

The treatment of burns and skills development is an area where Interplast has much to contribute, through the surgical and mentoring program. Although it remains an area of unmet need, there is an opportunity for Interplast to make an impact by contributing to an improved burns treatment regime in Mongolia, given the scope of the problem and the challenges in addressing burn injuries. Ms Hill and Mr Blanks agreed that Interplast is well placed to help address the issues, particularly with the establishment of the new Burns Rehabilitation Hospital, and noted that Interplast has recently engaged a local consultant to assess areas where it could make a contribution to burns prevention and to improving burns treatment.

## Burns gap analysis

Local consultant Ms Erdenechimeg Ulziisuren has been engaged again by Interplast to complete a gap analysis into burn injuries in Mongolia as part of a broader regional burns awareness and prevention project.

Preliminary research by both Interplast and Ms Ulziisuren has identified a lack of available burns-related data in Mongolia, despite the high occurrence of burns across the country. The gap analysis aims to identify existing burns-related research in Mongolia focusing on prevalence, causes and trends, whether the Mongolian Ministry of Health has a strategy or plan to address burns, identification of key stakeholders in burns prevention in Mongolia, and identification of existing prevention or burns first aid training programs.

The gap analysis will be used to inform future burn awareness and prevention programs in Mongolia to reduce the prevalence of burn injuries, reduce the duration of hospital stays, and improve survival rate of people with burns.



## Sustainability

*Choosing the right person to mentor and develop, that is the key to sustainability.*

(Dr MacGill)

### **Anaesthetic and surgical perspective**

Dr David Pescod outlined how much progress he has seen in capacity over the years of volunteering in Mongolia. He has seen the MSA advance as an organisation since its partnership with the ASA; in its aim of functioning as a medical college; its ambition for having a primary role in anaesthesia education; and in strengthening the profession through the Annual Conference. The MSA also has ambitions to forge links with the Australia New Zealand College of Anaesthetists, and facilitate Mongolian anaesthetists to travel to Australia for training. Dr Ganbold Lundeg, current Secretary of the MSA, has completed a three month placement in Australia, taking back the skills he learned to apply in Mongolia. Dr Pescod noted that the MSA is ready to move the organisation forward:

They want to lift the organisation to the next level—they want to write policies, standards and recommendations. They want to be more like a college and have an education role.

Dr Kirstie MacGill saw continuity of team members as an important element in sustainability for the program, as locals were engaged and more comfortable when dealing with a familiar team. Local counterparts had told her that programs come and go, and with Interplast's program, it is seeing the same team members and forming working relationships that counterparts value about Interplast's approach. She noted that she had delivered burns surgery in Murun for three years, seeing over 100 patients. By the end of the third year there had been a shift where local surgeons were doing the surgery themselves. Whilst the local surgeons weren't yet at the stage of doing all that patients with the most challenging injuries required, the Interplast team saw their role was now reinforcing the training they had delivered in previous programs. Dr MacGill said that finding two or more local champions would be 'a game changer' and help push the program forward. Overall the program is on track to being sustainable, but isn't there yet. An example of how things are changing is highlighted by one surgeon in Dalanzadgad who is very enthusiastically instigating better pre-surgical planning by ensuring that patients are seen and assessed prior to surgery. Dr MacGill noted this as best practice and a local success story.

### **Nursing perspective**

Mr Thao Phan felt that the nurse education aspects of the program were moving toward being sustainable, but were not there yet. While teaching is the focus, when the team leaves the local counterparts are not yet trained up sufficiently to apply all that they learn during a program, although he was noticing that this is improving with each visit. More regular visits will assist in establishing sustained improvement in nursing practice, and keeping in touch remotely (whilst travel to Mongolia is on hold) is important in maintaining contact, so that they are able to pick up the program when the team can once again visit.

### **Allied health perspective**

The allied health elements of the program are on a positive path to sustainability, but it is yet to reach that point. Ms Diana Francis noted that developing sound working relationships with key senior hospital personnel, particularly with the new teams who will work in the Burns Rehabilitation Hospital, are opportunities to push the program toward sustainability. The ongoing education program, maintaining momentum with skills development and training for the cohort of motivated young therapists at the new Hospital are all steps in the right direction to enhance the sustainability of the program.

### **Program administration perspective**

Ms Leonie Simmons echoed Dr MacGill's observations about the skills level of surgeons in Murun, which had improved to the point where they were able to perform surgery and teach others. In particular, these surgeons had achieved noticeable improvements in their grafting skills. She also noted that the partnership with the MSA, ASA and Interplast has resulted in a marked improvement in anaesthesia practice.



As noted under *Impact*, Mr Matthew Blanks felt that the capacity building program with the MSA has achieved results, where the improvement in skills is at a level where Mongolia is on track for having a sustainable and skilled anaesthetic practice. In part the sustainability of the program resulted from consistency of relationships, and a sustained commitment by volunteers to the program. The program has reached a point where volunteers could now step back a little and help their counterparts take the lead.

Whilst agreeing that one of the strengths of the program's sustainability is the consistent relationships, Ms Jess Hill also felt that reliance on existing relationships, or on individual volunteers, is a risk to the program's sustainability. There is a clear need on the part of Interplast to ensure that it engages in succession planning; for example, to send more than one anaesthetist so that there is a back-up role, and to encourage strong local ownership of the anaesthetic program.

## Challenges

### *Anaesthetic and surgical perspective*

Dr David Pescod noted that among the challenges of delivering the program to anaesthetists is the status of the profession. Anaesthetists in Mongolia are poorly paid and their training is generally very limited in-country. Dr Pescod estimated that Mongolia has an inadequate number of anaesthetists, with only about 200 to cover 87% of its 3.17 million people<sup>71, 72</sup>. He also noted that, in addition to the low numbers per capita, poor remuneration and limited access to training has resulted in anaesthetics being viewed as a poor choice for a medical career in Mongolia. To qualify as a specialist anaesthetist in Mongolia currently takes two years. Whilst this is significantly less than in Australia, which is six years, it is an improvement on previous training courses which ran for a total of six weeks – and an acknowledgement of the increasing profile of the profession. Dr Pescod observed that some of Mongolia's anaesthetics training that had been in place for decades included remnants of a medical training system inherited from the former Soviet Union, the content of which did not necessarily reflect current accepted practice.

Dr Kirstie MacGill explained some of the challenges in delivering the surgical program. One was the need to find a balance between the best outcomes for patients, and training surgeons using locally available equipment. As this was not always of a standard that surgeons in Australia would use, she would take some surgical instruments so that she could provide the best possible surgical service for patients. Dr MacGill stressed that she would take only what was required, as it was important to try and use what local surgeons themselves use. While this could make delivery of the surgical program challenging, she acknowledged the importance of using locally available surgical equipment for program sustainability, so that surgeons are trained using the equipment available to them. Dr MacGill also noted that in Mongolia, there is a practice of not treating or operating on burns immediately, something she is working to address:

*I'm trying to break that tradition. Getting a local surgeon to change that practice, and treat burns as they happen, will change the approach.*

### *Nursing perspective*

Unlike nursing practice in Australia, where nurses belong to multi-disciplinary teams with clearly defined roles for each individual, local counterpart nurses have more than one role; including in-theatre and on the ward, and one of the biggest challenges facing the nurse mentoring program is the ability to be flexible and impart skills in a number of areas. Volunteer nurses need to be able to mentor and build skills suitable for theatre and on-ward nursing; covering appropriate hygiene practices and instrument sterilisation, and post-operative patient care. Sterilising standards are lower than in Australia, making it another area where mentoring for improved skills need to be addressed. As noted above by Dr MacGill, Mr Thao Phan also pointed out the dilemma of bringing equipment for the best patient outcomes, but that this could create problems if not suitable to local circumstances. Volunteers need to work with what is locally available, even if it is not what they are used to using. Nurses also need mentoring on the appropriate use of documentation. They are empowered to raise issues with the teams and each other, but as noted elsewhere, communication with counterparts remains a challenge.

71 <https://www.cia.gov/library/publications/the-world-factbook/geos/mg.html> June 2020 population estimate.

72 By comparison, Australia has over 4,000 anaesthetists for a population of 25.7 million people; Australia's Future Health Workforce-Anaesthesia, Department of Health, p.13 <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Web+Pages/Population+Clock?opendocument&ref=HPKI> November 2020 population estimate

One of the biggest problems getting in the way of improvements in nursing practice is a lack of resources. Volunteers can train counterparts, but without access to basic equipment then some of that training will not translate into better treatment or patient management. Inadequate human resources also influences staffing levels, which are often stretched beyond capacity, and the focus on teaching is an important but challenging component of the surgical program.

*Teaching slows the surgery down. Locals are keen to do the work...one trauma surgeon had finished a 24 hour shift, and came to work with us because they wanted to learn.*

(Mr Phan)

### **Allied health perspectives**

Some of the major challenges in delivering the allied health mentoring program stem from the broader challenges faced by Mongolia's health system, and are similar to those faced in the surgical and nursing programs. The system has a low funding base, with health services, although provided free of charge, lacking sufficient government investment. There is a shortage of appropriately trained staff, and of adequate equipment, including basic consumables, such as bandages not being available to use in wards. Members of the volunteer team often take basic supplies for use in Mongolia, and part of their mentoring role was in overcoming the tendency for local staff to keep supplies for future use, rather than using them on patients when needed.

Visiting Mongolia for short periods of time also means that the volunteer team is aware that many patients miss out on the treatment that they need.

*Word gets out about our visits...we may plan to see 10 patients but we end up seeing 40. We have to turn away many.*

(Ms Francis)

Another challenge to allied health practice is the lack of adequate record keeping, and little documentation of patient assessment, treatment plans and changes in a patient's condition or progress. Follow up of patients is also an area that needed improving.

Language barriers and a lack of access to interpreters added to the challenges around the delivery of the allied health mentoring program.

### **Program administration perspective**

Ms Leonie Simmons noted a number of challenges in delivering the program in Mongolia; with one of the greatest being language barriers. Very few people that Ms Simmons has worked with have had a good command of English, and this is challenging in clinical settings where accuracy and good communication is essential. She felt that sometimes information can be lost when interpreters don't always have a good grasp of technical language.

Although she acknowledged that this is a broad issue and not unique to the Interplast program, another challenge Ms Simmons noted is the logistical challenges in complying with government requirements when bringing supplies and equipment into the country; and the amount of preparation and expense incurred to comply with customs requirements.

Both Ms Jess Hill and Mr Matthew Blanks commented that the strength of relationships between volunteers and counterparts and the consistency of volunteers outlined above in Sustainability, is both a strength and a risk, requiring a 'future-proofing' approach by Interplast to ensure that the program relies less on individual volunteers, and more on the legacy of capacity that they have achieved with their counterparts. Reliance on individuals not only relates to volunteers, but also to counterparts. Whilst acknowledging the enormous contribution to MSA capacity made by both Dr Pescod and Dr Lundeg, Interplast is mindful of the need to plan for changes in personnel to ensure that the work of volunteers and counterparts is sustained.

*At the macro level, the success of relationships between the ASA and the MSA has shown us the importance of maintaining these strong partnerships.*

(Ms Hill)

*Institutional support to our implementing partners is really important and will help address (program management) challenges.*

(Mr Blanks)

Mr Blanks and Ms Hill both noted an area that Interplast would like to see resolved is the lack of progress in finalising a Memorandum of Understanding with the Government of Mongolia. The process of negotiating and finalising the Memorandum of Understanding has been difficult. Mr Blanks explained that the draft has been with the Government for some time, and that staff at the Australian Embassy, particularly Mr Urnukh Khuujii, have been advocating on Interplast's behalf for its progression. Ms Hill also acknowledged the efforts of the MSA in trying to advance it to finalisation, but understands that the agreement isn't a current priority for the Government of Mongolia as it faces many competing issues. Although it is important to have the Memorandum of Understanding resolved, it hasn't impeded the impact of the successful partnerships that Interplast has with the MSA, and with the hospitals where volunteer teams work, particularly with the Trauma Hospital in Ulaanbaatar.

### **Challenges in delivering the program during the Covid pandemic**

During the current program pause, and in previous program years, some members of the volunteer team have been maintaining contact with local counterparts, via Zoom and through other platforms and methods. Webinars run by Interplast have been well received, and volunteers have maintained contact with their counterparts. Dr David Pescod explained that in the absence of the in-country program, he had continued regular email communication and conducted Zoom meetings with the MSA.

Some volunteers said that maintaining contact remotely is working well for some local counterparts, but is particularly useful for those who have good English language skills and an existing level of competency in surgical or allied health skills. In allied health, Ms Diana Francis explained that remote mentoring is good for education and lectures, but has limitations when working with patients. In many situations, advising on patient therapy requires a precise level accuracy, and physical adjustments to patients can be so subtle that it is cannot always be conveyed remotely. Ms Francis expressed her hope to work with local counterparts via video conferencing where it could be useful, such as for lectures and sharing information, and this would be relatively easy with therapists whose English language skills are good. Mr Thao Phan felt that Interplast could continue its remote education program by translating education packages for teaching purposes.

Ms Leonie Simmons also noted the positive response to Interplast's webinars while global travel restrictions prevailed, and that Interplast could continue this approach even when programs resume to their pre-Covid norms. Nurses would also benefit from increased access to webinars, as they don't normally have many opportunities for ongoing professional development. There are technical barriers regarding access for nurses, so identifying a venue for nurses with appropriate technology would help with access to training. She had seen the greatest benefit in one on one mentoring between volunteer surgeons and their counterparts, and surgeons in Mongolia are contacting volunteer counterparts to discuss and seek guidance on difficult or challenging cases.

Ms Jess Hill noted that while there has been some good engagement from clinicians in Mongolia in terms of participating in online webinars and other educational offerings during the COVID-19 pandemic, dealing with their own outbreaks and lock-downs, as well as challenges with English language, has meant that this has not been as well taken-up as Interplast may have liked. However, there has been strong continuing dialogue between the Interplast staff team and volunteers with local partners, and there are a number of projects in progress to develop educational resources (online) in Mongolian language to assist with local capacity building.

## **Respondents: Mongolia:**

### **MSA**

**Dr Ganbold Lundeg;** Anaesthetist and Secretary

**Dr Khurel-Ochir;** Anaesthetist and President

**Dr Unurzaya Lhagvajav;** Anaesthetist

**Dr Batgombo Natsagdori;** Anaesthetist

**Dr Odgerel Boldbaatar;** Anaesthetist

### **National Trauma and Orthopaedic Research Centre (the Trauma Hospital); Ulaanbaatar**

**Dr Galbadrakh Erdenetsetseg;** General Director

**Dr Tumen-Ulzii Badamsed;** Head of Department, Anaesthesiology

**Dr Tsermaa Sandag;** Doctor of Rehabilitation (Therapy)

**Dr Lkhagvasuren;** Physiotherapist

**Dr Tseden-Ish;** Physiotherapist

**Dr Khishigsuren;** Burn Rehabilitation Surgeon

**Dr Bat-Erdene;** Burn Rehabilitation Surgeon

### **Khovsgol United Hospital;**

**Dr Chuluunbat;** Trauma Surgeon

**Dr Erdenebaatar;** General Surgeon

**Davaajargal A;** Nurse, Surgical

**Dr Altanzul;** Anaesthetist

**Dr Tumenjargal;** Anaesthetist

**Dr Byambasuren;** Anaesthetist

**Dr Batsuuri Munkhbat;** formerly General Surgeon at Khovsgol United Hospital, currently Emergency Doctor; King's Mills Hospital, United Kingdom

**Tuya Ch;** Nurse, Anaesthesia

### **Regional Diagnostic Treatment Centre; Umnugovi province**

**Dr Nerguimaa;** Anaesthetist

**Dr Gansukh;** General Surgeon

**Dr Battengel;** General Surgeon

**Ariunzaya;** G. Nurse, Surgical

### **Australian Embassy, Mongolia**

**HE Mr David Vosen;** Australian Ambassador to Mongolia

**Mr Urnukh Khuujii;** Program Officer

## **Respondents: Interplast**

### **Surgeons and Anaesthetists**

**Dr David Pescod;** Anaesthetist and Mongolia Country Program Coordinator

**Dr Kirstie MacGill;** Plastic and Reconstructive Surgeon

### **Allied Health**

**Ms Diana Francis;** Hand and Occupational Therapist

### **Nursing**

**Mr Thao Phan;** Theatre Nurse

### **Program management**

**Mr Cameron Glover;** Chief Executive Officer

**Ms Jess Hill;** Director; International Programs

**Mr Matthew Blanks;** Coordinator, International Programs

**Ms Leonie Simmons;** Equipment and Supplies Coordinator

### **Board of Directors representative and Chair, Clinical Governance Committee**

**Dr Philip Ragg**

## FINDINGS AND RECOMMENDATIONS

### 7.1 Program achievements

### 7.2 Findings

### 7.3 Conclusions

### 7.4 Recommendations

#### **Vision:**

*Mongolia has a sustainable, locally-driven plastic and reconstructive surgery service, providing quality surgical and related medical outcomes to those requiring them.*

### 7.1 Program achievements

*The people at the Interplast program were really great doctors and nurses. They explained the whole process to me. My abdomen is now healed and (I am) without any problems with childbirth. I tell people with burns about this program. It ... gave me a new hope and life. We are sincerely grateful.*

(Patient, 27 years old)

*The big advantage of Interplast is its long term and stable cooperation. In addition to organising training, Interplast also provides support and treatment to children in rural areas.*

(Dr Odgerel Boldbaatar; Anaesthetist)

*Dr David (Pescod) has been working with Australian and Mongolian anaesthetists for over twenty years. ...The long term continuous goal of the MSA is building capacity of doctors with training, and to continue the cooperation with Interplast. Continuous support from Interplast and the ASA is critical to the sustainability of the MSA.*

(Dr Gandbold Lundeg; Anaesthetist and MSA Secretary)

As documented throughout this review, from 2014-2015 to 2019-2020, Interplast's Mongolia program has continued to contribute to improving the professional development and training of anaesthetists in Mongolia. Its partnership with the MSA and ASA has helped to enhance the status of the profession, supporting training at the local and regional level, encouraged links and professional networks, enhanced residency training and the continuing education of anaesthesia specialists in Mongolia. It has fostered a collegiate approach through the MSA Annual Conference, and provided institutional support to the MSA, assisting with operational costs, and helping the organisation to grow, improving its capacity as a professional association, its financial sustainability and its reach to anaesthetists across the region. Since 2014, Interplast has supported five Annual Conferences, reaching over 540 local professionals. Through the surgical program, volunteers have helped patients access plastic and reconstructive surgery, through which they developed the skills of local surgeons, nurses and therapists. These two aspects of the program contribute to achieving Interplast's vision for the Mongolia country program. Since commencing the

burns surgery mentoring program in Murun in 2014, the Interplast surgical team has conducted over 660 patient consultations, and performed 95 surgeries. Through providing burns therapy mentoring, Interplast volunteer Hand and Occupational Therapist Ms Diana Francis, has treated over 45 patients, and trained nurses, surgeons and therapists in hand therapy and post-treatment burns care.

Burns prevention and treatment is identified by Interplast, its volunteers and Mongolian counterparts, as an area where it has much to offer, in both capacity building for local medical teams, and at the strategic level through a burns prevention and education strategy. At the time of this review, a new Burns Rehabilitation Hospital is being built in Ulaanbaatar, and once completed and operational, Interplast expects it will be able to contribute to the new Hospital through a capacity building program. When travel restrictions ease and an in-country program is feasible, Interplast expects to continue the allied health mentoring and training program, focussing on burns rehabilitation and occupational therapy. As outlined in **Section 6- Key Stakeholder Interviews**, research commissioned by Interplast will help to inform future efforts in capacity in the area of burns.

### **2008 review of the MSA/ASA/Interplast partnership**

Although this review is examining Interplast's Mongolia country program from 2014-2015 the findings of the 2008 review are relevant. As noted in **Section 5-Overview**, the 2008 review identified that the partnership between Interplast, and the MSA and ASA, had made a number of positive achievements in enhancing and advancing professional standards in anaesthesia practice, through improved training and ongoing professional development; that the MSA had a solid base of support from its members; and that it was moving toward being sustainable as an organisation. The review also found that, although it faced financial challenges, members of its steering committee were identifying potential funding opportunities.

The review confirmed that the MSA's Annual Conference was the key professional educational event in building capacity in Mongolia's anaesthetics profession. It found that the Conference was instrumental in developing skills and knowledge of anaesthesia practice; supporting and mentoring anaesthetists; had a positive impact on reducing anaesthesia related morbidity and mortality rates in Mongolia; that participants were applying the knowledge and skills gained from the Conference into their hospital practice; that senior anaesthetists were more confident in mentoring and teaching younger participants; and, that local anaesthetists were starting to present and facilitate workshops at the conference. The majority of Australian anaesthetists who volunteered their participation at the Conference were committed to a continuing involvement, and felt that it provided an essential platform for learning, and supported future Conferences with increased local ownership.

### **Achieving program goals and objectives**

Interplast programs are guided by three-year country strategies, which outline the medium term vision and focus for its programs. Country strategies inform the implementation of annual country program plans, with specific activities for each year consistent with the outcomes, goals, objectives and indicators articulated in each country strategy. The Annual Plan reports on outcomes from objectives of the previous financial year.

### **Annual program design and activity plans**

In 2020, Interplast adjusted its approach to annual planning, which had previously focused on individual country programs. In the 2021 financial year, annual programs design and plans have taken a regional approach. This is helping Interplast to identify strengths and opportunities between countries, capitalise on links and networks in a given region, and articulate a common three year country strategy. In 2021, Mongolia's Annual Program Design is linked with Bhutan and Myanmar, and its three year strategy goal is:

*To improve locally driven, sustainable and quality access to plastic and reconstructive surgery and related medical services in Bhutan, Mongolia and Myanmar.*

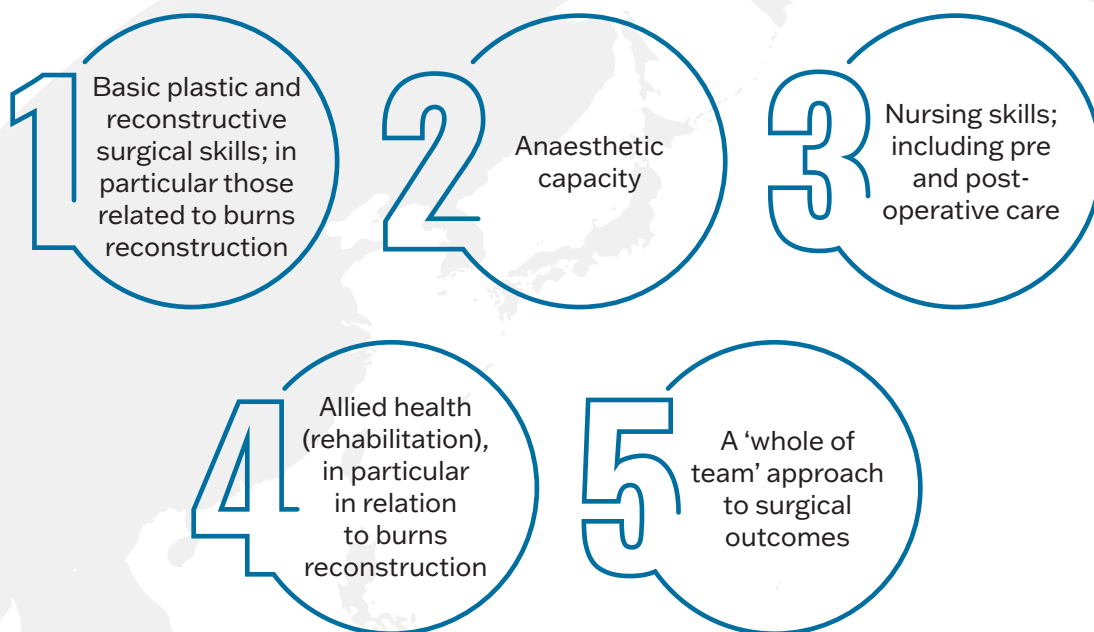
## Country Strategy-Mongolia, July 2019-June 2021

This review assesses how the program has met the objectives of the Mongolia Country Strategy 2019-2021, and the objectives of annual program plans.

The 2019-2021 Country Strategy for Mongolia aims:

*To contribute to improving quality access to plastic and reconstructive surgery and therapy services, particularly related to burns injury, in Mongolia.*

Its goals aim to achieve improvements in:



1. Since 2014-15, the surgical program has helped build capacity in plastic and reconstructive surgical skills in Mongolia. As noted in **Section 6: Key Stakeholder Interviews**, Interplast's Equipment and Supplies Coordinator, Ms Leonie Simmons, has seen the capacity building program at the Khovsgol United Hospital in Murun as beginning to pay dividends, so that some surgeons have developed sufficient skills so that they can now train their colleagues.

Volunteer Plastic and Reconstructive surgeon, Dr Kirstie MacGill has delivered burns surgery at the Khovsgol United Hospital for three years, and has observed a discernible shift where local surgeons have developed their skills to the point where they are taking on surgery themselves. Although local surgeons aren't yet able to treat all patients, as some have injuries that surgeons are not yet sufficiently skilled to take on, Dr MacGill now sees her role has evolved to be able to reinforce training delivered in previous programs. She believes that overall the program is on track to being sustainable. In other areas, she noted that one surgeon at the Umnugovi Regional Diagnostic and Treatment Centre in Dalanzadgad was taking on more responsibility and she saw this as a local success story.

2. Improved access and standards of anaesthetic services has been well-documented by Interplast, and is supported by interviews with counterpart anaesthetists and volunteers. The partnership with the MSA and ASA has made a significant contribution to improving professional development and has helped lift the standards of anaesthetic practice and improve patient safety. Key counterpart, Dr Ganbold Lundeg, told the review that co-operation between the MSA and the ASA, that Mongolia program's Country Coordinator, Dr David Pescod's long term commitment and Interplast's program have all been instrumental in moving the MSA forward, having a significant and long term impact on developing the training and skills of the profession.

3. Helping to build the skills of nurses in pre and post-operative care is an area that both volunteer and local nurses saw as one of the greatest benefits for professional development in nursing. Access to on the job training, and Interplast's approach to mentoring has improved the skills of nurses, some of whom have little access to training opportunities. Taking the surgical program to Dalanzadgad gave nurses access to training that would ordinarily only be available in Ulaanbaatar.
4. The capacity building program for allied health staff had led to improvements in patient care, particularly relating to post-burns reconstruction. The program has provided access to burns therapy training for therapists, particularly those in rural areas, and this in turn is helping to improve outcomes for those patients, many of whom could not afford to travel for treatment to larger centres. Therapists have improved their knowledge in long term treatment for patients who have undergone surgery for burn injury.
5. Interplast volunteer teams comprising anaesthetists, surgeons, nurses and therapists demonstrates the importance of a multidisciplinary 'whole of team' approach, with each individual team member having an important role in contributing to patient outcomes and improved patient safety. This approach to on the job training and patient care was seen to be particularly effective for doctors and nurses in aimags outside of the major centres. Some counterparts commented that seeing Interplast volunteers working as team, with each role having equal importance, showed them that this is a more sustainable way to work, resulting in improved capacity of the whole team to treat burns patients.

## Outputs against objectives by year<sup>73</sup>

### Country Program Plan 2014-15

#### Goal

*To continue to support the development of a sustainable anaesthetic training program, specific to the needs and capabilities of Mongolia, and to investigate surgical program potential for Interplast in Mongolia.*

#### Objectives

1. **To support the anaesthesia education centre and training coordination office – ACHIEVED**  
Annual funding was provided to the MSA to help with the running of the office and services to anaesthetists in Mongolia.
2. **To assist the MSA to coordinate and deliver anaesthetic training for the MSA Annual Conference – ACHIEVED**  
Annual funding provided to the MSA for the implementation of the Annual Conference.
3. **To sign Partnership Agreements with relevant local partners – ACHIEVED**  
Partner Agreements signed with MSA and the Trauma Hospital in March 2015.

<sup>73</sup> Achievements against each year's objectives are documented in the following year's country program plan.



## Country Program Plan 2015-16

### Goal

*To contribute to the strengthening and sustainability of anaesthesia care and burns treatment in Mongolia through working in partnership with local organisations.*

### Objectives

- 1. To provide institutional support to the MSA and to provide mentoring in financial sustainability – ACHIEVED**  
Institutional support provided to the MSA.
- 2. To assist the MSA to coordinate and deliver anaesthetic training for the MSA Annual Conference – ACHIEVED**  
Assistance provided to the MSA to coordinate and deliver anaesthetic training for their annual conference held in June 2016.
- 3. To implement burns surgery and therapy mentoring activities in central and regional Mongolia – NOT ACHIEVED**  
The program was delayed from 2015-16 to the following financial year (August 2016) due to flight schedules and seasonal challenges.
- 4. To undertake a Needs Assessment to investigate plastic and reconstructive surgical mentoring in a regional hospital – ACHIEVED**  
A Needs Assessment was undertaken in Murun in February 2016.

## Country Program Plan 2016-17

### Goal

*To contribute to the strengthening and sustainability of anaesthesia care and burns treatment in Mongolia through working in partnership with local organisations.*

### Objectives

- 1. To provide institutional support to the MSA and to provide mentoring in financial sustainability – ACHIEVED**  
Interplast has provided the MSA with both institutional support and mentoring in financial sustainability.
- 2. To assist the MSA to coordinate and deliver anaesthetic training for the MSA Annual Conference – ACHIEVED**  
Assistance provided to the MSA to coordinate and deliver anaesthetic training for their annual conference.
- 3. To implement burns surgery and therapy mentoring activities in central and regional Mongolia – PARTLY ACHIEVED**  
Interplast provided a burns surgery mentoring activity in central (Ulaanbaatar) as well as regional Mongolia (Murun). Interplast also provided an allied health therapy mentoring activity in Ulaanbaatar however not in Murun. This program was not run in Murun as it was thought best to embed the surgical mentoring program first before introducing mentoring assistance in another hospital department.

## Country Program Plan 2017-18

### Goal

*To contribute to the strengthening and sustainability of anaesthesia care as well as burns surgery and therapy in Mongolia through working in partnership with local organisations*

### Objectives<sup>74</sup>

- 1. To implement a burns therapy mentoring program activity in Ulaanbaatar – ACHIEVED**
- 2. To implement a burn surgery mentoring program in Murun – ACHIEVED**
- 3. To support the MSA to deliver training in the delivery of safe anaesthesia – ACHIEVED**
- 4. To build capacity across Asia in the anaesthetic, surgical, nursing and allied health fields and involve Mongolian medical professionals in Interplast's regional training programs – NOT ACHIEVED**  
It was decided that local surgeon was not ready to participate in the regional training due to insufficient English language comprehension, however, this may improve with further visits.

## Country program plan 2018-19

### Goal

*To contribute to the strengthening and sustainability of anaesthesia care as well as burns surgery and therapy in Mongolia through working in partnership with local organisations.*

### Objectives

- 1. To implement a burns therapy mentoring program activity in Ulaanbaatar –ACHIEVED**  
A burns therapy mentoring program was undertaken in Ulaanbaatar, however, it was shorter than previous years as the hand therapist also travelled to Murun.
- 2. To implement burn surgery mentoring program in Murun and Ulaanbaatar –PARTLY ACHIEVED**  
A burns mentoring program was delivered in Murun; however, one was not delivered in Ulaanbaatar.
- 3. To support the MSA to deliver training in the delivery of safe anaesthesia – ACHIEVED**  
Annual conference delivered by the MSA, with Interplast support
- 4. To build capacity across Asia in the anaesthetic, surgical, nursing and allied health fields and involve Mongolian medical professionals in Interplast's regional training programs – NOT ACHIEVED**  
The second Regional Training was postponed until 2019-2020 and there were no other appropriate regional training opportunities to include Mongolian trainees in during the financial year.

74 Note that there is not a complete commentary on the objectives that were achieved in 2017-18

## Country program plan 2019-20

### Goal

*To contribute to the strengthening and sustainability of anaesthesia care as well as burns surgery and therapy in Mongolia through working in partnership with local organisations.*

### Objectives

- 1. To implement a burns surgery mentoring program activity in the Umnugovi Province**
- 2. To deliver hand therapy education in Ulaanbaatar – ACHIEVED**
- 3. To assess ongoing options to deliver burns training in Ulaanbaatar – NOT ACHIEVED**
- 4. To support the MSA to deliver training in the delivery of safe anaesthesia – ACHIEVED**

Not all activities which were scheduled for delivery in-country from February 2020 were achieved due to travel restrictions resulting from the Covid19 pandemic. Objectives for Mongolia were revised accordingly, and informally in consultation with local partners, for the remainder of the financial year. With regard to the MSA, Interplast has continued to provide financial support for its education centre, and has supported the publication of a textbook for anaesthetists.

### Gender and disability

To give Interplast a clear picture of potential barriers based on gender and disability to its surgical and capacity building program, one of the terms of reference for this review was to collate data on gender and people with a disability. At the beginning of **Section 5.1: Objectives and summary of outcomes by program year** is a table outlining patients treated.

Interplast is yet to be in a position to draw upon a comprehensive data set which would assist in identifying areas that pose structural barriers to its programs, both surgical and capacity building. With regard to disability access, Interplast gleans its disability data from patient numbers, and holds the view that, in one sense, people who receive a surgical or therapy service have a congenital or acquired disability, so patient numbers alone offer insight into access to services for people with disability. The same cannot be said for gender. Whilst some program reports provide a gender breakdown for patients and for those who access training, a lack of comprehensive data on gender has meant that this review has not provided a coherent picture on access based on gender. This is an area which Interplast has recognised it needs to address, and is currently investing significant resources to better understand barriers in all of its country programs, so that it can develop targeted interventions to address these barriers. In its 2021 Annual Program Design and Activity Plan (2021 Plan) for Mongolia, Interplast has committed to undertake a contextual analysis project into gender equality and disability inclusion in Mongolia, in collaboration with gender focused local organisations and organisations for people with disabilities. This work will help Interplast to identify opportunities to partner with specific gender and disability-focused organisations.

As noted above, Interplast has, in the past, assumed that patient numbers alone indicate access to its services based on disability. Although a good start, Interplast has recognised the need to take a more nuanced approach to reporting on disability; and identify if there are any actual, unforeseen or subtle barriers that a person with a disability may have in accessing either an Interplast or a local surgical and therapy service. Interplast's 2021 Plan recognises that while partner organisations adopt disability inclusive practices, there are gaps, and it will be exploring opportunities to collaborate with local disabled people's organisations to help strengthen inclusive practices.

In interviews with stakeholders in Mongolia, some participants gave their views on potential barriers based on gender in their profession. Many considered that men and women have equal access to the medical profession, but acknowledged the cultural norms that meant women face greater challenges in pursuing a career. Even if women had entered the profession, they still faced challenges, such as having the time to access training which may involve travel or additional time at work. Both nursing and physiotherapy had higher proportions of women, while some areas of surgery are more male dominated. Some respondents felt that women were naturally better suited to certain specialty areas of surgery and not others. Responses to those questions are summarised in **Section 6: Interviews with key stakeholders**.

## 7.2 Findings

### *Patients*

All patients interviewed felt that their lives had improved by the treatment that they received from Interplast. For each individual, the restoration of function has had life changing impacts; allowing them to participate in their communities and in their family life, and to commence or return to work. For younger patients, treatment had given them a far greater chance of going to school, socialising with their peers, and to be engaged in other aspects of their young lives. Parents were extremely grateful for treatment which had improved the lives of their children, giving them the prospect of a normal life now and into the future. A number of families told the review that they knew of many in their communities who would benefit from Interplast's surgical program, particularly children who had experienced burn injuries. Patient interviews indicate that this is an area of great unmet need in Mongolia, particularly for those who live in remote and regional areas.

### *Institutional support and capacity building*

This review has found that the primary outcome of the Mongolia program has been improved capacity, knowledge and skills of local anaesthetists, surgeons, nurses and allied health workers. Volunteers and counterparts alike are in agreement that this has been one of the most beneficial achievements of the program. Institutional and mentoring support for the MSA, and the formal lecture and interactive workshop program has focused on practical subjects relevant to surgery and patient care. Country Coordinator, Dr David Pescod told the review that most important contributor to capacity building outcomes for anaesthetists was creating the training program in anaesthetics. In 2019 he reported that Interplast's ongoing support to the training activities of the MSA was highly successful; as at June 2019, 87.5% of patients in Mongolia had access to anaesthesia, and over 200 anaesthetists were trained since introduction of the training program and the support that Interplast had given to the MSA (Country Program report, 2019). One volunteer said that Dr Pescod's work had fundamentally 'changed the way they do anaesthetics in Mongolia. It's a massive change.' (Mr Thao Phan).

Members of the MSA explained that the partnership with Interplast and the ASA has improved capacity in their profession, and on the practice of anaesthesia in Mongolia. The professional development program, financial assistance and organisational capacity building is helping the MSA progress its institutional goals, moving it closer to becoming a teaching college, and lifting the standard of anaesthesia practice toward a level commensurate with developed countries. Improvements in capacity of the MSA had led to a more structured approach to anaesthesia training, and peers were sharing professional experience and knowledge. MSA Secretary and key counterpart, Dr Ganbold Lundeg pointed out that Interplast's program helps rural doctors with financial assistance which allows them to travel to Ulaanbaatar to attend the MSA Annual Conference, where they have the opportunity to meet other anaesthetists, learn from each other and exchange information. Dr Lundeg made particular mention of the contribution of the Mongolia program's Country Coordinator, Dr David Pescod, that his long-term commitment and the partnership with the ASA have been instrumental in moving the MSA forward.

The surgical program has provided on the job training and mentoring, boosting the skills and capacity of surgeons, nurses and allied health staff. Surgical mentoring has also improved access to treatment for patients, particularly those in the more remote regions of Mongolia, and has enhanced the skills of the surgical teams in these areas, something which has a lasting impact. One nurse respondent said that taking the surgical program to Dalanzadgad gave nurses access to training that would ordinarily only be available in Ulaanbaatar. Interplast volunteers observed that local teams were keen to apply new skills into their work practices, and that this has contributed to improved local capacity. Dr Kirstie MacGill commented on how the program was seeing changes in practice, giving the example of one surgeon that the team had mentored on the last trip to Dalanzadgad who was very enthusiastic to plan for up-coming surgeries and was bringing in patients to be part of the planning process: 'that is good practice and a success story'. Although she had found a tendency for not burns patients not to receive immediate treatment, she acknowledged that encouraging local surgeons to change that practice, and treat burns as they happen, will foster change. She was beginning to see changes in skills from the program:

*By the end of the third year (in Murun) the locals were doing things themselves, we weren't seeing as many catastrophic patients, we have met the need but they're not yet competent to do everything. We go back to reinforce the training.*

Both volunteers and counterparts agreed that on the job training is achieving some of the best results of the program, providing practical knowledge and technical information on the latest developments in surgical and anaesthesia practice. Some surgeons who have accessed on the job training are now undertaking more complex surgery, and are training their colleagues. Others noted that Interplast is making a major contribution to not only anaesthesia training, but also intensive care, resulting in improved practice. Training for doctors, nurses and therapists is giving them improved practical skills and has addressed the theoretical aspects of their work. This is the real benefit of capacity building, and over time is enhancing the overall impact for patients, and the sustainability of the in-country program. Interplast's equipment and supplies coordinator Ms Leonie Simmons had seen systemic changes, such as improved practice and skills of surgeons which was resulting from the capacity building program, particularly in Murun.

A contributor to capacity building and sustainability is that Interplast's volunteers are a multidisciplinary team, with anaesthetists, surgeons, nurses and therapists delivering the in-country program, and modelling the benefits of a whole of team approach. As noted earlier in this section under *Country Strategy-Mongolia, July 2019-June 2021*, counterparts see that while each team member makes an important contribution, it's the collective effort of the team that achieves the best outcomes for patients, and is a more sustainable way to work. This was commented on by Australia's Ambassador to Mongolia, HE Mr Dave Vosen, who witnessed the surgical team working together in Dalanzadgad. He noted that Interplast's strength is its teamwork, with each individual having an important role to play in supporting the work of the surgical program. Counterparts had also observed how Interplast's whole of team approach and on the job training to aimag doctors and nurses is having a sustainable result, where capacity to treat burns patients is improving. Allied health volunteer, Ms Diana Francis reiterated that modelling multidisciplinary teamwork, and training allied health staff in appropriate procedures, had resulted in discernible improvements in standard practice, a decrease in patient infection rates and improved skills for theatre staff.

Nurse respondents to the review saw the commitment to capacity building made Interplast the most effective of volunteer organisations in this field. Some noted that many medical professionals of all disciplines saw the benefit not only for their own skills development, but the impact that the program has for patients, who would otherwise have missed out on treatment and care. Training, mentoring, and cooperation with counterparts, where both volunteer and local surgical teams work together in treating patients, sets Interplast apart from other similar organisations. One nurse noted that prior to Interplast's surgical program in rural and regional locations, burns surgery was not available to patients close to where they lived. Counterparts said that taking the program to aimags outside of central areas has particularly helped children access treatment only available at tertiary hospitals in the city.

*Interplast differs from other organisations with its goal of improving burn care, and outreach to rural people who have not had access to burn treatment, surgery and scar removal.*  
(Dr Ganbold Lundeg)

When volunteer teams deliver programs in these areas patients are spared the lengthy journeys to seek treatment. This is an area where most who were interviewed felt that the impact on individuals was greatest; not only has this improved the quality of life for those receiving treatment, training during surgeries has increased the skills of anaesthetists, surgeons and nurses. Since Interplast's first burns treatment and training program, doctors outside of the main centres are performing burns surgery independently. In his 2019 Country Program report, Dr David Pescod observed that the burns surgery mentoring program in Murun was seeing surgeons applying the skills they had, and that the burns therapy mentoring program was also leading to improved therapy for patients and changes in practice.

## Unmet need

Research for this review has highlighted areas of unmet need where Interplast is well placed to make an ongoing contribution, and Interplast's coordinators of International Programs are potentially considering future programming to address emerging needs and challenges. Some areas are perennial issues identified by program reports and during interviews, and are at an operational level; such as assisting local teams and facilities with access to better equipment and supplies, ensuring that training is extended to those who work outside of the main centres, and maintaining a focus on capacity building. Others are more systemic or strategic in nature, and require further research and analysis to gauge the extent of the challenges to be addressed, and whether Interplast is well-placed to make a contribution. The current research that Interplast is undertaking in the area of gender and disability barriers falls into this category, and is discussed above in the sub-section Gender and disability. Gender and disability barriers in Mongolia are areas where Interplast's ability to influence is relatively small; and whilst there are opportunities to partner with local organisations, its direct influence is limited to examining its own structures to ensure that its programs are accessible to all. The current research aims to identify and address these barriers for future programs, and to potentially assist its partner organisations to look at structural barriers within their institutions.

### **Burns prevention and treatment**

Another example of unmet need that is systemic in nature is burns prevention and treatment. Interplast, its volunteers and counterparts have identified burns as an area of significant unmet need, where the learnings from Australia's experience of the past decades has much to offer Mongolia, and where Interplast and local partners can make an impact. Burns in Mongolia are not very well treated or managed, and burn injuries are often seen as inevitable, and a low priority. Anecdotally, the numbers of burns injuries in children suggests that as many as one in four children have accidents in the home resulting in burns. There is some evidence in peer reviewed journals which support this estimate.<sup>75</sup> Some hospitals lack basic equipment to treat burns, and during winter (often when most injuries occur in the home) there is little access to treatment, possibly exacerbated by isolation and remote locations.

Interplast's Director of International Programs; Ms Jess Hill, said that there is a huge amount of unmet need in Mongolia in how burns are treated, and in building capacity. A government campaign to raise awareness could reduce the incidence of burns related injury and would have a profoundly positive impact on children. She sees a role for Interplast in improving burns prevention, treatment and management. Interplast could assist Mongolia to mount a concerted effort to address burns; potentially helping it develop a national strategy encompassing prevention and education campaigns, access to quality treatment and workforce skills development. Remote populations are particularly affected by a lack of capacity in burns treatment and management, and there is a need to train more medical personnel in early treatment of burns to avoid life long consequences for those with burns injury.

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75 Of total 1154 children, 291 (25.2%) had burn injury in their life-time.  
<https://pubmed.ncbi.nlm.nih.gov/22342177/>  
One survey revealed that 27% of children had a history of burn injuries.  
<https://onlinelibrary.wiley.com/doi/pdf/10.1111/tmi.13034>

Interplast volunteers, International Program staff and Mongolian counterparts see the new Burns Rehabilitation Hospital in Ulaanbaatar as an opportunity for Interplast to lift the profile of burns management and awareness, and for establishing data for research into burns injury and treatment. As noted in **Section 6.4 Interplast Volunteers and Staff** – under *Impact*, Interplast has engaged local expertise to undertake a *Burns Gap Analysis*. Gathering data will boost Interplast’s own knowledge base, and help it to understand the extent of burn injuries in Mongolia. Once the new Hospital is established, the gap analysis will help Interplast to gauge where it can assist in enhancing awareness and treatment of burns to local counterparts across all disciplines.

Continuing its contribution to training is an important area for Interplast in influencing and addressing future capacity in Mongolia, in surgery and anaesthesia practice, nursing and allied health. As highlighted many times throughout this review, Mongolia faces challenges in service provision for its more remote locations, and in many areas there is a need for better access to training and mentoring. For example, in some locations, newly qualified doctors work with little access to support for what they do. Interplast sees that it has an ongoing role in helping meet the training needs of these more isolated professionals, through its outreach capacity building program.

### 7.3 Conclusions

Interplast’s Mongolia program is characterised by a strong focus on capacity building and sustainability; through the burns mentoring program in Ulaanbaatar; the surgical and mentoring program in Murun; and the partnership between Interplast, the MSA and the ASA. This focus is achieving improvements in anaesthesia access and practice, in the skills of surgeons, particularly in burns surgery, in nursing skills for post-operative patient care, and in therapy practice. As noted by Interplast’s Director of International Programs, Ms Jess Hill, one of the greatest contributors to the success of the program is the close and consistent working relationships between volunteers and counterparts.

As outlined in **Section 5.1 Interplast’s Mongolian Country Program 2014-2015 to 2019-2020**, one of the aims of the partnership between Interplast, the ASA and the MSA is to improve residency training and continuing education for Mongolia’s anaesthetists. Interplast’s long-term commitment to institutional capacity building and the partnership has helped to lift professional development, access for patients and improve the standard of anaesthesia in Mongolia. These efforts have put the MSA on the path to a sustainable footing, and to achieving its long term goals. The MSA Annual Conference gives participants an opportunity to improve knowledge and capacity in anaesthetic practice. From 2015 to 2019, the Conference has covered topics relevant to local practice and given local participants the opportunity to present to their peers, and to form professional networks across their region. Conference evaluations show that participants value the learnings and see it as integral to their professional development. The Annual Conference has continued to foster a professional culture for anaesthetic services in Mongolia, and a commitment to education and training.

The following summary from Interplast’s 2015 country program plan for Mongolia highlights how much has been achieved in the period of this review.

*Anaesthetists have an extensive role in Mongolia; they are responsible for all critical care areas including intensive care, resuscitation, emergency care and anaesthesia for surgery and operative obstetrics. Despite this important role, Australian anaesthetists visiting Mongolia have found a significant lack of consistency in training anaesthetists across the country.*

(Country Program Plan, Mongolia, 2014-2015)

Although the program has achieved improvements in anaesthesia, surgical and nursing, and therapy practice, there remain areas of need and ongoing challenges which Interplast's program will continue to address. The burns surgery and mentoring program that has taken place in Murun and Dalanzadgad, and at the Trauma Hospital in 2015, is reaping benefits for both surgical teams and patients. Volunteers and counterparts alike agree that more needs to be done, particularly in skills development. Interplast acknowledges the ongoing role of the MSA in providing strategic and logistical support for its burns surgery and mentoring programs.<sup>76</sup> Interplast volunteers and program administration staff, along with counterpart Dr Tsermaa Sandag, have identified opportunities for greater collaboration to improve the treatment of burns once the new Burns Rehabilitation Hospital opens. With the new Hospital comes a cohort of dedicated staff, and volunteer Ms Diana Francis, see this is a very important time for Interplast to continue its involvement and teaching in all areas of treatment for burns patients.

Despite the disruptions brought about by the Covid19 pandemic, Interplast's ongoing work with the MSA has continued in an online capacity. In the absence of an in-country presence, many respondents to the review were grateful for Interplast's rapid switch to the online program, and expressed the hope for remote mentoring to continue even when an in-country program resumes. The travel restrictions have forced a lengthy pause in all of Interplast's in-country programs, but has also given the organisation a window to think about how to best use its resources for future programming. Through the input of the many respondents, both in Australia and in Mongolia, this review has been able to highlight areas where the Mongolia country program is achieving significant outcomes for surgical and allied health teams, and for patients. It has identified where efforts need to be continued, but also new and emerging areas that will provide opportunities for Interplast to continue making a substantial contribution to individuals, and to health systems, in Mongolia.

## 7.4 Recommendations

Recommendations are informed by feedback from all stakeholders involved in this review, and by key recommendations in program activity reports. They are for the consideration of Interplast's Board of Directors, its senior management and program staff, and stakeholders. Some recommendations have been raised in the activity reports that volunteer teams complete at the end of each visit, and others have been informed by patient interviews, the observations of volunteers and their counterparts in Mongolia, and by Interplast's management and program staff. Interplast acknowledges that implementing any recommendation is dependent on agreement with its partners and its Board of Management, and is subject to available resources.

### Ongoing Program Delivery

18. Continue the current support for the MSA office and Annual Conference, and support MSA members to identify and implement measures that will progress the organisation achieving its ambition for financial sustainability.  
(Interplast/MSA/ASA)
19. To safeguard the continuity and sustainability of the Mongolia program, Interplast to explore options to extend the pool of volunteers suitable to the Mongolia program, so that it is less susceptible to disruption from potential changes in key volunteers.  
(Interplast)
20. Support and facilitate training in areas identified by allied health partners; such as training physiotherapists in scar management, pressure garment making, orthopaedic exercises in therapy programs, contracture and joint management and post-surgery management.  
(Interplast/allied health partners)



### **Clinical Education and Skills Development**

- 21.** Interplast, along with the MSA and ASA, identify opportunities for anaesthetists and surgeons to undertake overseas training placements to better develop professional skills and to boost professional capacity.  
(Interplast/MSA/ASA)
- 22.** Consult with nurses to identify skills development needs, and ensure that nurses have access to practical skills development, through on the job training and mentoring.  
(Interplast/nursing counterparts)
- 23.** Interplast to facilitate the translation of education packages for nurses, and make these packages accessible remotely so that nurses outside of the main centres have access to the materials.  
(Interplast)
- 24.** To address the difference in access to training between regional staff and their city colleagues, Interplast should consult with surgical, nursing and allied health staff who work in rural and remote regions to identify their specific training needs, identify opportunities to extend training to those areas, and/or facilitate participation by support for travel to locations where Interplast training is available.  
(Interplast/regional surgical teams)
- 25.** Interplast and partners to identify training deficits in allied health and rehabilitation practice, focussing on skills development for physiotherapists and occupational therapists.  
(Interplast/National Research and Orthopaedic Centre-the Trauma Hospital)
- 26.** To maximise opportunities for professional development that Interplast, the MSA and the ASA contribute to through the MSA Annual Conference, explore the feasibility of using modalities such as online learning and other computer/internet based applications.  
(Interplast/MSA/ASA)
- 27.** Interplast and partners to identify opportunities for sponsored visits by Mongolian anaesthetists to participate in observerships in Australia to boost capacity in the profession.  
(Interplast/MSA/ASA)

### **Strengthening partnerships**

- 28.** Interplast to engage the assistance of the Australian Embassy, the MSA and other relevant partners to advance finalising and signing of the Memorandum of Understanding with the Government of Mongolia.  
(Interplast/Australian Embassy/MSA)
- 29.** In consultation with the Australian Embassy, consider opportunities for participating in its public diplomacy initiatives to showcase the work of Interplast and other Australian organisations involved in capacity building in Mongolia.  
(Interplast/Australian Embassy)
- 30.** To ensure equitable access to its programs, and to identify any barriers in its capacity building and surgical program, Interplast explore opportunities to work with local disabled peoples' organisations and gender equity organisations to develop a targeted strategy to address barriers to its programs based on disability status and gender.  
(Interplast)
- 31.** To enhance the effectiveness and promotion of the surgical capacity building program in Murun, work with surgical counterparts to identify a local surgeon to take on the role of a local champion for the program.  
(Interplast/surgical counterparts in Murun)

## New programming activities to consider

- 32.** To support the new Burns Rehabilitation Hospital in Ulaanbaatar, Interplast and partners work together to assess skills needs of Hospital staff; including surgeons, nurses and therapists, and develop a tailored program to support training and skills development in burns treatment, surgery and therapy.  
(Interplast/Burns Rehabilitation Hospital management and senior surgical, nursing and therapy staff)
- 33.** Through the in-country research, commissioned by Interplast, to identify the scope of burn injuries in Mongolia, Interplast and partners identify opportunities to help Mongolia develop a national burns prevention, awareness, skills development and treatment strategy.  
(Interplast/National Trauma and Orthopaedic Research Centre-the Trauma Hospital-/Mongolian Burns Association)
- 34.** In partnership with the Trauma Hospital and the new Burns Rehabilitation Hospital, explore the specific training needs of allied health staff to improve skills in preparing and tailoring ongoing therapy plans and treatment for patients following burns surgery, and coordinate with partners to ensure that these opportunities are also extended to allied health staff in regional and remote healthcare facilities.  
(Interplast/Burns Rehabilitation Hospital Allied Health Department)



## Attachment: An Interplast governance and senior management response

During 2020 and 2021, Interplast, like many other organisations whose core business is sending teams overseas, was forced to suspend its in-country programs due to global travel restrictions resulting from the COVID-19 pandemic. Interplast quickly moved its mentoring and capacity building program from an in-country program to a virtual one, using technology to ensure it could continue to deliver training, education and mentoring; patient follow up, support and advice for counterparts in partner countries. Interplast has used the temporary suspension of its in-country programs to step back and conduct reviews of four of its country programs; Bhutan, Mongolia, Nepal and Sri Lanka.

Interplast engaged an external consultant to oversee all four reviews. As stakeholder input is an important part of any review, interviews with Australian based stakeholders were conducted. To seek input from partner country stakeholders, Interplast engaged consultants in each country to conduct interviews with surgeons, nurses, allied health workers and patients. This has proved to be highly successful; stakeholders generously shared their experiences of Interplast programs, and provided their views on future directions of Interplast's program in their country.

Interplast's Chief Executive Officer, Mr Cameron Glover, and Interplast Board member and Chair of its Clinical Governance Committee, Dr Philip Ragg, provided Interplast's management and governance perspective to help inform the reviews. This document presents a senior management and governance perspective to the review of the four country programs. It also has been an opportunity for the reviewer to ask these two key individuals to reflect on what they see as the successes, challenges and aspirations of the organisation they lead. Their insights cover a range of Interplast specific issues, including philosophy, governance, sustainability, challenges, organisational strengths, adapting to change and emerging priorities.

### *Interplast's philosophy and approach*

Interplast's development philosophy is underpinned by the fundamental principle that solutions, changes and impact are determined by the local needs, and that these should be sustainable and enduring.<sup>77</sup> Mr Glover outlined the importance of being driven by the needs and wishes of the partner country:

*We need to be able to do as requested in a given country; it depends on what the government and the Ministries of Health want.*

In addition to partnerships with countries driving programs, decisions are influenced by other variables; past successes, the logistics of getting surgical teams to specific locations, needs, and the priorities of partner countries.

In some countries where the program has had ongoing success, there is scope for Interplast to consider a shift in activity, with the potential to meet a new set of capacity challenges or training needs. Any change to a successful program requires careful management, as Interplast is guided by requests from the partner country. In some countries the program has matured to the point of having a lasting and sustainable impact; such as in Sri Lanka, where in the capital, Colombo, capacity is strong, but this does not extend to all regional areas in Sri Lanka. In these cases, Interplast could undertake needs analysis to understand the specific benefits of the program, providing evidence to potentially change direction and meet other needs. This would have to be done in close cooperation with counterparts and ministries of health.

## **Governance: Board of Directors and Clinical Governance Committee**

Interplast's Board of Directors provides oversight and guidance on policy and guidelines, program direction and policies, and financial and corporate reporting. The Clinical Governance Committee is a sub-committee of the Board. Its Chair is also a Board member. The Clinical Governance Committee provides advice on country program outcomes, plans for upcoming surgical trips, and considers potential risks.

Both the Board of Directors and the Clinical Governance Committee receive regular updates on progress of country programs through presentations by Country Coordinators to the Board and the Committee. These occur on a rotating basis. The Board and the Committee see these as a highlight of their meetings; it keeps members motivated and helps drive improvement. The Board and Committee also hold regular discussions with Interplast senior managers.

The Board of Directors comprises a mix of people with clinical, and senior management and corporate skills. Interplast's governance structure ensures a direct line of communication between the Board and the Clinical Governance Committee

Transparency in appointments to the Board of Directors and the Clinical Governance Committee has improved in recent years. While Interplast is not prescriptive about the composition of its Board and the Committee, it recognises the need for diversity. The terms of reference do not specify gender and cultural diversity targets for either body. Gender diversity on the Board reflects gender distribution of volunteers; with one female volunteer surgeon on the Board. Representation on the Board and Committee of members from culturally and linguistically diverse (CALD) backgrounds is reflective of the surgical profession in Australia, where 50% of surgeons are from CALD backgrounds. In addition to the female surgeon, Interplast's Board includes five prominent women from non-clinical professions.

At least half of the members of the Clinical Governance Committee are clinician volunteers, with nurses, anaesthetists and surgeons represented. Members of Interplast's management and programs team are also present at Committee meetings, giving the Committee direct communication on progress in country programs. In recruiting members, the Committee looks for committed and motivated people with clinical expertise. It recognises a need for greater diversity and better representation from allied health, burns and paediatrics expertise. Interplast is currently working on a clinical governance framework, to formalise links back to the Board, and to ensure that it retains a strong clinical focus.

Having processes in place to ensure renewal of the Board of Directors is an issue that the Board and management is giving thought to, so that it can recruit and maintain the skills it needs for effective governance, now and in the future. Current terms of reference limits members to serving three terms of three years duration. Recruiting people to the Board and the Committee with the necessary skills is important for succession planning. A skills analysis would help identify the composition that the Board needs for an effective, diverse base for decision making. In recognition of the increased effort being made to address gender equity in its programs, Interplast has established a gender advisory committee which advises the CEO. It meets four times annually.

## Sustainable capacity building, monitoring and evaluation

Partner countries differ greatly in capacity and resources. Some partner countries lack the resources that they need to provide sustainable services and ongoing professional development, and for many this is unlikely to change. In some partner countries, health system capacity is generally weak and health resources are scarce, and developing ongoing capacity in plastic and reconstructive surgical services is not feasible. It is in these countries that Interplast makes a significant contribution to providing surgical services to the population. While Interplast can help meet this need, it is challenging to make future programming decisions based on goals of sustainability and impact when there is limited scope to achieve this in the medium to long term.

Mr Glover acknowledged that there are challenges in reorienting programs, and that for many partners there are few incentives to change. He noted that, ideally, Interplast would undertake a detailed review of all of its country programs to identify emerging needs and priorities.

Sri Lanka is an example of a country where Interplast has had solid and ongoing success. In the capital, Colombo, Interplast's capacity building program has helped to establish sustainable plastic and reconstructive surgical services, and volunteer surgeons have observed that the skills of Sri Lankan surgeons are on par with theirs. On Sri Lankan surgeons that have placements in Australia, Dr Ragg said:

*The trainees from Sri Lanka who come to the Children's Hospital are the best the hospital sees. And in countries like Sri Lanka, needs vary. Its surgeons are highly skilled, but they continue to request more training.*

## Sustainability: leadership

Recruiting and selecting suitable volunteers is less of a challenge than other aspects of programs; there is no shortage of people willing to offer their skills as volunteers with Interplast. Some country programs have a strong core of volunteers who work well together. In order to plan for succession of its teams, attracting new volunteers will help to ensure that core teams remain sustainable. Managing successful team composition is something in which Interplast is actively engaged. Dr Ragg said:

*We want to encourage new volunteers...lots want to...many offer (to volunteer).*

Each program's Country Coordinator is critical to Interplast's success and ensuring sustainability of these pivotal roles is paramount. Interplast is aware of the weight of responsibility that Country Coordinators assume, and will look to ways of easing the pressure on those in that role. One possibility is to consider establishing an assistant Country Coordinator position to share responsibility or step in when a coordinator retires or ceases in the role. Mr Glover said that Interplast is open to any suitable and willing volunteer who may wish to take on this additional responsibility:

*It doesn't always have to be a surgeon.*

Sustainability of leadership and teams can also be addressed in other ways. Dr Ragg suggested that two teams in-country can help with outreach programs outside of a main centre.

*There is a precedent with having more than one team for a country program. The feedback where this happens has been very positive. This could solve the problem of one team leader, and would help to train up another.*

(Dr Ragg)

This is particularly relevant in partner countries which have reached a level of sustainable capacity, such as in Sri Lanka. Whilst Interplast's program has made an impact in Sri Lanka's sustainable, local plastic and reconstructive surgical services, as noted above, capacity is focused on the National Hospital in Colombo. The same cannot be said for health facilities outside of the capital, where there is potential for Interplast to make a substantial contribution to capacity in some provincial areas.

## Challenges

*In some countries the more success a program achieves, the more call there is on that program.*  
(Dr Ragg)

An ongoing challenge, but one which has become more prominent in recent years, is sustainability of funding, particularly government funding, and competition for donor funds between various non-government organisations. This is a challenge that Interplast and its Board of Directors is looking to meet to ensure that its programs have a sustainable and secure funding base.

Managing volunteer expectations and ensuring that they are well prepared is an ongoing program management challenge, and one area of which Interplast is mindful it needs to continue to do well. Making sure that volunteers receive comprehensive pre-departure briefings is an area that Mr Glover believes Interplast can do better. Part of this challenge is trying to minimise the time burden; volunteers already give generously of their time, and Interplast tries to ensure that briefings are targeted and efficient. While these briefings are important in preparing volunteers, there is a limit to how well all potential experiences in-country can be conveyed. The reality that volunteers experience can be confronting; the lack of familiar and up to date equipment; processes, practices and facilities that fall short of expected standards; language and cultural barriers; managing situations that do not go to plan; all of these possibilities can exacerbate situations where volunteer teams need to respond and adapt rapidly.

*Some of the hardships the teams face are significant. A major requirement is to adapt when things go wrong. This can be challenging for volunteers.*  
(Dr Ragg)

In terms of challenges in partner countries, Dr Ragg reiterated the importance of the premise for all programs: *what does the partner country want from us?* As noted under **Sustainability**, where a need to reorient a program becomes clear, the challenge lies in managing the change, which may result in a very different program to that which partners are accustomed. In some partner countries, Interplast's program may focus on something different to other country programs; for example, specialty areas other than plastic and reconstructive surgery. In these instances, and despite pressure from partner countries, it is important for Interplast to maintain its core business. Mr Glover sees room for improvement in setting clear and strong objectives, and in having a vision of an exit point: *the end game-when we know we've achieved it with a program.*

## Organisational strengths

*Long term change doesn't happen quickly. Our teams need to adapt and reprioritise.*  
(Mr Glover)

Ensuring that programs are meeting goals is at the core of Interplast's philosophy and approach. With some country programs this can mean the need for a fundamental shift in program focus, or a decision to exit where program goals have been achieved and are sustainable. This can create challenges in relationships not only with partner countries but also with volunteers, many of whom wish to continue volunteering in a particular partner country. Managing stakeholder relationships during change is an important element of Interplast's program management role.

Dr Ragg sees the key to Interplast's success being in the relationships it builds, and the ability of volunteers to adapt:

*Relationship development is a strength of Interplast, and a high priority. If a supportive contact moves on, we need to establish new contacts, develop new relationships. When they change, we do our best to work with these new partners or we change the approach.*

Local champions are often the key to ensuring a successful program, and are important at every level; government, surgical, nursing and allied health. Without them it is difficult to establish a successful program. This has been the case in some country programs where Interplast has tried, without success, to identify a local champion. In these circumstances, or where there is a lack of partner commitment to sustainable development, or counterparts want service delivery rather than capacity building, Interplast needs to firmly convey its core business. Success in building capacity can be very much dependent on the country in which Interplast operates, and in some cases, even a city or region within a given country.

Qualifying as a plastic and reconstructive surgeon requires a high level of surgical training, and when Interplast is successful in helping individuals achieve this goal, it contributes to not only the capacity of the individual, but also to capacity within a partner country, bringing it a step closer to a local, sustainable, plastic surgical service. Capacity building in nursing and allied health is an area where Interplast's direction has changed. Interplast's focus in these areas is with empowering individuals, and encouraging them to become educators. In many partner countries there are barriers such as the culture of the workplace; some adhere to a strict, traditional hierarchy, and some professions, such as physiotherapists and nurses, are undervalued. Interplast has an important role in educating nurses and allied health professionals, and in improving standards of professional development and practice, so that they can then become educators.

There are other areas where Interplast has identified that it can capitalise on previous successes and extend what it does well. The model of regional training hubs has worked well in the Pacific (through the Fiji hub), and in Sri Lanka as a centre for craniofacial surgery training and workshops. It is a model which can be extended and further developed in other areas. The training of surgeons in Sri Lanka has been achieved at a great rate, and the country has the potential to serve as a regional hub of excellence for Interplast's South Asia programs. It has a workforce development plan which many countries do not have. A regional centre based in Colombo would allow Sri Lankan plastic and reconstructive surgeons to train others in the region.

## **Adapting to change**

*It was very pleasing how quickly Interplast was able to pivot its way of working. The Board was very impressed with how it responded.*

(Dr Ragg)

As with many organisations, the global pandemic has changed how Interplast conducts its core business. Education and mentoring programs which were face to face are now done by webinars; case conferences are conducted via Zoom and other videoconferencing technologies; support by Country Coordinators to their counterparts is by regular email and phone contact. This way of working has proven to be very efficient in keeping programs going, and some of these approaches will remain even when in-country programs resume.

*Interplast has been quick to reassure our counterparts that we're still here for them. We've been able to rethink what we do, we can do some things remotely. COVID has allowed us to change; we have continued with education and will ramp this up.*

(Mr Glover)

## Emerging priorities

*The current way of working has given us additional options for patient care. Some volunteers have been able to use Zoom so that they can still participate in patient follow up.*

(Mr Glover)

With appropriate resources, Interplast has seen remote working as an opportunity to scale up its current operations. Interplast's expertise in capacity building and education has been recognised, for example, with a request from the World Health Organization to assist with nurse education in Nauru.

When asked what Interplast would do with a significant increase in resources, Dr Ragg felt that Interplast could increase exponentially and scale up its programs; deliver more education, work on identifying promising individuals and champions, deliver more training to nurses, and provide nurses and allied health workers the opportunity to improve their skills; with the main focus being on quality plastic surgery and repairing bodies. Mr Glover agreed that additional resources would help the organisation train more people, adding that an area he would like to see Interplast invest in is to help partner countries with planning and health system reform.

*We're a small organisation and have been successful. That's something we should be proud of.*

(Dr Ragg)

*Interplast has been an enabling organisation; we've contributed to systemic change, we've worked successfully at government and Ministerial levels.*

(Mr Glover)

## Recommendations:

- Explore the feasibility of conducting a broad analysis to determine the mix of skills that the Board of Directors need for an effective, diverse base for decision making.
- In cooperation with partner countries, undertake a needs analysis to understand the specific benefits of Interplast's programs, to provide an evidence base where there is potential to change direction and meet other, emerging needs.
- Explore the feasibility of establishing an assistant Country Coordinator position to share responsibility or step in when a coordinator retires or ceases in the role.
- Scope the potential for a regional training hub for South Asia, based in Colombo, Sri Lanka, to allow plastic and reconstructive surgeons to train others in the region.



