



# Impact Model Report: Year 2

2024-25

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# Executive Summary

Since launching the impact model in October 2023, we've collected over 1,900 surveys from trainees participating in educational programs. Respondents represent all four regions and nearly every foundation country. These surveys estimate the broader impact of our education programs on the patients our volunteers care for in their daily work. Beyond those directly reached through programs, these patients demonstrate the exponential, indirect impact of our investments in health systems.

**Counting X Research = Impact**

The survey asks two questions for their patients with and without cleft: how many patients do you see per year and what percentage of them benefit from the training with Operation Smile? We combine these values in the formula below to estimate the average number of patients indirectly impacted per trainee per year.

Average # patients seen per trainee outside of OS yearly X Average % of patients that benefit from training = Average # patients indirectly impacted per trainee yearly

|                              | Avg. # patients with cleft per year |   | Avg. % patients with cleft benefitted |   | Avg. # patients with cleft impacted yearly per trainee |  | Avg. # patients without cleft per year |   | Avg. % patients without cleft benefitted |   | Avg. # patients without cleft impacted yearly per trainee |
|------------------------------|-------------------------------------|---|---------------------------------------|---|--|--|--|---|--|---|---|
| <b>All trainees surveyed</b> | 55                                  | X | 49                                    | = | 27   |  | 704                                    | X | 51                                       | = | 359   |

**1916** Total # trainees surveyed X **27 / 359** # patients indirectly impacted per trainee yearly = **51,732 / 687,844** Total # pts impacted yearly by surveyed participants

In total, from the 1,916 trainees surveyed, **739,576 patients with cleft and other surgical needs will benefit from our educational training programs.**

In FY26, we plan to expand this impact modeling to better understand "how" patients are impacted by improved safety, better outcomes, increased access, and more. We also plan to follow-up with trainees to understand the long-term impact of education over generations of medical providers.

# Background

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In 2023, we developed a global impact model to measure the effect of capacity building investments on health systems and the communities they serve. This model aligns with the Lancet Commission on Global Surgery’s proposed indicators to measure the strength of health systems. Additionally, the model will allow Operation Smile to quantify its impact towards the Sustainable Development Goals.

Direct impact is measured by counting the unique patients cared for on surgical and non-surgical medical programs. To translate educational and infrastructure investments into patient care, research is needed to understand how they benefit patients with and without cleft on a yearly basis. **This is indirect impact.**

$$\text{Counting} \quad \times \quad \text{Research} \quad = \quad \text{Impact}$$

To measure the indirect impact of education, trainees were asked two questions for patients with and without cleft at the end of educational programs:

1. Approximately, how many patients do you see in your work (with cleft/without cleft) outside of OS yearly?
2. What percentage of those patients (with cleft/without cleft) do you think benefit from the training you received through OS?

By multiplying these values together, we are able to estimate the average number of patients indirectly impacted per trainee at OS trainings yearly. This is the “research” variable to the impact model equation.

This modeling can be expanded to other areas of health system strengthening, including each pillar below. Quantifying the impact of these investments equips Operation Smile to demonstrate how cleft surgery can be used to improve access to essential surgical care globally.



# Implementation

**1916**

Trainees surveyed

**44**

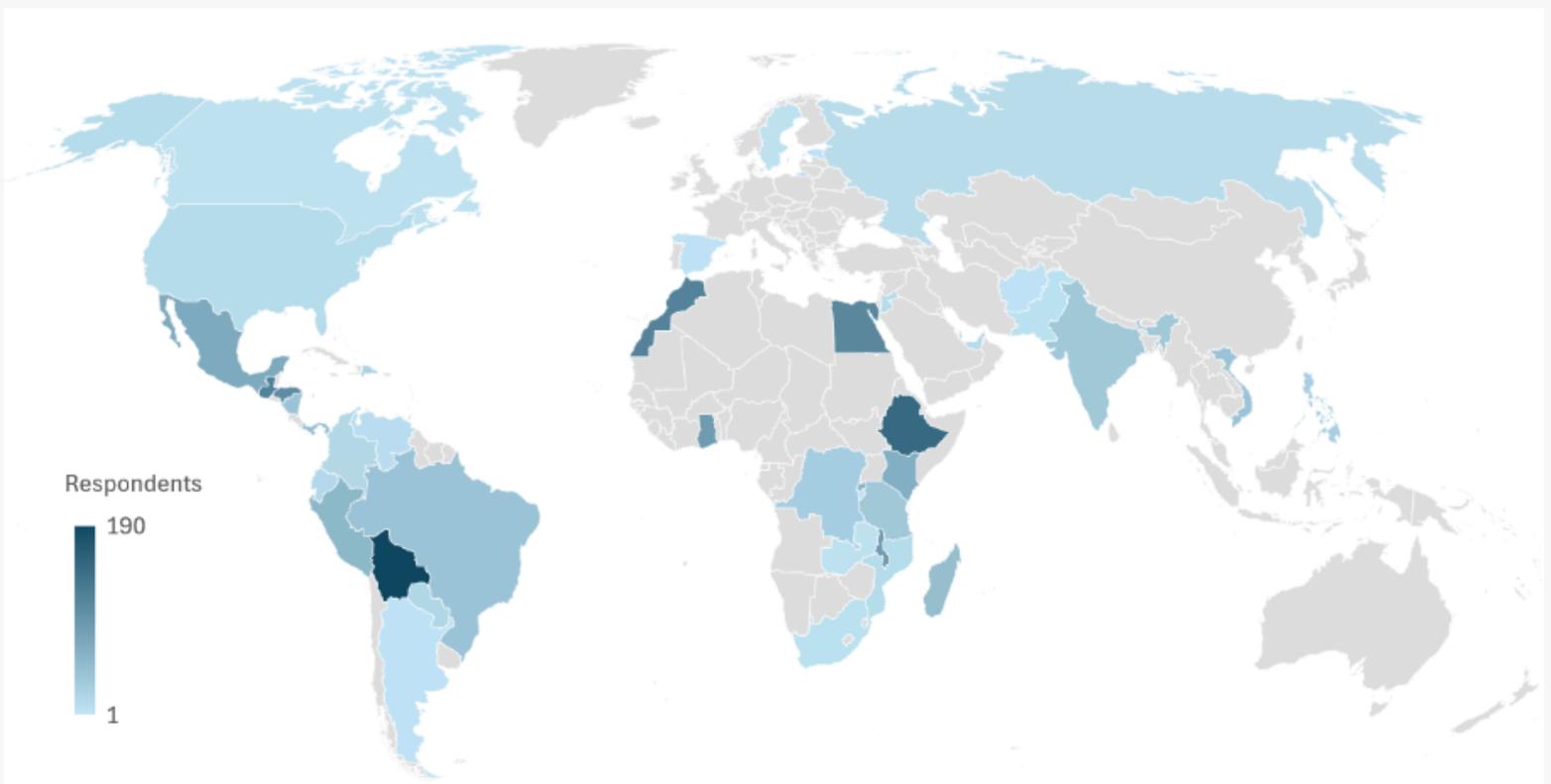
Countries

**66**

Programs

**78%**

Fully qualified,  
independent providers



## Year 2 Progress

● FY24

● FY25

# of survey participants

1004

916

# of new countries

10

22

# of programs

19

47

# Impact by Region



**750**  
LAC trainees

X

**24 cleft / 266 noncleft**  
Patients impacted per LAC  
trainee yearly

=

**18,272 cleft / 199,471 noncleft**  
Total patients impacted yearly by  
LAC trainees



**649**  
SSA trainees

X

**28 cleft / 619 noncleft**  
Patients impacted per SSA  
trainee yearly

=

**18,125 cleft / 402,011 noncleft**  
Total patients impacted yearly by  
SSA trainees



**303**  
MENA trainees

X

**15 cleft / 226 noncleft**  
Patients impacted per  
trainee yearly

=

**4,554 cleft / 68,598 noncleft**  
Total patients impacted yearly  
MENA trainees



**196**  
Asia trainees

X

**46 cleft / 231 noncleft**  
Patients impacted per  
trainee yearly

=

**8,961 cleft / 45,357 noncleft**  
Total patients impacted yearly by  
Asia trainees

# Impact by Specialty

Surgeon

**243**  
Surgeons

X

**47 cleft / 347 noncleft**  
Patients impacted yearly

=

**11,421 cleft / 84,321 noncleft**  
Total patients impacted yearly by  
surgeons

Anesthesiologist

**303**  
ANs

X

**17 cleft / 308 noncleft**  
Patients impacted yearly

=

**5,151 cleft / 93,324 noncleft**  
Total patients impacted yearly by  
ANs

Nurses

**646**  
Nurses

X

**40 cleft / 451 noncleft**  
Patients impacted yearly

=

**25,840 cleft / 291,346 noncleft**  
Total patients impacted yearly by  
surveyed nurses

Pediatrician

**126**  
Pediatricians

X

**10 cleft / 477 noncleft**  
Patients impacted yearly

=

**1,260 cleft / 60,102 noncleft**  
Total patients impacted yearly by  
surveyed peds

Comp. Care

**494**  
Comp. Care

X

**15 cleft / 281 noncleft**  
Patients impacted yearly

=

**7,410 cleft / 138,814 noncleft**  
Total patients impacted yearly by  
surveyed comp. care

# Surgical Programs

Impact Surveys were completed on 34 educational surgical programs from August 2024 to May 2025, making a total of 45 surgical programs included in impact research.



**29 Countries**



**783 Respondents**



**28% In-training  
72% Fully independent**



**525 Repeat trainees**

Surveys were given to trainees on both Short- Term Surgical Programs (STSPs) and Visiting Professorships (VPs). By tracking impact on the different program models, we can evaluate impact by specialty and by program.

|  | Avg. # patients with cleft per year |   | Avg. % patients with cleft benefitted |   | Avg. # patients with cleft impacted yearly per trainee | Avg. # patients without cleft per year   |   | Avg. % patients without cleft benefitted |   | Avg. # patients without cleft impacted yearly per trainee |
|--|-------------------------------------|---|---------------------------------------|---|--|--|---|--|---|---|
| Surgeon                                  | 68                                  | X | 73                                    | = | 50   | 714                                      | X | 59                                       | = | 421   |
| Anesthesiologist                         | 10                                  | X | 82                                    | = | 8  | 555                                      | X | 79                                       | = | 438   |
| Dentist/Orthodontist                     | 7                                   | X | 58                                    | = | 4  | 442                                      | X | 66                                       | = | 292   |
| Operation Room Nurse                     | 33                                  | X | 54                                    | = | 18   | 707                                      | X | 70                                       | = | 495   |
| PACU Nurse                               | 9                                   | X | 62                                    | = | 6  | 758                                      | X | 69                                       | = | 523   |
| Pre/Post-op Nurse                        | 47                                  | X | 78                                    | = | 37   | 860                                      | X | 73                                       | = | 628   |
| PACU Physician                           | 12                                  | X | 80                                    | = | 10   | 977                                      | X | 75                                       | = | 733   |
| Pediatrician                             | 12                                  | X | 74                                    | = | 9  | 1264                                     | X | 73                                       | = | 923   |
| Nutritionist                             | 57                                  | X | 55                                    | = | 31   | 1990                                     | X | 85                                       | = | 1692  |
| Psychosocial Provider                    | 6                                   | X | 44                                    | = | 3  | 108                                      | X | 57                                       | = | 62  |
| Speech Language Pathologist              | 17                                  | X | 54                                    | = | 9  | 160                                      | X | 55                                       | = | 88  |
| <b>Total (one trainee per specialty)</b> |                                     |   |                                       | = | <b>184</b>   | <b>Total (one trainee per specialty)</b> |   |  | = | <b>6294</b>   |

Counting X Research = Impact

# surgical trainees X Avg. # patients with cleft indirectly impacted per surgical trainee = # patients with cleft indirectly impacted by surgical trainees per year

**181 surgical trainees X 50 patients with cleft indirectly impacted per surgical trainee = 9,050 patients with cleft indirectly impacted by surgical trainees per year**

# Specialty Training

Specialty Training is a unique opportunity to focus on specialized skills that may not be covered during a typical surgical program. By measuring this data by program and specialty, we can compare how impact varies compared to other education models like surgical education programs. Impact Surveys were administered at 11 specialty trainings from August 2024 to May 2025. Trainings were categorized based on focus for impact analysis.



**32 Countries**



**321 Respondents**



**22% In-training**  
**78% Fully independent**



**268 Repeat trainees**

|  | Avg. # patients with cleft per year |   | Avg. % patients with cleft benefitted |   | Avg. # patients with cleft impacted yearly per trainee |  | Avg. # patients without cleft per year |    | Avg. % patients without cleft benefitted |             | Avg. # patients without cleft impacted yearly per trainee |  |
|--|-------------------------------------|---|---------------------------------------|---|--|--|--|----|--|-------------|---|--|
| Oral Health Training (Rwanda, Honduras, Mexico, & Vietnam) | 48                                  | X | 70                                    | = | 34   | 748  | X                                      | 61 | =  | 456         |   |  |
| Nursing Leadership Conference (Peru, Kenya, India)         | 96                                  | X | 76                                    | = | 73   | 962  | X                                      | 80 | =  | 770         |   |  |
| PACU & CC Training (Egypt)                                 | 34                                  | X | 57                                    | = | 19   | 459  | X                                      | 76 | =  | 349         |   |  |
| SLP Training (UAE)   | 3                                   | X | 79                                    | = | 2  | 631  | X                                      | 52 | =  | 328         |   |  |
| WFSA (Tanzania & Vietnam)                                  | 61                                  | X | 76                                    | = | 46   | 375  | X                                      | 79 | =  | 296         |   |  |
| <b>Total (one trainee per specialty)</b>                   | <b>=</b>                            |   |                                       |   | <b>175</b>   | <b>Total (one trainee per specialty) =</b> |  |    |  | <b>2199</b> |   |  |

Counting X Research = Impact

# trainees at Nursing Leadership Conference X Avg. # patients with cleft indirectly impacted per trainee at Nursing Conference per year = # patients with cleft indirectly impacted by trainees at Nursing Conferences per year

**142 trainees** X **73 patients with cleft indirectly impacted per trainee at Nursing Conference per year** = **10,366 patients with cleft indirectly impacted by trainees at Nursing Conferences per year**

# Comprehensive Care Trainings

The Comprehensive Care Regional Trainings consist of workshops, hands-on training, lectures, and interdisciplinary sessions over the course of 3-4 days. Participants represent speech language therapy, nutrition, psychosocial care, and oral health specialties. Impact has been captured on three trainings: Morocco in May 2024, South Africa in March 2025, and the Philippines in May 2025.



**22 Countries**



**114 Respondents**



**11% In-training**  
**89% Fully independent**



**87 First-time participants**

Skills from this training are intended to transfer to Operation Smile patients as well as patients treated by these medical professionals in their day-to-day jobs. Additionally, 97% of participants indicated they would pass on this training to other colleagues which will continue to increase the impact on patients.

|  | Avg. # patients with cleft per year |   | Avg. % patients with cleft benefitted |   | Avg. # patients with cleft impacted yearly per trainee |  | Avg. # patients without cleft per year |   | Avg. % patients without cleft benefitted |   | Avg. # patients without cleft impacted yearly per trainee |
|--|-------------------------------------|---|---------------------------------------|---|--|--|--|---|--|---|---|
| <b>Dentist/Orthodontist</b>              | 18                                  | X | 77                                    | = | <b>14</b>  |  | 1805                                   | X | 68                                       | = | <b>1227</b>   |
| <b>Nutritionist</b>                      | 68                                  | X | 96                                    | = | <b>65</b>  |  | 233                                    | X | 84                                       | = | <b>196</b>  |
| <b>Psychosocial Provider</b>             | 174                                 | X | 95                                    | = | <b>165</b>   |  | 192                                    | X | 81                                       | = | <b>156</b>  |
| <b>Speech Language Pathologist</b>       | 14                                  | X | 83                                    | = | <b>12</b>  |  | 129                                    | X | 61                                       | = | <b>79</b>   |
| <b>OS Program Staff</b>                  | 40                                  | X | 79                                    | = | <b>32</b>  |  | 88                                     | X | 74                                       | = | <b>65</b>   |
| <b>Other</b>                             | 136                                 | X | 87                                    | = | <b>118</b>   |  | 101                                    | X | 70                                       | = | <b>71</b>   |
| <b>Total (one trainee per specialty)</b> |                                     |   |                                       | = | <b>406</b>   |  |  |   |  | = | <b>1793</b>   |

Counting X Research = Impact

# SLP trainees X Avg. # patients without cleft indirectly impacted per SLP trainee per year = # patients without cleft indirectly impacted by SLP trainees per year

**33 SLP trainees at Comprehensive Care Trainings** X **79 patients without cleft indirectly impacted per SLP trainee per year** = **2,607 patients without cleft indirectly impacted by SLP trainees per year**

# Biomed Impact

Because biomedical technicians do not work directly with patients, a different impact model is needed to assess how training affects their daily work environment. From February to September 2024, a focus group of biomedical technicians from MENA, LAC, and SSA regions was consulted and helped pilot this biomed-specific impact model.



**10 Countries**



**29 Respondents**



**17% In-training**  
**83% Fully independent**



**20 Work in a hospital**

While biomedical technicians work in various settings, survey data confirms that about 69% are based in hospitals, aligning with volunteer management estimates. As most training involves OR-related equipment, the biomed impact model focuses on hospital environments. The focus group agreed that the technical skills gained through OS programs are widely transferable across different equipment manufacturers. To capture this impact, the survey asks two key questions:

1. How many ORs are you responsible for servicing?
2. Which pieces of equipment you were trained on with OS do you also service in your daily job?



- Patient Monitor
- Anesthesia Machine (Induction Unit)
- Vaporizer
- Electro Surgical Unit
- Suction Machine
- Ambu bag

| Counting   | X | Research  | = | Impact   |
|--|---|---|---|--|
| <b># surgical patients</b><br>(# ORs X 700 patients per OR per year) | X | <b>% OR equipment overlap</b><br>(# equipment used in daily job / total # equipment trained on with OS) | = | <b># surgical patients indirectly impacted per biomed per year</b>     |
| <b>4789 surgical patients per biomed</b>                             | X | <b>74% OR equipment overlap</b>   | = | <b>3,563 surgical patients indirectly impacted per biomed per year</b> |

This model provides a conservative estimate of the number of patients impacted by training a biomedical technician. The World Health Organization ranks certain equipment as essential to safety and quality—much of which is used in Operation Smile programs—amplifying the value of biomed training. We aim to refine the model over time to better capture the role of biomedical technicians in advancing safe surgery globally.

# Using Impact Data

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Below are a few examples of how to use impact data internally or externally. Two very important caveats to consider, especially when sharing data externally, are:

1. These numbers **will change** as we collect more data. They may increase or decrease, but they will change.
2. This data is unpublished as of June 2025.

**“In addition to the patients that directly receive care on our surgical programs, our research shows that training 1000 cleft professionals will impact an additional 2,700 patients with cleft per year outside of Operation Smile programming.”**

**“Specialty workshops and conferences offer volunteers a unique opportunity to learn specific skills. Although no patients are directly cared for during the training, each participant uses those skills to benefit up to 600 surgical patients every year in their clinical work outside of Operation Smile.”**

**“Despite being a highly specialized surgery, our current research shows that surgical trainees use the knowledge gained during their cleft training to impact over 400 patients without cleft every year- emphasizing how translatable these skillsets are.”**

**“Biomedical technicians that are trained with Operation Smile use these skills to improve safe surgery for over 3,500 surgical patients every year, demonstrating the pivotal role they play in improving access to high quality surgical care.”**

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# FY26 Plans

What's next?

*We look forward to continuing to measure educational impact throughout FY26, as well as beginning to quantify other health system strengthening investments.*



## 01 100 Hospital Project

- Develop and implement an impact framework to monitor and communicate all aspects of the initiative
- Launch tracking model for infrastructure investments and equipment donations across all programs



## 02 Looking past “one year”

- The current model looks at patients impacted per year, next we will further that work to understand how this impact translates year over year.
- This includes measuring skill attrition and knowledge transfer to others, capturing the ‘waterfall effect.’



## 03 Student Programs, Research, P&A

- Develop tool to quantify impact of StuPro on current and past participants (ISLC 2025)
- Pilot and launch survey to understand the impact of research by OS volunteers and staff
- Develop tool to measure impact of P&A initiatives

**While we anticipate the numbers from this summary changing in the next year, we are excited to improve our impact reporting as an organization and contribute to the global conversation on health system strengthening through data-driven evidence and solutions.**

# Acknowledgements

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- OS UAE
- OS Malawi
- OS Ghana
- OS India
- OS Dominican Republic
- OS Panama
- OS Italy
- OS Vietnam
- OS Mexico
- OS Tanzania
- OS South Africa
- OS Kenya
- OS Philippines



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