



Until We Heal Safe Surgery Resources

Safe surgery means providing patients with the highest quality of care, based on the highest medical standards, no matter where they live. Operation Smile wants the best possible surgical result for each and every patient. To better understand safe surgery, consider the threat of unsafe surgery: the risks for medical complications are high, as equipment is unsterile, and mistakes are made due to insufficient medical training. Unsafe surgery is harmful, if not deadly, while safe surgery is the first step on the path to healing.

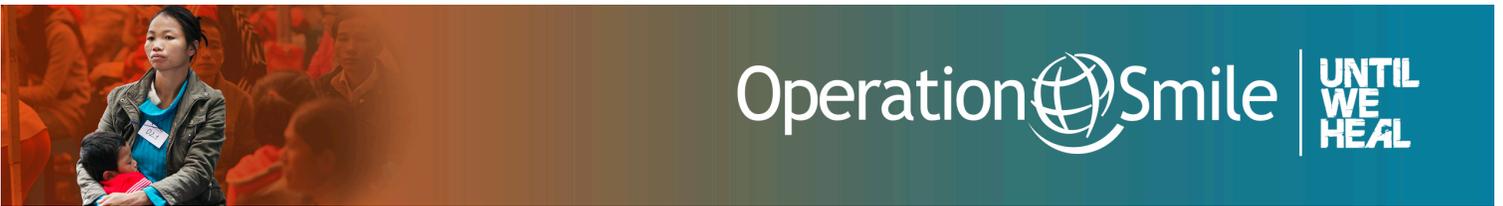
Use this document to reference research and other key points regarding safe surgery.

Billions¹ of people lack access to safe surgical care.

- As a result, common, easily treatable conditions like cleft conditions, appendicitis, hernia, fractures, obstructed labor, and breast and cervical cancer can become fatal.
- In 2010, more than twice as many people died from a lack of access to surgical care (16.9 million)¹ than from heart disease (7 million).²

Billions of people are unable to access safe, effective surgical care when they need it due to the shortage of surgeons, equipment and affordability.

- In low- and middle-income countries (LMICs), there is approximately 1 surgeon for every 100,000 people.³
- Similarly, many LMICs have less than 1 anesthesiologist per 100,000 people. Whereas in the United States it is estimated there is 1 anesthesiologist for every 4,000 people.⁴
- More than half of LMICs do not have health policies to ensure the proper planning, assessment, acquisition and management of medical devices that are critical for effective surgical care.⁵
- 3.7 billion people, the majority who reside in LMICs, cannot afford to have surgery even if they need it.⁶



Increasing the safety and effectiveness of surgery across the globe is critical.

- There is an estimated 5 to 10 percent mortality rate associated with major surgeries in LMICs.⁷
- The rate of anaesthesia-associated mortality in low- and middle-income countries is between 100 to 1,000 times higher than in high-income countries.
- Mortality from general anesthesia alone is reported to be as high as 1 in 150 in some parts of sub-Saharan Africa.⁸
- At least half of all complications associated with surgical care are avoidable.⁸

There is a significant imbalance in providing global access to safe, effective and well-timed surgical care.

- Less than 6 percent of all operations are delivered to the world's poorest countries.⁹
- 9 out of 10 people in LMICs cannot access basic surgical care.¹
- An additional 143 million surgical procedures are needed in LMICs each year to save lives and prevent disability.¹
- 2.2 million more surgeons, anesthetists and obstetricians will be needed in the next 15 years to ensure that 80 percent of the world's population has access to safe surgical care.¹

This gap in surgical care leads to lost opportunities for social and economic development (caused by long-term disabilities and death).

- Lack of access to surgical care results in more deaths than HIV, tuberculosis and malaria combined, but these diseases tend to draw greater attention and funding from the public.¹
- If countries do not address the lack of access to surgical care, the resulting loss in economic productivity could accumulate to \$12.3 trillion by 2030.¹



Safe surgery is an essential component of healthcare and a universal human right that should be accessible to all. Here's a timeline of recent global events related to safe surgery:

- In 2004, the World Health Organization launched a patient safety program to address the challenges of unsafe care.⁵
- In 2008, the World Health Organization published a Surgical Safety Checklist that has dramatically reduced patient deaths as well as inpatient complications.¹⁰
- On May 19, 2015, the Global Alliance for Surgical, Obstetric, Trauma, and Anesthesia Care (G4 Alliance) was formally launched in Geneva, Switzerland. The G4 Alliance is an advocacy-based nongovernmental organization dedicated to promoting surgical, obstetric, trauma and anesthesia care as a priority in the global development agenda. Operation Smile was one of the founding member organizations, along with the World Federation of Societies of Anesthesiologists, International Federation of Surgical Colleges, Association for Academic Surgery, Harvard Medical School's Program in Global Surgery and Social Change, Johns Hopkins Global Surgical Initiative and others.
- On May 22, 2015, the 68th World Health Assembly passed Resolution WHA68.15 focused on Strengthening Emergency and Essential Surgical Care and Anesthesia as a Component of Universal Health Coverage.
- On September 25, 2015, the United Nations adopted 17 proposed Sustainable Development Goals. Goal 3: Ensure Healthy Lives and Promote Wellbeing for All at All Ages, includes Universal Health Coverage among its targets: Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all.¹¹

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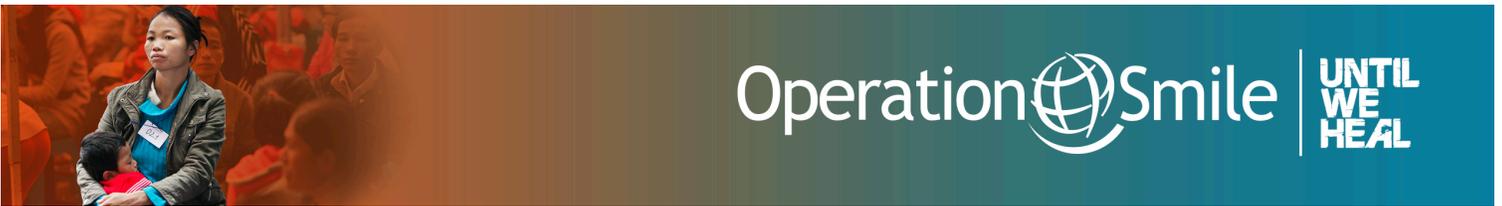
¹ Meara JG, Leather AJM, Hagander L, et al. Global surgery 2030: Evidence and solutions for achieving health, welfare, and economic development. *Lancet*. 2015; published online April 27. Accessed March 7, 2016: <http://bulletin.facs.org/2015/06/global-surgery-2030-the-lancet-commission-on-global-surgery-report/>

² Lozano R, Naghavi M, Foreman K, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: A systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*. 2012; 380(9859), 20952128. Accessed March 7, 2016: [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(12\)61728-0.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(12)61728-0.pdf)

³ Hoyler M, Finlayson SR, McClain CD, Meara JG, Hagander L. Shortage of Doctors, Shortage of Data: A Review of the Global Surgery, Obstetrics, and Anesthesia Workforce Literature. *World J Surg World Journal of Surgery*. 2013; 38(2), 269280. Accessed March 7, 2016: <http://link.springer.com/article/10.1007%2Fs00268-013-2324-y>

⁴ Dubowitz G, Detlefs S, McQueen KAK. Global Anesthesia Workforce Crisis: A Preliminary Survey Revealing Shortages Contributing to Undesirable Outcomes and Unsafe Practices. *World Journal of Surgery*. 2010 Mar; 34(3): 438-444. Accessed March 7, 2016: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2816796/>

⁵ World Health Organization, The Second Global Patient Safety Challenge, Safe Surgery Saves Lives. Accessed Jan. 31, 2017: http://www.who.int/patientsafety/safesurgery/knowledge_base/SSSL_Brochure_finalJun08.pdf



⁶ Shrime MG, Dare AJ, Alkire BC, O'neill K., Meara JG. Catastrophic expenditure to pay for surgery worldwide: A modelling study. *The Lancet Global Health*. 2015; 3. Accessed March 7, 2016: [http://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(15\)70085-9/abstract](http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(15)70085-9/abstract)

⁷ World Health Organization, New checklist to help make surgery safer. Accessed March 7, 2016: from <http://www.who.int/mediacentre/news/releases/2008/pr20/en/>

⁸ World Health Organization, Safe Surgery. Accessed March 7, 2016: <http://www.who.int/patientsafety/safesurgery/en/>

⁹ G4 Alliance, About G4 Alliance, A Global Alliance for Surgical, Obstetric, Trauma, and Anaesthesia Care. Accessed February 26, 2016: <http://www.theg4alliance.org/aboutg4alliance/>

¹⁰ Haynes AB, Weiser TG, Berry WR, et al. A Surgical Safety Checklist to Reduce Morbidity and Mortality in a Global Population. *New England Journal of Medicine* *N Engl J Med*. 2009; 360(5), 491-499. Accessed March 7, 2016: <http://www.nejm.org/doi/full/10.1056/NEJMsa0810119#t=article>

¹¹ United Nations Sustainable Development Goals, Goal 3: Ensure healthy lives and promote well-being for all at all ages. Accessed March 7, 2016: <http://www.un.org/sustainabledevelopment/health/>