Lifebox Foundation
Safe surgery in South Asia: no one left behind

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Unsafe surgery is one of the fastest-growing global health crises of the decade. Unevenly distributed and rarely discussed, it must be addressed if we are to see long-term improvement in maternal and child health worldwide. Lifebox Foundation is a global health charity working to make surgery safer. For more information visit www.lifebox.org or contact info@lifebox.org

In cities across South Asia, medical technology is booming – but it’s not just the bumpy roads that make hospitals in rural areas feel like worlds away. Lack of access to resources and training means that for an expectant mother struggling with obstructed labour in a remote village, a safe emergency caesarean section is a challenge to access – and often desperately unsafe.

Lifebox Foundation, a new global health charity that works to make surgery safer, has seen firsthand the scale of this rural/urban divide and the risks at stake. Working in South Asia in the last three years, the charity has focused on remote hospitals on the frontline of this crisis – “the areas of greatest need,” explained Dr. Ravi Ram Shrestha, General Secretary of the Society of Anaesthesiologists of Nepal.

Lifebox provides essential equipment and training directly to hospitals in low-resource settings. By harnessing collegial networks and modern logistics, the organisation is able to deliver to the most remote corners of the world.

Across Bangladesh, India, Laos, Myanmar, Nepal and Pakistan we’ve seen what an immediate difference basic equipment and education can make in an environment where surgical cases are almost always emergencies, the electricity cuts out 20 times a day, continuing education is limited and there is certainly no safety net.

“We were in the middle of an operation when the hospital’s only pulse oximeter failed,” recalled Dr. Angela Enright, Lifebox Trustee, of a recent trip to United Mission Hospital in Tansen, Nepal. Tansen’s two theatres provide surgery for nine surrounding districts in the western region, as well as parts of northern India.

This time the patient was lucky. The visiting team had brought a Lifebox pulse oximeter with them; someone dashed next door, grabbed the monitor and in a couple of minutes the reassuring bleep was back and the operation was successfully completed.

Too many cases don’t end as well. Access to safe surgery is an essential component of healthcare, not to mention a requirement of the management of complications of pregnancy – but the risk is up to a thousand times greater in low-resource settings than in higher ones.

“You think this is someone that, in another environment, we should have been able to save,” said Dr. Enright.

The Lifebox intervention of pulse oximetry combined with the team-building, error-eliminating World Health Organization (WHO) Surgical Safety Checklist is proven to foster that safer environment.

Pulse oximetry is the most important safety tool in modern anaesthesia, but an estimated 49 percent of all theatres in South Asia lack access to one, putting millions of patient lives at risk every year.

“Oximeters have made the big difference between life and death for my patients,” explained Rebecca Jacob, recently retired head of anaesthesia at Christian Medical College in Vellore, India. “It has saved mainly children, who get hypoxic faster than adults.”

With nearly 400 environment-appropriate pulse oximeters and surgical safety training packs in use across the region, Lifebox is safeguarding more than 600,000 lives in South Asia every year. But there is a long way to go.

Global poverty doesn’t look like it used to. Low-income countries are becoming middle-income countries, but for nearly a billion people, nothing has changed. At life and death moments, access to safe surgical care is the starkest reminder.
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Saving Mothers’ lives in the operating theatre and beyond

Iain Wilson, Lifebox Trustee, consultant anaesthetist at the Royal Devon and Exeter NHS Hospital and past President of the Association of Anaesthetists of Great Britain and Ireland

For theatre teams in low-resource settings, a pulse oximeter is more than just another monitor – it’s a second pair of eyes and ears, saving lives in situations no health care worker or patient should ever have to face.

Choosing between mother and baby, for instance...

“After the birth, when the patient was still anaesthetized, I was asked by the midwife to help resuscitate the newborn,” reported a Ugandan anaesthesia provider. “During the resuscitation, we all heard the beep from the Lifebox oximeter start falling and I quickly realised that the mother had stopped breathing.”

In the last three years the organisation has distributed more than 7000 oximeters to hospitals across 90 countries worldwide, ensuring that several hundred thousand patients a year are safely monitored.

But this is just the beginning. Global surgery has failed to keep pace with global need, and in low-resource countries around the world, lack of access to surgery is compounded by a surgical safety crisis.

With more than 40 percent of all surgical procedures worldwide obstetric-related, RCOG Members know only too well the risks that women and children face.

“Significant numbers of maternal deaths could be prevented by simple medical manoeuvres,” explained Dr Kate Grady, Dean of the Faculty of Pain Medicine of the Royal College of Anaesthetists. “Hypoxia can readily present in the sick obstetric patient and can kill within seconds, yet be prevented by very basic airway opening techniques and pulse oximetry monitoring.” The oximeter is also a valuable triage tool, identifying tachycardia in sick mothers.

That is why the RCOG, with a newly-launched Global Health Strategy, is working with Lifebox. Following a successful introduction at the 1st FIGO Africa Regional Conference in Ethiopia, the upcoming conference in Hyderabad presents an exciting opportunity to let colleagues in South Asia know that oximeters, training and equipment are available.

The equipment and training is distributed through countrywide programmes and joint education initiatives such as the Association of Anaesthetists of Great Britain and Ireland’s SAFE Obstetric Anaesthesia Course – but also on an individual basis. RCOG Members working in low-resource settings are encouraged to contact Lifebox about bringing this essential monitor and education programme with them.

Each package directly supports access to safer surgery for women and children worldwide. With the impact of maternal mortality extending beyond the immediate devastation of the family to long-term childhood mortality and the wider economy, it’s clear that we need a wide range of solutions now.

To read the references for this article, please visit the RCOG website to read the online version of International News.