



## Providing emergency and surgical services in rural central India

Jan Swasthya Sahyog



*A 5 day old female newborn had been frothing from her mouth since she was born in her village, some 200 km away. Attempts to feed her led to regurgitation of the milk immediately. She was hypothermic and breathing rapidly when her mother brought her to the Emergency Room of JSS hospital at Ganiyari. An x-ray showed a break in the formation of the food pipe, which created an abnormal communication with the wind pipe — a fatal birth defect if left untreated.*

*Under general anaesthesia, the baby was operated on, and through the chest her food and air passages were set right. She required ventilatory support for a day, and was declared normal seven days after surgery. The mother was delighted to be able to breast feed her baby normally, and so was the team managing her.*

Emergency and surgical services are an essential part of modern medicine. The high cost of such services makes them inaccessible to most of the rural poor. In fact, paying for these medical procedures is the second leading cause of impoverishment in rural India. Very few centers in India provide good surgical facilities at affordable costs, especially for rural populations. JSS is one such center- a reliable place for surgical care for a large, remote, and underprivileged region.

The JSS hospital in Ganiyari village contains an operation theatre complex which includes 3 major operation theatres and a labour room. Emergency and surgical care, including obstetrics, has been a feature of our clinical program since 2001. Since then, we have provided high-quality surgical services to more than 10,000 patients. Of the patients 2,400 admitted to the referral hospital every year, 30% are brought in as emergencies, and we conduct around 40 minor and 30 major surgeries a week. The quality of care provided and complexity of problems dealt with have progressively improved, especially over the last five years. A team of dedicated doctors, nursing staff, laboratory and operating room staff, despite their limited number, have been able to provide these services round the clock. Newborn and childhood surgical problems are treated frequently because one of the only pediatric surgeons in the public sector is part of the JSS core team.

### Common Surgical Emergencies

- road traffic accidents
- falls from trees
- thresher injuries
- intestinal perforations
- ruptured ectopic pregnancies
- gastrointestinal bleeding
- intestinal obstruction



*Duodenal and gallbladder perforations causing peritonitis in a child*



*Resuscitation in the Emergency area of a snake bite victim*



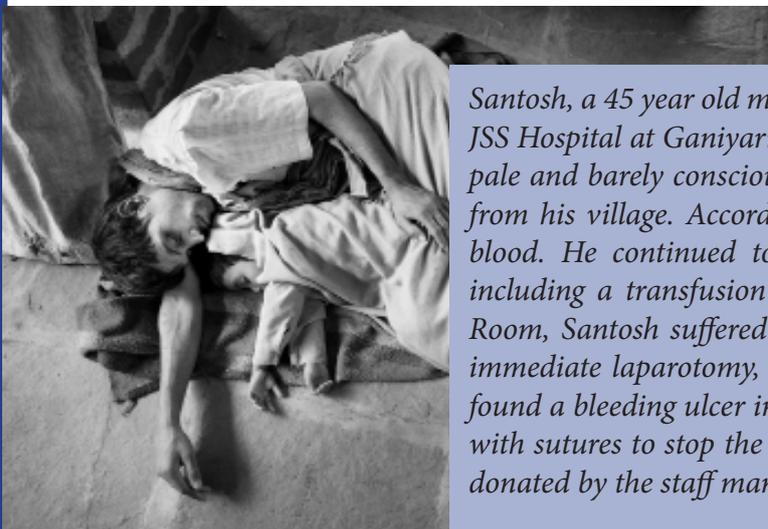
*A complex surgery for an oral cancer patient*

## Common Medical Emergencies

- snake bites
- scorpion and other animal bites
- poisoning
- stroke
- respiratory distress
- sepsis
- meningitis
- severe falciparum malaria
- sickle cell crisis
- necrotising fasciitis
- heart failure
- diabetic complications

## Common Obstetric Emergencies

- obstructed labor
- antepartum and postpartum bleeding
- eclampsia
- incomplete abortion



*Santosh, a 45 year old man with abdominal pain was admitted to the Emergency of JSS Hospital at Ganiyari with massive bleeding from the mouth. He was extremely pale and barely conscious upon arrival at the hospital, after being brought 35 km from his village. According to his relatives, Santosh had vomited 2 litres of fresh blood. He continued to bleed actively despite extensive medical interventions, including a transfusion of 2 units of blood. Then, on the way to the Operating Room, Santosh suffered a cardiac arrest. He was resuscitated and underwent an immediate laparotomy, a surgical cut through the abdominal wall. The surgeon found a bleeding ulcer in the wall of his small intestine, which was quickly overrun with sutures to stop the blood. In all he required 8 units of blood, 6 of which were donated by the staff managing him. He was on ventilator support for 24 hours.*

*Santosh went home on the 8th postoperative day. We have been pleased to see him in follow up at our clinic more than three years after this episode.*

A detailed teaching case study on the surgical services provided at JSS was recently published in *The Lancet*, one of the world's premier medical journals: *Surgical care for low-income, rural populations: an alternative delivery model from Jan Swasthya Sahyog, India*. The Lancet Commission on Global Surgery Teaching Cases, Volume One (April 2015).

## How you can contribute

Emergency services are heavy on skilled human resources and also require substantial drugs, laboratory inputs and surgical interventions, which are all fairly expensive. The population to which we cater is not in a position to bear these emergency costs. Hence they have to be subsidised externally.

**\$50** to take care of one illness episode requiring emergency admission (We see nearly 30 such patients each month).

**\$500** for comprehensive care of emergency newborn/pediatric surgical problems often requiring staged procedures

We propose to start a dedicated emergency services area at the JSS hospital in Ganiyari, for which construction work has just begun. This will require additional manpower and a separate team of health providers.

The total annual budget for these services is \$64,677 (Rs. 35,34,000) of which \$31,754 is towards supporting personnel costs, and \$22,615 is towards non salary recurring costs. We have already been able to arrange for the non recurring expenses including equipment and supplies from other sources (shown in blue).

Emergency & Surgical Services Budget	
<b>Salaries</b>	
Senior doctor	\$9,231
Junior doctor	\$5,538
Laboratory technician	\$2,769
Senior nurse	\$5,538
Junior nurse	\$3,692
Honorarium for visiting surgeons	\$2,769
Drivers	\$2,215
<b>Salary Subtotal</b>	<b>\$31,754</b>
<b>Non Salary</b>	
Laboratory Consumables	\$1,846
Drugs & surgical consumables	\$18,462
Communication costs for telephone, internet, etc.	\$462
POL	\$1,846
<b>Non Salary Subtotal</b>	<b>\$22,615</b>
<b>Non Recurring expenses</b>	
Furniture and small equipment	\$3,077
OT Lights	\$3,077
Electrocautery	\$3,231
2 Suction machines	\$923
<b>Non Recurring Expenses Subtotal</b>	<b>\$10,308</b>
<b>Total Budget</b>	<b>\$64,677</b>
<b>Total Annual Needs Remaining</b>	<b>\$54,369</b>