

# **Putting a Price Tag on Human Life**

**Dr. Devi Prasad Shetty, M.S, FRCS (England)  
Chairman, Narayana Group of Hospitals**

**20 lakh heart surgeries / year**

- **1,20,000 / year**
- **Young bread winners.**
- **Young widows**

**EVERY 10 MINS A YOUNG GIRL DIES DURING CHILD BIRTH  
3-LAKH CHILDREN DIE THE DAY THEY ARE BORN/YEAR**



- **80% of the national expenditure on health is borne out of pocket**
- **47% of RURAL 37% of urban population borrow money, or sell sets to pay the medical bills.**
- **Our government spends 1.1% of GDP on health**

**INDIA WILL BECOME THE FIRST  
COUNTRY IN THE WORLD TO  
DISSOCIATE HEALTHCARE FROM  
AFFLUENCE.**

- **We produce one of the largest number of doctors in the world**
- **We produce the largest number of nurses and med technicians in the world**
- **Out side the USA we have the largest number of US FDA approved drug manufacturing units.**

# Also Largest Employer of WOMEN





**Tax payers money can't pay for the health care**



# Yeshaswini Micro - Health Insurance

Eleven cents per month

4,44,416 surgeries

66,504 heart surgeries

850 million mobile phone subscribers.



# Narayana Hrudayalaya Health City at Bangalore



**Multi Specialty  
and Cancer  
Hospital**

**Cardiac Hospital**

**Orthopedic Hospital**

**Eye  
Hospital**

**Thrombosis  
Research Institute  
& Blood Bank**

# Government nod for redevelopment of Safdarjung Hospital



PTI Jun 4, 2013, 10.26PM IST

NEW DELHI: Government today approved the phase I redevelopment of [Safdarjung Hospital](#) here which would see the establishment of two separate building blocks having a 807-bed super speciality cum paid ward block and a [500-bed emergency block](#).

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**Tags:** [Safdarjung Hospital](#) | [Cabinet Committee on Economic Affairs](#) | [500-bed emergency block](#)

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Both the blocks would be having ICU beds, said a government statement after the [Cabinet Committee on Economic Affairs](#) approved the proposal.

The cost of project execution would be **Rs 1,332 crore** inclusive of Rs 165 crore towards expenses on operations for the first one year.

The super speciality cum paid ward block will cater to cardio vascular thoracic science, cardiology, cardiac surgery, endocrinology, neurosurgery, nephrology, neurology etc, said the statement.

This block will have its own diagnostic and investigation facilities, some of which are proposed to be provided through the PPP mode, it added.



(Government today approved...)

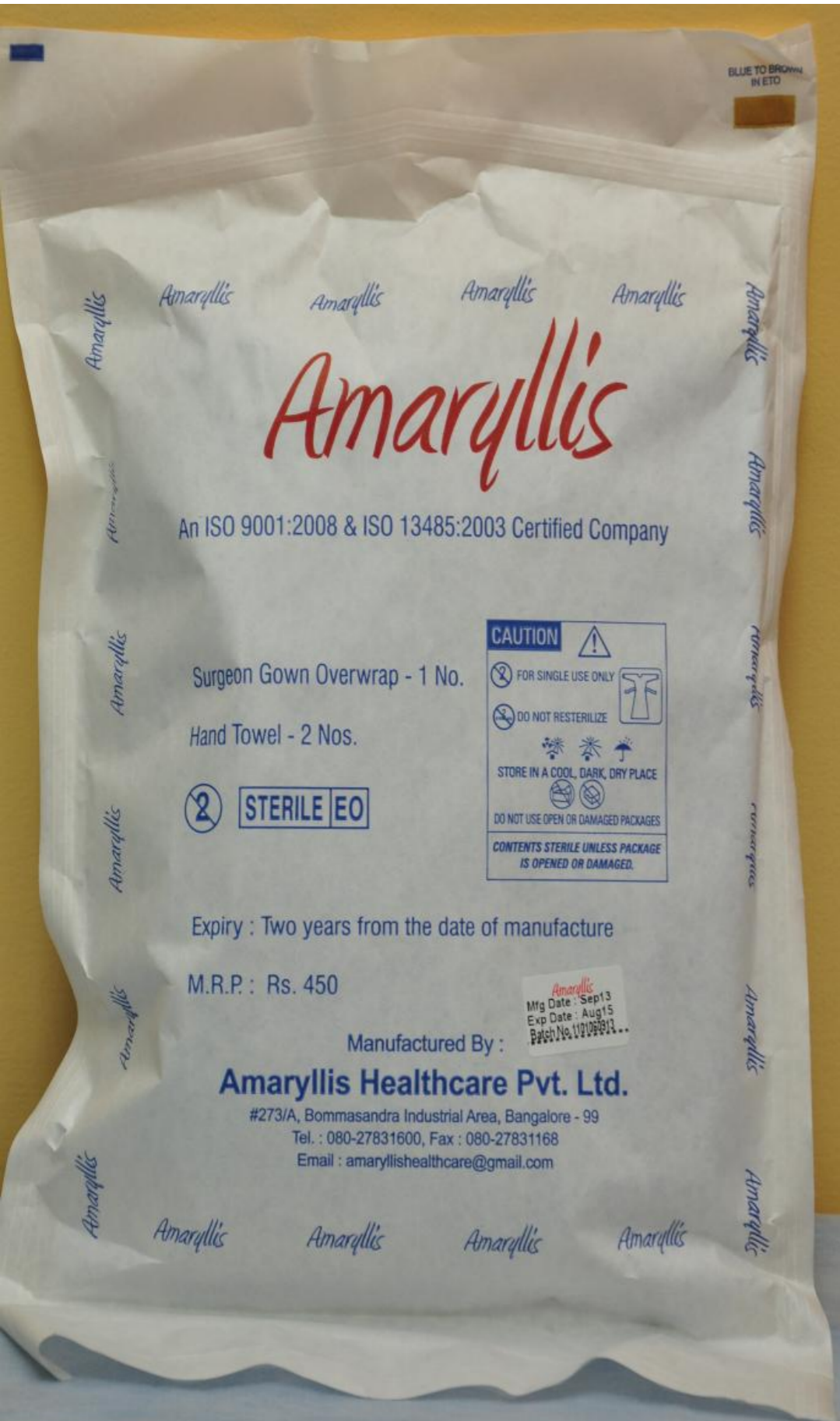
# 300 bed low cost heart hospital for \$6 million, 6 months by L&T



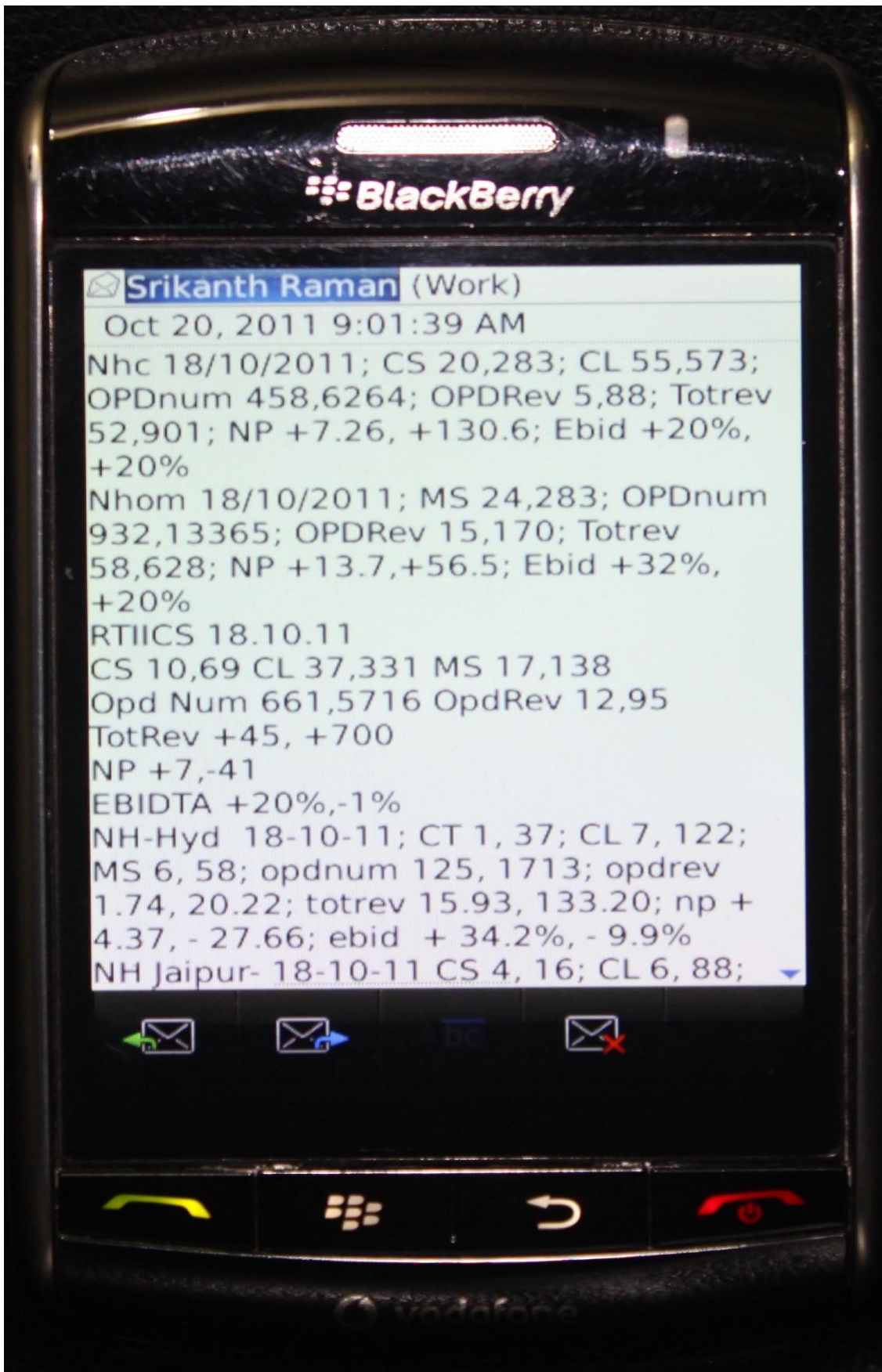
**Only way to reach 30000 beds**



# AMARYLLIS SURGICAL GOWNS, DRAPES



# Daily P&L statement



**Charity is not scalable.**



# CELEBRATE COMPLAINTS



Customer Relationship (CRM)

## Helpdesk

Tuesday, June 04, 2013

Good Afternoon, System Admin - Quality!



Ref.No	Synopsis	Category Name	Location	Complaint By	Reported On	Department Name	Executive Name
201306/14223	1ST FLOOR A BLOCK EHC MSH HOSPITAL, Registration & Counsell. <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	1ST FLOOR A BLOCK EHC MSH	Deepak	07/Jun/2013	1ST FLOOR A BLOCK EHC MSH	Anihony
201306/14391	6TH FLOOR A BLOCK DIALYSIS MSH HOSPITAL, 2 motors not workin... <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	6TH FLOOR A BLOCK DIALYSIS	Vijay	03/Jun/2013	6TH FLOOR A BLOCK DIALYSIS	Anihony
201306/14313	Food Court (MSH), exhaust fans to be fixed, Near Store room... <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	Food Court (MSH)	Shenakar narayana	03/Jun/2013	Food Court (MSH)	Anihony
201209/24312	5th Floor A Block OT MSH Hospital need to be fixed. <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	5th Floor A Block OT MSH Hospital	Lakshmi	25/Sep/2012	5th Floor A Block OT MSH Hospital	Bhaskeer
201301/01463	GROUND FLOOR B BLOCK OPD MSH HOSPITAL, In Neurec OPD, Next Door <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	GROUND FLOOR B BLOCK OPD	Lakshmi	19/Jan/2013	GROUND FLOOR B BLOCK OPD	Bhaskeer
201305/13821	4TH FLOOR B BLOCK WARDS MSH HOSPITAL, in deluxe waiting area... <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	4TH FLOOR B BLOCK WARDS	Serthil	28/May/2013	4TH FLOOR B BLOCK WARDS	Sharada
201304/10175	3RD FLOOR B BLOCK WARDS MSH HOSPITAL, in corridor wall tile... <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	3RD FLOOR B BLOCK WARDS	Vinitha	19/Apr/2013	3RD FLOOR B BLOCK WARDS	Sharada
201305/13824	5TH FLOOR B BLOCK WARD MSH HOSPITAL, Pneumatic system is no... <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	5TH FLOOR B BLOCK WARD MSH	Manimagalai	28/May/2013	5TH FLOOR B BLOCK WARD MSH	Sharada
201305/12841	5TH FLOOR A BLOCK PICU MSH HOSPITAL, near bed no.4 ceiling f... <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	5TH FLOOR A BLOCK PICU MSH	Tamilarasi	18/May/2013	5TH FLOOR A BLOCK PICU MSH	Sharada
201303/07544	4TH FLOOR B BLOCK NEAR IP PHARMACY MSH HOSPITAL, 1 Tie fro... <b>Reported By</b> :Help Line <b>Cur Resolver</b> :On call HEMS MSH.	Engineering Services Department - MSH	4TH FLOOR B BLOCK IP	Preethi	25/Mar/2013	4TH FLOOR B BLOCK IP	Sharada

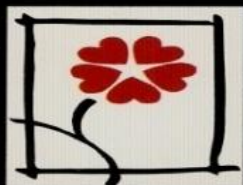
- Un-Lock Record
- Re-Assign to Resolver
- Update Reminder
- Problem Group
- Department Master
- Problem Categories
- Form Buttons
- Reports**
  - Print Problem
  - Status Report**
  - Export In-Progress Details
  - Export Completed Details
  - Export Completed Activity Log Details
  - Export In-Progress Activity Log Details
- Management Reports
- System
- Special effects
- Refresh



# Udayer Pathey

## Doctoring the Future

Many parents want their children to become doctors. Unfortunately, in rural India these dreams don't often come true.



### Asia Heart Foundation

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Fax: +91 33 2436 1263/2426 4204

e-mail: [email@rtiics.org](mailto:email@rtiics.org)

Website: <http://rtiics.org>





# Harvard Business School

“Cardiac Care for the Poor”



TARUN KHANNA  
V. KASTURI RANGAN  
MEELINA MANOJARAN

## Narayana Hrudayalaya Heart Hospital: Cardiac Care for the Poor

Narayana Hrudayalaya (NH), means God's Compassionate Home, in Sanskrit. Situated in the south Indian city of Bangalore, best known as India's Silicon Valley, almost everything about this heart hospital was unique, from its buildings and equipment to the doctors, nurses, and their treatment and care of patients. At the entrance to the main foyer of the hospital was a circular Chapel, equally divided into four independent quadrants, each a place of prayer and meditation for the four main religious faiths of its patient population—Hindus, Muslims, Christians, and Sikhs (see Exhibit 1). Depicting the unity of human faith, the four streams naturally converged at the center of the chapel.

Founded in 2001 by Dr. Devi Prasad Shetty, NH had grown rapidly in four years to house 500 beds, 10 fully commissioned operating theatres (OTs), two cardiac catheterization laboratories and its own blood and valve banks.<sup>1</sup> The pediatric intensive therapy unit (see Exhibit 2), which consisted of 50 beds, was one of the largest in the world with 40% of all procedures performed at NH being pediatric treatments. Since its opening, the hospital had completed over 11,228 open-heart surgeries (OHS), half of which were pediatric. In 2004 alone, it performed 4276 surgeries, of which 1,467 were on children. To complement the surgeries, NH also performed 5,430 catheterization procedures that year.

To provide affordable cardiac care to the masses, NH followed a hybrid strategy of attracting paying patients by virtue of its reputation for high quality, but combined this appeal with a relentless focus on lowering its costs of operation wherever possible, so that a larger number of people could afford to seek treatment. The surplus gained from paying patients was used to subsidize procedures that were performed at, or below, cost for patients who could not afford the full fee. In 2004, the proportion of patients who paid NH's full price to those that could not afford to pay, was about 60:40. See Exhibit 3 for a picture of the entrance foyer at NH on a typical day.

The break-even price for a typical OHS at NH was approximately Rs. 90,000 (US\$2,000) for adults and Rs. 130,000 (US\$2,800) for children. At a price of Rs. 110,000 (US\$2,400) for a regular package

<sup>1</sup> The valve bank (one of four in India) stored valves (harvested from cadavers) which were used to replace damaged valves during surgery. NH offered these valves to patients and other hospitals free-of-charge.

Professors Tarun Khanna and V. Kasturi Rangan and Doctoral Student Meelina Manojaran prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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IN DEPTH

# Bangalore heart surgeon transforms India's health care

Model for hospitals is cutting costs and yielding profits, offering insights for countries grappling with soaring medical tabs

By GEETA ANAND  
Bangalore

**H**AIR TUCKED into a surgical cap, eyes hidden behind thick-framed magnifying glasses, Devi Shetty leans over the sawed open chest of an 11-year-old boy, using bright blue thread to sew an artificial aorta onto his stopped heart.

As Dr. Shetty pulls the thread tight with scissors, an assistant reads aloud a proposed agreement for him to build a new hospital in the Cayman Islands that would primarily serve Americans in search of lower-cost medical care. The agreement is inked a few days later, pending approval of the Cayman parliament.

Dr. Shetty, who entered the limelight in the early 1990s as Mother Teresa's cardiac surgeon, offers cutting-edge medical care in India at a fraction of what it costs elsewhere in the world. His flagship heart hospital charges \$2,000, on average, for open-heart surgery, compared with hospitals in the U.S. that are paid between \$20,000 and \$100,000, depending on the complexity of the surgery.

The approach has transformed health care in India through a simple premise that works in other industries: economies of scale. By driving huge volumes, even of procedures as sophisticated, delicate and dangerous as heart surgery, Dr. Shetty has



Dr. Devi Shetty consults with a patient at his 1,000-bed cardiac hospital in Bangalore. Surgeries here cost an average of \$2,000.

ties at once. Many surgeons in other countries would never reach that number of any type of cardiac surgery in their lifetimes.

Dr. Shetty's success rates appear to be as good as those of many hospitals abroad. Narayana Hrudayalaya reports a 1.4% mortality rate within 30 days of coronary artery bypass graft surgery, one of the most common procedures, compared with an average of 1.9% in the U.S. in 2008, according to data gathered by the Chicago-based Society of Thoracic Surgeons.

It isn't possible truly to compare the mortality rates, says Dr. Shetty, because he doesn't adjust his mortality rate to reflect patients' ages and other illnesses, in what is known as a risk-adjusted mortality rate. India's National Accreditation Board for Hospitals & Healthcare Providers asks hospitals to provide their mortality rates for surgery, without risk adjustment.

Dr. Lewin believes Dr. Shetty's success rates would look even better if he adjusted for risk, because his patients often lack access to even basic health care and suffer from more advanced cardiac disease when they finally come in for surgery.

Dr. Shetty, 54 years old, is a lanky and chatty man. He grew up in Mangalore, another south Indian city, the eighth of nine children. Doctors were gods in the Shetty household, swooping in to save his restaurateur father who suffered from chronic di-

ride from Miami. Procedures, both elective and necessary, will be priced at least 50% lower than what they cost in the U.S., says Dr. Shetty, who hopes to draw Americans

"I think he has reached the point where if you increase volume any more, you could compromise patient care unless backed up by very robust standard operating proce-

Markets

Index of 30 leads to the rescue

Markets

Market remains a sea of red

Markets

Market remains a sea of red

Markets



IN DEPTH



Dr. Devi Shetty, above, has pushed down the cost of health care in India. He drives huge volumes, even of procedures as sophisticated, delicate and dangerous as heart surgery.



Markets

Index of 30 leads to the rescue

Markets

Market remains a sea of red

Markets

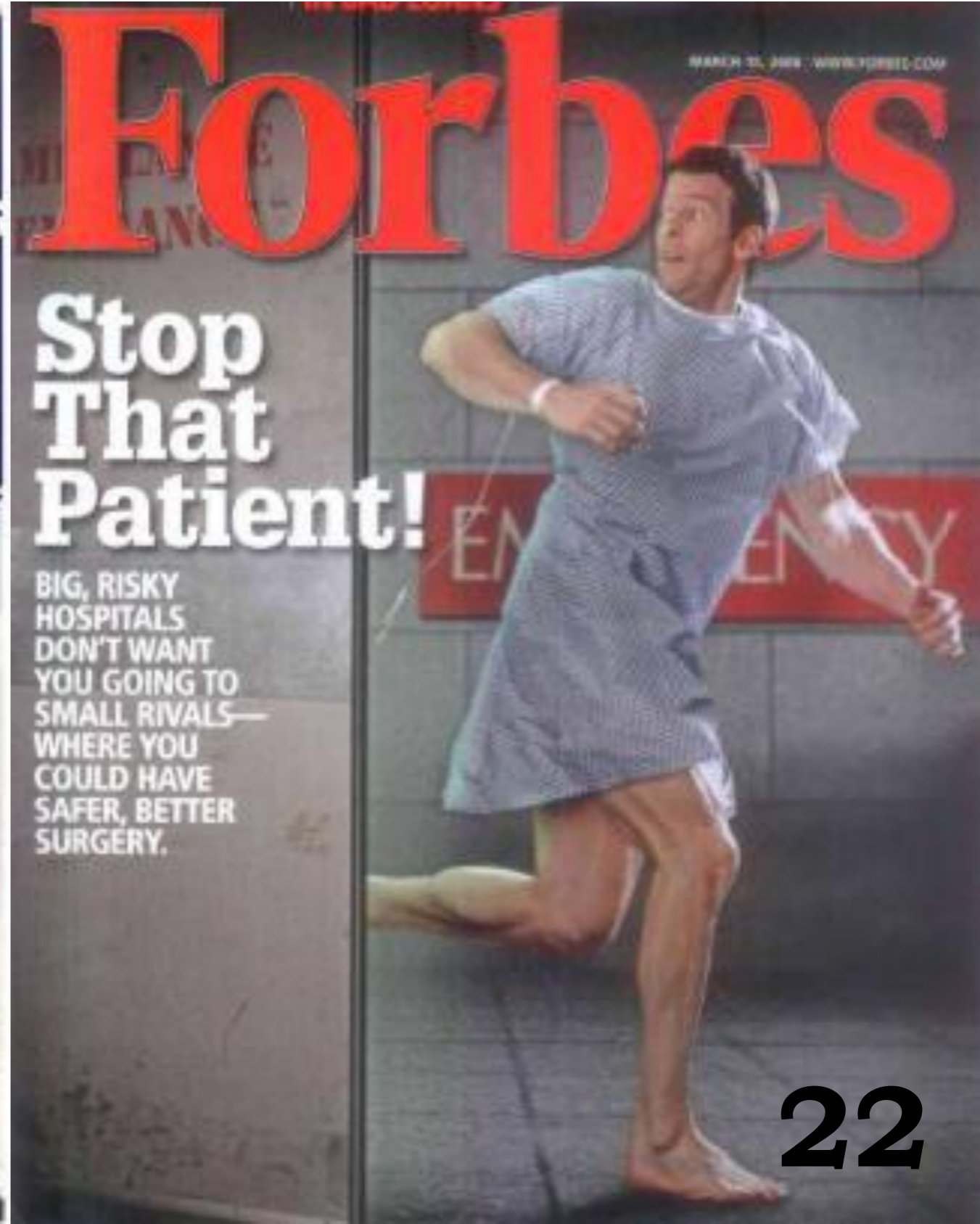
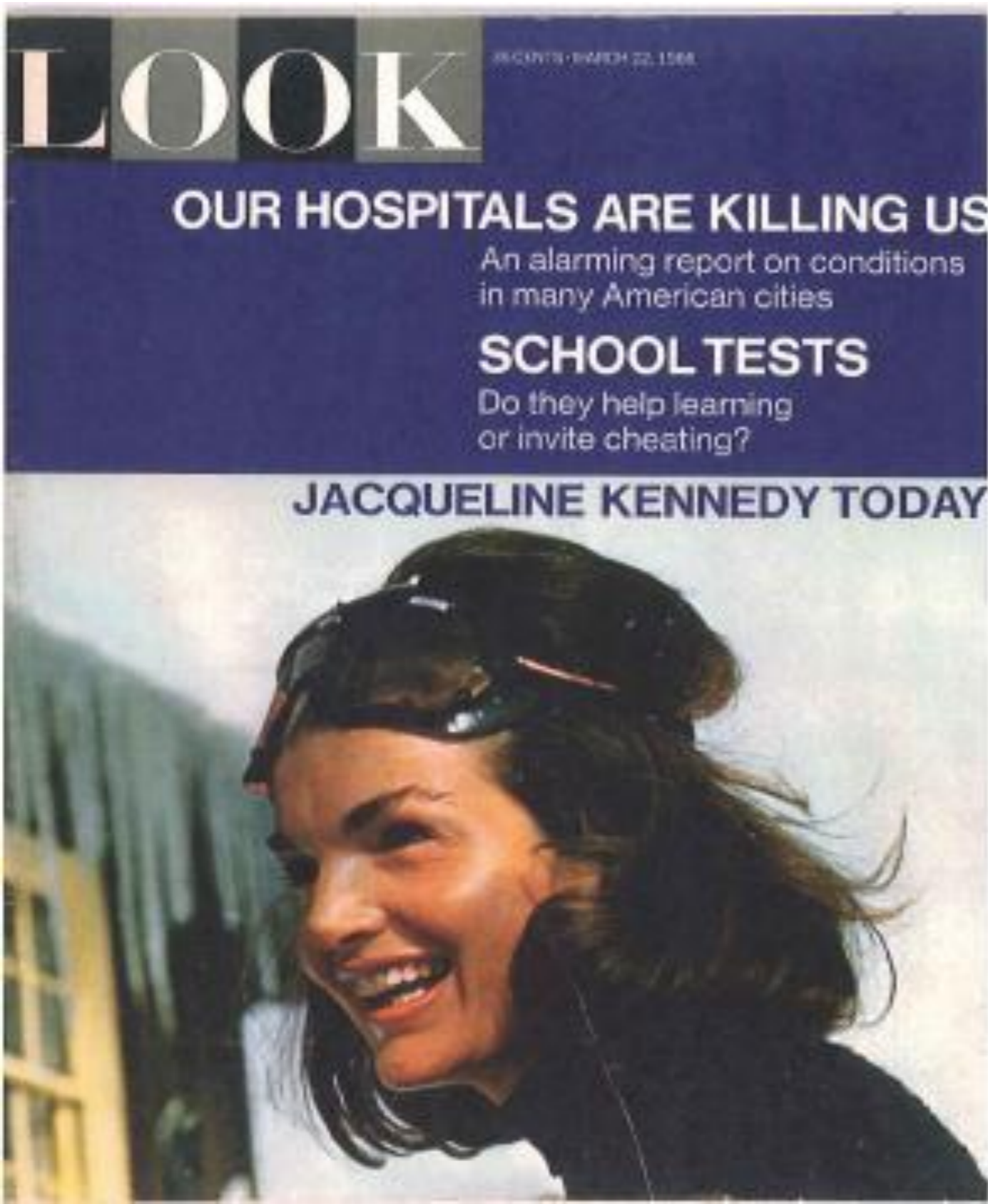
Market remains a sea of red

Markets

# Children's hospital Of Philadelphia pediatric Anesthetists Team



**IT to reduce the mortality by 50%, and cost by 50%  
with Digital protocol**



# **WE ARE NOT TALKING ABOUT BIG DATA**

- ICD 9-6000 diseases, 1000 common.
- 50,000-SIGNS, SYMPTOMS
- 100,000-SIGNS, SYMPTOMS, LAB TESTS

OT - ROUND 6<sup>th</sup> round FORM / NUM / 58

NARAYANA HRUDAYALAYA INTENSIVE THE  
AITU OBSERVATION CHART

Diagnosis: CAD

Room No: 403

Weight: 60 kg, Height: 160 cm

Date of Birth: 08/05/1950, Date of Admission: 10/19/13

Medications	Dose	Adjustment / Duration
7. Pencas	5mg	1-0-1
7. Aspirin	81mg	1-0-1
7. Insulin	2-0-0	10-0-0







# Machines to Train ICU NURSES

- CAE TECHNOLOGY SIMULATORS TO TRAIN ICU NURSES.
- UNIVERSITIES GIVE THE KNOWLEDGE, DRIVING SCHOOLS GIVES THE SKILL
- APPROXIMATELY 110 TASKS
- APPROXIMATELY 20 CARDIAC ARRESTS PER YEAR
- MACHINES DON'T GET TIRED, BORED, BLUFF
- MACHINES TO TRAIN, GRADE AND CERTIFY.