

ASANTE TEACHING HOSPITAL: ACTIVITY-BASED COSTING

Melissa Jean and Courtney Young wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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In August 2015, Courtney Young had only two weeks left in her internship at Asante Teaching Hospital (Asante), a prestigious not-for-profit hospital in Johannesburg, South Africa, to organize the cost data she had gathered from staff interviews into clear recommendations for the chief executive officer (CEO). The hospital's maternity ward competitors had begun offering bundled pricing for natural births, and Young wondered if Asante should do the same. In order to calculate the costs of the service, Young planned to employ both activity-based and time-driven activity-based costing techniques. With this information, Young would be prepared to present the results of her analysis and recommendations for a pricing strategy to the CEO.

ASANTE TEACHING HOSPITAL

Asante had served its community for 40 years, and was the top-ranked hospital in the region for surgery, trauma, neonatal care, and teaching, as evidenced by its status as the official emergency facility for visiting presidents and prime ministers. Asante had 274 beds, employed 1,652 staff, and served over 22,000 patients each year with an annual budget of over R378 million.¹

The hospital received 100 per cent of its funding from a private foundation, and was governed by a board of directors. Because Asante received no government support, patients paid for their services through a combination of insurance coverage and out-of-pocket payments. If patients were unable to afford services, they could apply for coverage under Asante's Patient Welfare Program. This program was jointly funded by the foundation, donations, and any hospital surpluses. The charitable mission of the foundation was to improve living conditions and opportunities for millions of people, without regard to race or religion.

Despite Asante's not-for-profit status, it operated like a competitive enterprise whose revenue figure was comprised of cost recovery from patients and their insurers. As a not-for-profit organization, Asante's challenge was to extract maximum benefits for each dollar of annual funding from the foundation. Examples of these benefits included more doctors learning at a higher level, and advances in eye surgery that created greater benefit for those suffering from cataracts. Quantifying these metrics objectively (even soft ones such as "better") was an important part of the challenge for the organization.

¹ R = ZAR = South African rand; all currency amounts are in R unless otherwise specified; USD\$1 = R12.69 on August 1, 2015.

Asante's CEO was a chartered professional accountant, and was recruited in 2013 from a for-profit hospital in California, where he had earned a reputation for disciplined cost control. This skill set appealed to the board because it had the potential to broaden the number of positive patient outcomes through astute cost management.

THE ENVIRONMENT

Location

Johannesburg had a population of 4.4 million in the city itself, 7.8 million including the metropolitan area, and 10.3 million with the outer suburbs and townships.² The city's unusual history had left vast segments of rich and poor citizens, but growth in the middle class had been strong in the decades since the end of Apartheid.³ The city and townships were economically varied, but with an average gross domestic product of R249,900,⁴ Johannesburg residents' wealth was higher than that of any other area in Africa. In particular, the city's middle class had grown rapidly, which meant that many residents could afford levels of health care their parents had never imagined.

Although the buying power of Johannesburg residents had increased, only 20 per cent of South Africans had private health insurance coverage. Government spending on health care comprised less than half of total health expenditure. Approximately 70 per cent of all doctors and most specialists worked only in the private sector; the remaining 30 per cent served the public sector.⁵

A Competitive Landscape

Competing hospitals in the region operated on a for-profit basis, so they were able to raise capital from investors to expand and earn profits from operations to pay dividends. By contrast, Asante's not-for-profit model meant that it needed to survive independently—any surplus from one department was used to offset care in another department. Competition was stiff in the health care industry, and as the population's wealth grew, so did the health care marketplace.

Competitors generally offered cheaper services with fewer variations in price, but some argued that these organizations provided a lower quality of care and fewer perks in terms of comfort, such as enhanced privacy for mothers. The maternity ward pricing and services offered by competitors for natural births without complications varied across the city (see Exhibit 1). All but Johannesburg Hospital offered bundled pricing for labour with no complications.

Hospitals in the best sections of the city tended to have the newest facilities and the highest prices. St. Luke's Hospital was housed in a modern building and was located in the affluent suburb of Sandton. In sharp contrast, Johannesburg Women's Hospital and Metro Hospital were located in low-income areas. All competitors except St. Luke's were configured for efficiency, with four patients per room, which rendered them less appealing to the growing demand for privacy among maternity ward patients. Privacy was a core driver of perceived luxury, and Asante was the only hospital that offered single rooms to patients for an additional fee.

² Statistics South Africa, *Census 2011 Statistical Release—P0301.4*, October 30, 2012, accessed January 24, 2016, www.statssa.gov.za/publications/P03014/P030142011.pdf.

³ A former system of racial segregation in South Africa enforced through legislation by the governing party from 1948 to 1994.

⁴ Joseph Parilla, Jesus Leal Trujillo, Alan Berube, and Tao Ran, "Global Metro Monitor 2014: An Uncertain Recovery", *The Brookings Institution*, 2014, accessed January 24, 2016, www.brookings.edu/research/reports2/2015/01/22-global-metro-monitor.

⁵ World Health Organization, *Bridging the Gap in South Africa* 88, no. 11 (November 2010): 797–876, accessed May 25, 2016, www.who.int/bulletin/volumes/88/11/10-021110/en/.

While Asante's higher prices could be justified by its premium level of care, insurance providers often scrutinized and debated its long bills before mothers could be discharged. These situations put significant financial strain on patients, undermining Asante's commitment to the best patient experience.

INSURANCE COVERAGE

The Patient Perspective

Given the lack of government-sponsored health care, one of the first priorities of families ascending to a stable middle-class income level was the purchase (often through payroll deduction) of private health insurance. Like fire and auto insurance, health insurance required consumers to pay a steady monthly premium even if there were no claims. When an accident, fire, or illness did occur, policy holders were still responsible for some portion of the cost, often referred to as the deductible or out-of-pocket portion. This meant that patients, though insured, were still sensitive to price and were worried about unexpectedly high bills. Seventy per cent of Asante's patients were covered by private health insurance, which typically reimbursed the patients for up to 70 per cent of the cost of care received. The billing procedure at discharge could be overwhelming for new parents, who were often already nervous about their new baby.

The Hospital Perspective

Management had an ongoing struggle with insurance providers to receive full payment for Asante's premium level of care and patient comfort. Asante included every supply item on the invoice, which was one reason for Asante's lengthy patient bills. Insurance providers naturally appreciated low costs, but also preferred bundled pricing because of its simplicity.

THE BILLING SYSTEM

The existing invoicing system billed Asante's patients for the specific services and supplies used in their particular situation. Since patient needs varied widely (even beyond the simplistic distinction between "with complications" and "without complications"), expectant parents at Asante had no certainty regarding the cost of a birth. Prices at Asante ranged from R13,912 to R19,917 for a natural birth.⁶ These costs were broken down for the patients in dizzying detail upon final discharge, which could be overwhelming for some patients. Some new parents were forced to wait for hours at discharge while their bill was being meticulously compiled and vetted by the insurance providers. The stress of anticipation and the disappointment that their birth cost more than expected was often upsetting to parents, even when much of the cost was covered by insurance. Three broad categories of care were provided in the maternity ward, from no complications (Level 1) to most complications (Level 3). Complications could range from prolonged labour (Level 2 complication) to fetal distress (Level 3 complication) (see Exhibit 2).

THE TASK

Before the end of her internship, Young needed to recommend a pricing strategy for the natural birth maternity ward services at Asante. The options included a single bundled price for all natural birth deliveries, three bundled prices (for each of the three different levels of care), or the status quo.

⁶ Caesarean delivery and aftercare prices were moderately higher. This case focuses solely on the cost for natural childbirth.

To begin her analysis, Young determined the total overhead of the maternity ward by identifying cost drivers and applying those drivers to the total hospital overhead costs (see Exhibit 3). Given her understanding of the operations, she believed that utilities, rent, housekeeping, laundry, information technology, and dining hall expenses would vary with the length of stay. With the extra time involved, she thought that the general and administrative expenditures would be driven by the amount of time the registration clerk used to process the patient's paperwork.

Total staff costs for the maternity ward (see Exhibit 4) were based on employees working a standard 42-hour, five-day work week, taking an average of eight personal leave days and six sick days per year, and twelve days of holidays. Each employee participated in weekly training for an average of two hours per week. The only exceptions were residents who worked 80 hours per week, but were still entitled to the same number of personal leave days, sick days, holidays, and employee training. The chief financial officer indicated that benefits and taxes added an additional 23 per cent to these costs (see Exhibit 5).

ACTION REQUIRED

In order to finalize her pricing recommendation, Young needed to assign costs to each level, and also consider incorporating a markup to help the hospital cover any unexpected costs. She thought a 20 per cent markup would be reasonable. With this information, she would build her presentation to the CEO, which would include a review of the total costs for each level of delivery, as well as her pricing recommendation.

EXHIBIT 1: MATERNITY WARD COMPETITOR INFORMATION

	Asante Teaching Hospital	Johannesburg Women's Hospital	Johannesburg Hospital	Metro Hospital	St. Luke's Hospital
Average Days in Ward	3	2	3	3	2
Obstetrician Services	Yes	Yes	No	Yes	No
Paediatrician Services	Yes	Yes	No	Yes	Yes
Midwife Services	Yes	No	Yes	No	Yes
Baby Accommodation	Yes	Yes	Yes	No	Yes
Postnatal Care	Yes	No	Yes	Yes	No
Average Price	16,915	5,271*	Not Available	7,906	13,177

Note: * Not a bundled price.

Source: Company documents.

EXHIBIT 2: SELECTED HOSPITAL INFORMATION

	Level 1	Level 2	Level 3
Average Days in Maternity Ward	3	3	4
Total Natural Birth Maternity Ward Patients	4,160	240	390
Total Maternity Ward Patients	11,975		
Total Maternity Ward Square Feet	30,294		
Total Hospital Square Feet	455,000		

Note: Patient volumes shown as an annual total.

Source: Company documents.

EXHIBIT 3: TOTAL ANNUAL MATERNITY WARD OVERHEAD (IN R)

Overhead Item	Total
Equipment Depreciation	363,672
General and Administrative	314,622
Insurance	233,991
Utilities	7,454,026
Rent	16,195,458
Housekeeping	206,241
Laundry	395,295
Information Technology	6,119,349
Dining Hall	856,684
Security	302,076
Groundskeeping	898,940
Marketing	105,412

Source: Company documents.

EXHIBIT 4: ANNUAL SALARIES FOR MATERNITY WARD STAFF BY POSITION

Position	Salary
OB/GYN—Total for Team of Three	35,403,451
Paediatrician—Total for Team of Four	23,477,139
Midwife/Nurse	114,557
Resident	231,841
Registration Clerk	9,092
Practical Nurse	7,122

Note: OB/GYN = Obstetrician/Gynecologist.

Source: Company documents.

EXHIBIT 5: BREAKDOWN OF MATERNITY STAFF TIME PER DELIVERY (MINUTES)

Position	Level 1	Level 2	Level 3
OB/GYN	30	37	80
Paediatrician	43	55	71
Midwife/Nurse	1,422	1,422	1,600
Resident	225	240	412
Registration Clerk	43	43	60
Practical Nurse	99	99	110

Note: OB/GYN = Obstetrician/Gynecologist.

Source: Company documents.