

Cone Health Administrative Fellowship Application Question

DaVinci Robot Purchase:

The robotic program at Cone Health has been in place for three years and three facilities within the six-hospital system have one robot each. One of the facilities has requested to add an additional robot that will offer more capacity for the hospital (and health system overall) and will offer new features that allow more complex procedures to be performed on the equipment.

Based on the information provided below, should the health system purchase an additional robot for the hospital? Why or why not? What factors might change your recommendation?

Background Information:

Robotic surgery is not reimbursed at a higher rate than laparoscopic surgery for inpatient cases. For outpatient cases, commercial payors reimbursing as a percent of charges reimburse more because the charge for robotic surgery is higher. Robotic cases have longer OR case time and shorter lengths of stay. On average, the direct margin on outpatient cases is \$2,000 more per case than an equivalent case performed laparoscopically.

On average, the direct margin on inpatient cases is \$500 less per case than an equivalent case performed laparoscopically. One provider group would like to use the new equipment to perform complex surgical cases. These cases will be inpatient. They estimate an additional 2-3 cases per month would be performed on the new equipment in year one. These cases would be new to the health system (the surgeons are currently performing the procedures at a competitor's facility). The average direct margin for these cases performed laparoscopically is \$5,000.

The health system is hiring a new surgeon who specializes in outpatient surgery utilizing the robot. They estimate an additional 1-2 cases per month would be performed on the new equipment in year one. These cases would be new to the health system. The average direct margin for these cases performed laparoscopically is \$3,000.

Current volume averages 22 cases per month. The average length of each robotic case is 3.5 hours.

The annual growth rate for robotic surgery is 2% per year.

The Robot is located in a room that is scheduled based on Block time. One physician group has the room blocked on Mondays, Tuesday and Thursdays and a second physician group has the room blocked on Wednesday and Friday mornings. Currently, Friday afternoons are open for add-on cases from any provider group. Providers can perform any type of case in the OR during their block time and are not required to use the robot.

The capital cost of the robot is \$700,000 with an additional \$200,000 annual maintenance fee (operating expense). Medical equipment is depreciated using straight-line depreciation over 7 years, the capital equipment will be expensed at a rate of \$100,000 per year to the hospital.

¹(Mayo Clinic, 2016)

Definitions:

Direct Margin – net reimbursement minus direct cost. Direct cost is the cost associated with billable services.

Robotic Surgery¹ - robotic surgery using the da Vinci Surgical System was approved in 2000 by the FDA. Robotic surgical systems include a camera arm and mechanical arms with surgical instruments attached to them. The surgeon controls the arms from a computer console. Reported advantages of robotic surgery include enhanced surgical precision and control, fewer complications, less pain and blood loss, a faster recovery and smaller less noticeable scars.

If you have any questions, please contact us at administrative.fellowship@conehealth.com

¹(Mayo Clinic, 2016)