

# Arnold Palmer Hospital

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## Operations Management

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## Summary of Findings

Arnold Palmer Hospital had a need for expansion when their facility could no longer withstand the demand for hospital beds. The hospital's project manager and administration team took the time to carefully strategize during the planning of the new facility to optimize efficiency of the construction and operations. Using the hospital's own guiding principles along with regulatory guidelines as a basis, they also received input from 35 different user groups. The information gathered allowed them to design, build and operate a new facility that was cost efficient.

## Background Information

Arnold Palmer Hospital first opened its doors in 1989. The initial donations to start the new hospital came from Arnold and Winnie Palmer. The two lent their name and assisted with fundraising, eventually the team decided to refurbish an old hospital building and construct an adjoining building of 160,000 square feet.

When the hospital opened in 1989, it had rooms for 273 Beds and a capacity for 6,500 births per year. The hospital's administration decided they had to do something when the number of births climbed from 6,500 in 1989 to almost 12,000 in 2004. The hospital could not meet the demand and chose to build a new facility across the street.

This new facility would be 11 stories tall and hold a total of 285 beds. The administration also kept in mind that there may be a need for future expansion. They decided to leave the top two floors of the new building empty, as they did not see a demand for the extra room at the time of the opening, but figured with the a rising population they will need the space in the future. The design team carefully chose where to place the building on the lot, again keeping in mind a need for future expansion.

The Arnold Palmer Medical Center now consists of the original Arnold Palmer Hospital and the new Winnie Palmer Hospital for Women and Children, which opened its doors in 2006. The Arnold Palmer Medical Center continues to be funded by the Arnold Palmer Medical Center Foundation and is the largest facility dedicated to children and women in the United States.

## Problem Statement

How to construct and operate a new facility at a low cost without compromising quality construction, operational efficiency and breaking the hospital's own guiding principles.

## Analysis of Alternatives

### 1. Reallocate Current Resources

Although this case only focuses on child birth, the hospital does offer other services, to which it allocates space and resources. Those other services may not have as high a demand as the child birth services. An alternative may be to take space and resources away from those services and reallocate them to the child birthing. This solution will be cost effective, but may not be as operationally efficient, or give in to the apparent demand.

### 2. Use Outside Resources

The Arnold Palmer Project Management team used its internal employees and resources throughout most of this process to come up with what they thought to be the most efficient plan. There are firms such as SSOE Group, architecture and construction management firm, which specialize in the design and construction of Hospital and healthcare facilities. Using this alternative, instead of using internal resources, may have cut down on the time spent in the planning stages and it would've allowed hospital workers to focus on their actual jobs and save on any overtime the project may have caused.

### 3. Do Nothing

A third alternative is to do nothing at all and let other area hospitals pick up the demand for beds.

## Detailed Recommendations

To conduct this project, I would first appoint a project manager. A single person, who has a clear understanding of the problem and has the ability to organize and facilitate available resources to best benefit the organization. In this case, a good project manager choice would be someone who holds a management position within the hospital (involved in decision making process), has a background in construction for facilities planning, and has a clear channel to the hospital's top management.

The next step I would take is to have the Project Manager create a schedule of critical events in the process, for this task he would use Microsoft Project.

I would recommend the use of internal resources during throughout the design phase. The user groups (doctors, nurses, etc.) are the ones who use the facilities every day and know where materials, equipment, and even electrical outlets should be placed to be most efficient during the operations phase. The use of internal resources may be costly during this time, as overtime may be necessary to make up for missed work, but it will be made up for during implementation if the design allows for optimum efficiency and less time is needed to perform each task.

Before construction begins, it is imperative that there is a complete list of materials made for the entire project, taking the time to carefully plan each item will save during the purchasing process. Buying in bulk and being creative with the delivery schedule will save a lot of money.

Efficiency goes beyond staff work, it includes the operational costs of utilizing the building itself. Using modern technology and implementing green technology, such as solar panels, the hospital can save on electricity costs, and cut down on its hazardous waste output.

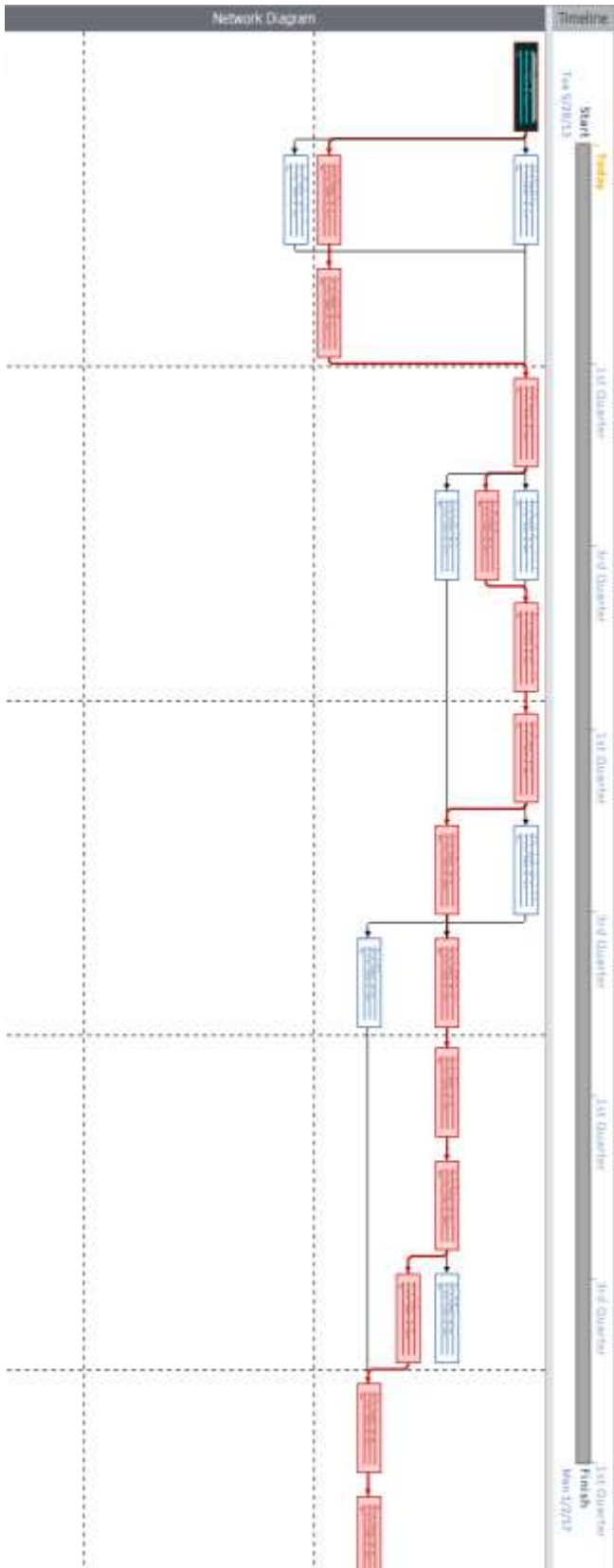
Although the new facility will have 11 floors, 2 being non-operational unless there is an unexpected overflow, I would keep both floors completely empty unless the demand is absolute. Even filling those floors with equipment is a waste of capital, and if there is no present demand the equipment will become outdated and obsolete.

## Implementation

For the new facility to be successful, it must be completed just as how it was discussed in the planning stages. The different departments coordinated where in the building each should be located. The purpose of this plan was to cut down on employee travel time throughout the hospital. The departments that work closely together will be placed near one another to create an easy flow through the hospital. This system will only work if the departments were accurate on how they interact with one another. This will be tested once the building is complete and operation has begun.

The individual rooms should already be perfect from an operations standpoint. During the planning process input was gathered from the employees and patients, mock rooms were set up to test different layouts. Due to the fact that the staff will already be familiar with the new layout, transitioning to the new facility should go smoothly with little interruptions. After one year, the administration team should compare outputs of the new facility to the outputs of the old, to determine the efficiency increase.

# Appendix



Task Mode	Task Name	Duration	Start	Finish	Predecessors
	Establish Master Schedule	14 days	Tue 6/25/13	Fri 7/12/13	1
	Architect Selection Process	25 days	Tue 6/25/13	Mon 7/29/13	1
	Survey Whole Campus and its needs	20 days	Tue 6/25/13	Mon 7/22/13	1
	Conceptual Architects Plans	30 days	Tue 7/30/13	Mon 9/9/13	3
	Cost Estimating	40 days	Tue 9/10/13	Mon 11/4/13	2,4,5
	Deliver Plans to board for consideration/decision	20 days	Tue 11/5/13	Mon 12/2/13	6
	Surveys/Regulatory Review	30 days	Tue 11/5/13	Mon 12/16/13	6
	Construction Manager Selection	45 days	Tue 11/5/13	Mon 1/6/14	6
	State review of need for more hospital beds	70 days	Tue 12/17/13	Mon 3/24/14	7,8
	Design Drawings	80 days	Tue 3/25/14	Mon 7/14/14	10
	Construction Documents	100 days	Tue 7/15/14	Mon 12/1/14	9,11
	Site Preparation/demolish existing building	45 days	Tue 7/15/14	Mon 9/15/14	11
	Construction Start/building pad	40 days	Tue 12/2/14	Mon 1/26/15	12,13
	Relocate Utilities	30 days	Tue 12/2/14	Mon 1/12/15	12
	Deep Foundations	40 days	Tue 1/27/15	Mon 3/23/15	14
	Building Structure in	180 days	Tue 3/24/15	Mon 11/30/15	16

