



**Healthcare Project  
Management**

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# **Chapter 6: Planning Projects, Part 3 (Quality, Human Resource, Communications, Stakeholder, Risk, and Procurement Management)**

Note: See the text itself for full citations.

# Learning Objectives

- ▶ Create plans incorporating the components for project quality, human resource, communications, stakeholder, risk, and procurement management
- ▶ Demonstrate the understanding of the project quality management planning, and explain the purpose and contents of a quality management plan, project dashboard, quality metrics, and quality checklists
- ▶ Explain the project human resource management planning process, and create a human resource plan
- ▶ Describe the importance of using a project communications management plan, a project Web site, and other collaboration tools

# Learning Objectives (continued)

- ▶ Demonstrate the importance of creating a stakeholder management plan
- ▶ Discuss the five project risk management planning processes, and explain how a risk management plan, a probability/impact matrix, a risk register, and risk-related contractual agreements are used in risk management planning
- ▶ Explain a make-or-buy analysis, procurement management plans, requests for proposal/quote, contract statements of work, and supplier evaluation matrices

# Introduction

- ▶ Some project managers neglect planning in the quality, human resource, communications, stakeholder, risk, and procurement management knowledge areas
- ▶ It is important to skillfully plan *all* knowledge areas because they are all crucial to project success

# Figure 6-1. Planning Processes and Outputs for Project Quality, Human Resource, Communications, Risk, Procurement, and Stakeholder Management

Knowledge area	Planning process	Outputs
Project quality management	Plan quality management	Quality management plan Process improvement plan Quality metrics Quality checklists Project documents updates
Project human resource management	Plan human resource management	Human resource plan
Project communications management	Plan communications management	Communications management plan Project documents updates
Project stakeholder management	Plan stakeholder management	Stakeholder management plan Project documents updates
Project risk management	Plan risk management Identify risks Perform qualitative risk analysis Perform quantitative risk analysis Plan risk responses	Risk management plan Risk register Project documents updates Project documents updates Project management plan updates Project documents updates
Project procurement management	Plan procurement management	Procurement management plan Procurement statement of work Procurement documents Source selection criteria Make or buy decisions Change requests Project documents updates

# Project Quality Management

- ▶ Project quality management ensures that the project will satisfy the stated or implied needs for which it was undertaken
- ▶ Quality is critical in clinical care projects
- ▶ Key outputs produced as part of project quality management include a quality management plan, quality metrics, and quality checklists

# What Is Quality?

- ▶ The International Organization for Standardization (ISO) defines **quality** as “the degree to which a set of inherent characteristics fulfill requirements” (ISO9000:2000)
- ▶ Other experts define quality based on conformance to requirements and fitness for use.
  - **Conformance to requirements** means that the project’s processes and products meet written specifications
  - **Fitness for use** means that a product can be used as it was intended
- ▶ The *customer* ultimately decides that the quality level is acceptable

# Planning Quality Management

- ▶ Quality planning includes identifying which quality standards are relevant to the project and how best to satisfy those standards
- ▶ It also involves designing quality into the products of the project as well as the processes involved in managing the project
- ▶ Like other plans, the size and complexity of quality management plans varies to meet project needs

# Figure 6-2. Sample Quality Management Plan (partial)

## Introduction

The main goal of this project is to develop new clinical workflows, and supporting systems, that will align with the IHI Ventilator Associated Pneumonia best practices bundle in order to reduce the AHS VAP incidence rate. The project includes the identification, collection, and testing of clinical data from one or more existing AHS clinical systems into a new data mart that will be used to deliver reports to caregivers. The reports must be accurate, timely, and readily accessible in order to provide the caregivers time to correct any shortcomings in compliance with the IHI bundle. Key stakeholders from technology, data analytics, nursing, respiratory therapy, and resident physicians must be engaged in the design, testing, training, and rollout of the VAPR system.

## Quality Standards

The standards that apply to this project are summarized as follows:

Standard	Metric
The Institutes of Medicine has identified six quality categories that must be addressed when dealing with patient care. All AHS clinical care projects must address on more of these categories.	VAPR will improve patient safety by reducing the VAPR incidence rate by 25% in the first 90 days after implementation. It will also improve equity of care as all ventilated patients will receive the same best-practices ventilator protocol. It will also improve effectiveness as the IHI bundle has been proven to reduce VAP.
All direct patient care staff will complete computer-based or in-class training relevant to their workflows when any of the following occurs <ul data-bbox="115 1142 927 1270" style="list-style-type: none"><li>• the staff member is hired or transitions into a new role ,</li><li>• before a workflow is modified, or</li><li>• on their hire date anniversary.</li></ul>	Computer based training for the VAPR workflow changes are available 30 days prior to go live and be incorporated into the annual clinician online training curriculum.

# Quality Metrics

- ▶ A **metric** is a standard of measurement
- ▶ Metrics allow organizations to measure their performance in certain areas and to compare them over time or with other organizations
- ▶ Examples of common metrics used by organizations include failure rates of products produced, availability of goods and services, and customer satisfaction ratings

# Sample Quality Metrics

- ▶ The VAPR project's success criteria, as documented in the project charter, included metrics based on:
  - *Time*: Completing the project within one year
  - *Cost*: Spending \$980,000 or less
  - *VAP incidence reduction*: Reducing incidences by at least 50% within six months of implementation based on the number of VAP events per 1000 ventilator days.
- ▶ Many organizations use charts to keep track of metrics, such as a **project dashboard**—a graphical screen summarizing key project metrics

# Best Practice

- ▶ Four key practices that best-performing companies follow include the following:
  1. They build an integrated project management toolbox. In other words, they use several standard and advanced project management tools. They tailor these tools to their organizations and provide employees with lots of templates
  2. They grow competent project leaders, emphasizing business and soft skills. These organizations identify good project leaders and provide training, mentoring, and a career path for them
  3. They develop streamlined, consistent project delivery processes. Project management methodologies are well defined and followed
  4. And probably the hardest of all, they install a sound but comprehensive set of project performance metrics. It is difficult defining, measuring, and tracking metrics across an organization, but in order to improve project delivery capability, these metrics are crucial\*

\*Dragan Milosevic, Portland State University, "Delivering Projects: What the Winners Do," PMI Conference Proceedings (November 2001).

# Figure 6-3a. Sample VAPR Project Dashboard

Metric	Description	Status	How Measured	Explanation
<b>Scope</b>	Meeting project goals	●	Earned value chart	On target
<b>Time</b>	Staying on schedule	●	Earned value chart	Slightly behind schedule
<b>Cost</b>	Staying on budget	●	Earned value chart	Under budget
<b>VAP Bundle</b>	Identify AHS systems with required elements	●	Percent of elements identified in AHS systems	All elements identified and available
<b>VAP reduction</b>	Reduce by 50% within six months	↔	Infection Control data	Cannot collect until after implementation
<b>Percent of ICU staff trained</b>	Train all ICU staff prior to go live	○	Training Management System test results	Learning management system down for four days causing a delay in training. We expect to catch up quickly.

● On Target

○ Slightly off target / caution area

● Off Target / problem area

↔ Not able to collect data yet

# Figure 6-3b. Sample Project Dashboards from [www.projectmanager.com](http://www.projectmanager.com)



# Figure 6-4. Sample Quality Metrics Description

The following quality metrics apply to this project:

1. All direct patient care staff will complete computer-based or in-class training relevant to their workflows when any of the below occurs:

- the staff member is hired or transitions into a new role ,
- before a workflow is modified, or
- on their hire date anniversary.

Therefore the VAPR training modules, all computer-based, must be developed and tested prior to nurse, respiratory therapy, and physician training on the new workflows for ventilated patients. The training modules must be integrated with the existing annual clinical staff training and therefore be hosted in the existing training management system. As with all required clinical training at AHS, the VAPR training must include an “end of course” test with at least five questions related to the course material. A passing grade is 80% or higher, per AHS standards.

2. All new bedside patient care systems must be mobile-device ready in order to allow physicians to manage the patient regardless of the location of the physician or the patient. Therefore the VAPR reporting tool will be both desktop and iPad (the only AHS supported mobile platform) ready, with the report being optimized for each separate platform.

# Quality Checklists

- ▶ A **checklist** is a list of items to be noted or consulted
- ▶ It helps project teams verify that a set of required topics or steps has been covered or performed
- ▶ A single project can have many different checklists, such as for:
  - Interviewing project team members
  - Selecting suppliers
  - Reviewing important documents
  - Ensuring a room is ready for training

# Figure 6-5. Sample Quality Checklist

**Project Name:** VAPR Project

**Checklist Purpose:** VAPR Online Training Program Standards

- Program includes at least 10 slides.
- Program slides use the AHS training template for background graphics, logos, etc.
- Program describes the workflow from start to finish.
- Program describes the impact (patient, financial, safety, etc.) of not following the prescribed workflow.
- Program includes an “end of course” test that includes at least five questions.
- Passing score for the test is an 80% or higher.

# Project Human Resource Management

- ▶ Many corporate executives have said, “People are our most important asset.” People determine the success and failure of organizations and projects
- ▶ **Project human resource management** is concerned with making effective use of the people involved with a project
- ▶ The main output produced as part of project human resource management planning is a human resource management plan, which includes a project organizational chart, a responsibility assignment matrix, a resource histogram, and a staffing management plan
- ▶ Other topics, such as motivation and dealing with people problems, are discussed in Chapter 7

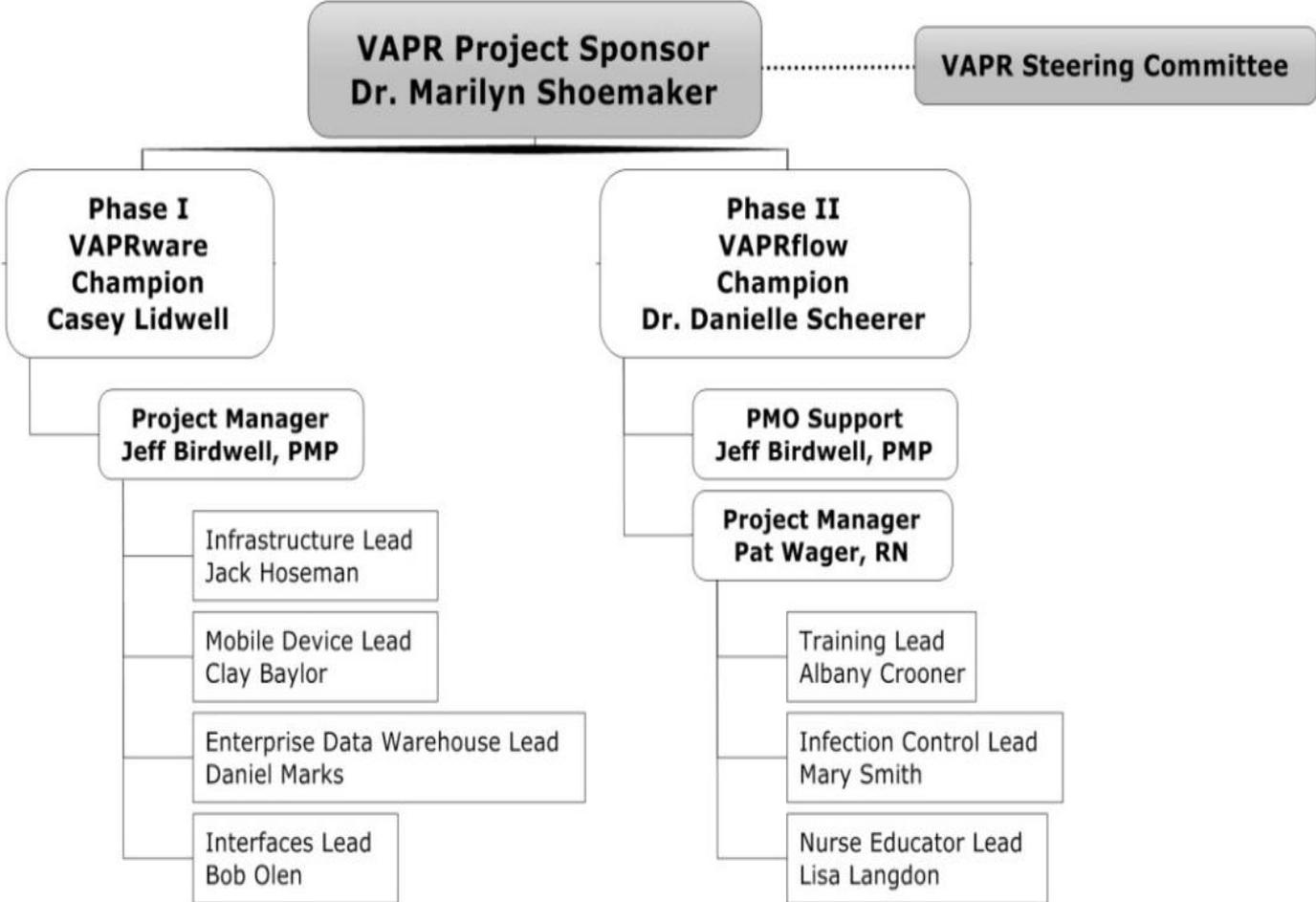
# Healthcare Perspective

- ▶ PMI funded a study to consider factors that would improve the health care sector's project success rate.
- ▶ The researchers suggest that a major problem is that healthcare workers do not understand the differences between service work and project work.
- ▶ People on project teams need to learn to collaborate on achieving project goals and understand their roles on the project team, which may differ from their roles in their day-to-day work.
- ▶ Management also needs to structure project teams to be successful by properly planning workers time and payment to allow them to successfully engage in project work.

# Project Organizational Charts

- ▶ Similar to a company's organizational chart, a **project organizational chart** is a graphical representation of how authority and responsibility is distributed within the project
- ▶ The size and complexity of the project determines how simple or complex the organizational chart is

# Figure 6-6. Sample Project Organizational Chart



# Responsibility Assignment Matrices

- ▶ A **responsibility assignment matrix (RAM)** is a matrix that maps the work of the project as described in the work breakdown structure (WBS) to the people responsible for performing the work
- ▶ For smaller projects, it is best to assign WBS activities to individuals; for larger projects, it is more effective to assign the work to organizational units or teams
- ▶ **RACI charts** are a type of RAM that show **R**esponsibility (who does the task), **A**ccountability (who signs off on the task or has authority for it), **C**onsultation (who has information necessary to complete the task), and **I**nformed (who needs to be notified of task status/results) roles for project stakeholders

# Figure 6-7a. Sample RACI Chart, Work Package Based

Work Package	Jeff	Pat	Bob	Mark	Clay
IHI Bundle Definition	A	R	I	I	-
AHS VAP Bundle Data Sources	A	R	C	R	-
Database	A	I	C	R	C
Daily Script to Update Database	A	I	R	C	R
Reports	A	C	I	R	R

R: Responsible    A: Accountable    C: Consulted    I: Informed

# Figure 6-7b. Sample RACI Chart, Project Task Based

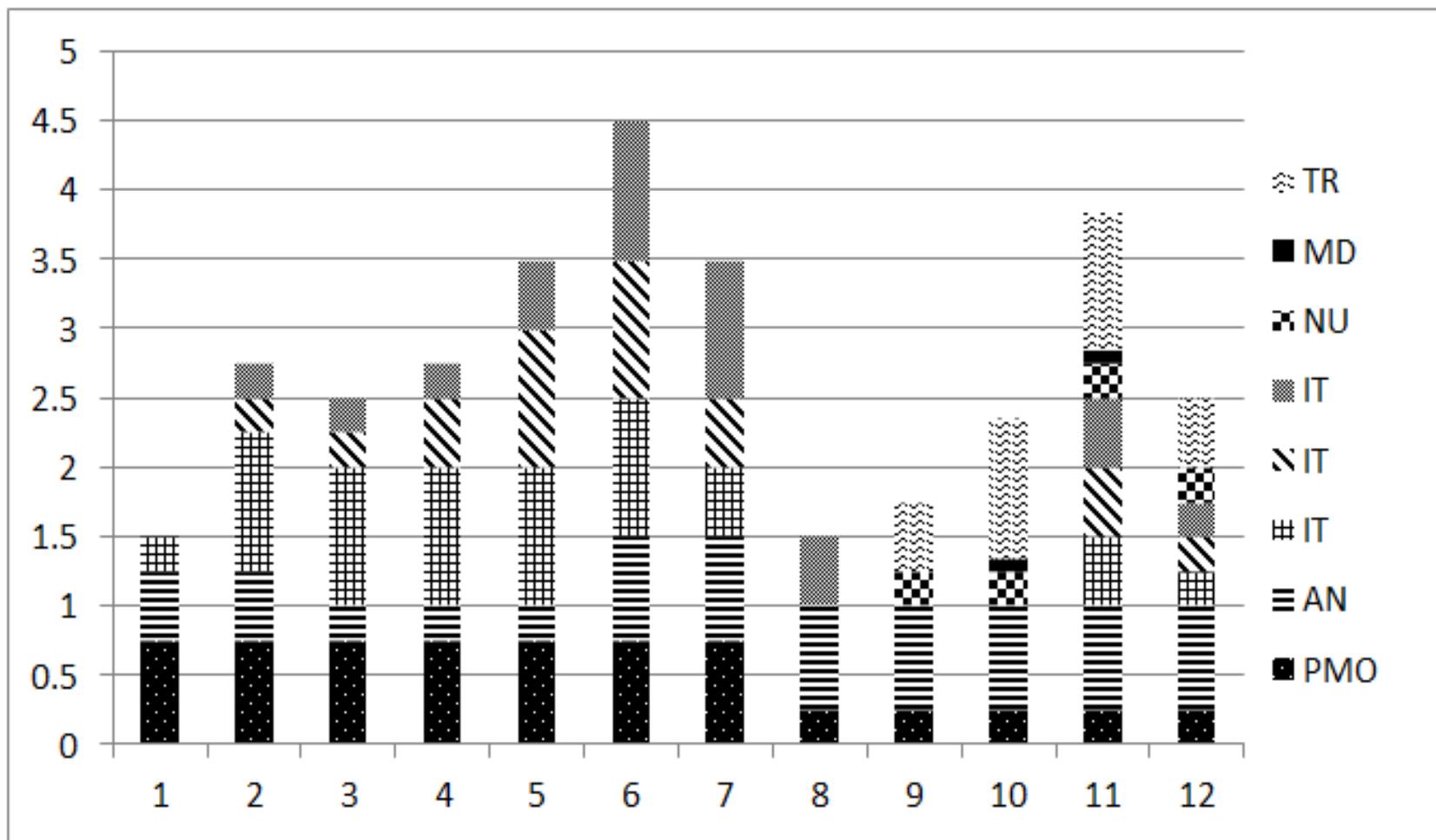
Work Package	Jeff	Pat	Bob	Mark	Clay
IHI Bundle Definition	A	R	I	I	-
AHS VAP Bundle Data Sources	A	R	C	R	-
Database	A	I	C	R	C
Daily Script to Update Database	A	I	R	C	R
Reports	A	C	I	R	R

R: Responsible    A: Accountable    C: Consulted    I: Informed

# Resource Histograms

- ▶ A **resource histogram** is a column chart that shows the number of resources required for or assigned to a project over time
- ▶ In planning project staffing needs, senior managers often create a resource histogram in which columns represent the number of people needed in each skill category. By stacking the columns, you can see the total number of people needed each month
- ▶ After resources are assigned to a project, you can view a resource histogram for each person to see how his/her time has been allocated

# Figure 6-8. Sample Resource Histogram



# Staffing Management Plans

- ▶ A **staffing management plan** describes when and how people will be added to and removed from a project
- ▶ It describes the types of people needed to work on the project, the numbers needed for each type of person each month, and how these resources will be acquired, trained, rewarded, and reassigned after the project

# Figure 6-9. Sample Staffing Management Plan

## VAPR Project Staffing Management Plan

June 1

### Introduction

The primary goal of this project is to revise the clinical workflows for ventilated patients within the intensive care units so that they align with the IHI Ventilator Bundle, an evidenced-based set of practices that prevent ventilator associated pneumonia.

### Staffing Requirements

This project will require the following internal staff:

- Project manager (PM) for Phase I
- Project manager (PM) for Phase II
- PMO Support for Phase II (PMO)
- SME from clinical analytics
- Nursing educator
- Physician
- IT department staffing (database developer, script developer, interface developer, report developer)

### Staff Assignments

The project manager will work through functional managers to assign individuals to the project. Other than for physicians, all roles will be allocated in .25 FTE increments (staff will all be assigned as .25, .5, .75, or 1 FTE). To minimize communication issues and handoff problems, no roles can be filled by a combination of staff. To ensure consistency, all staff assigned to a role will remain in that role for the life of the project.

### Training, Rewards, and Reassignment

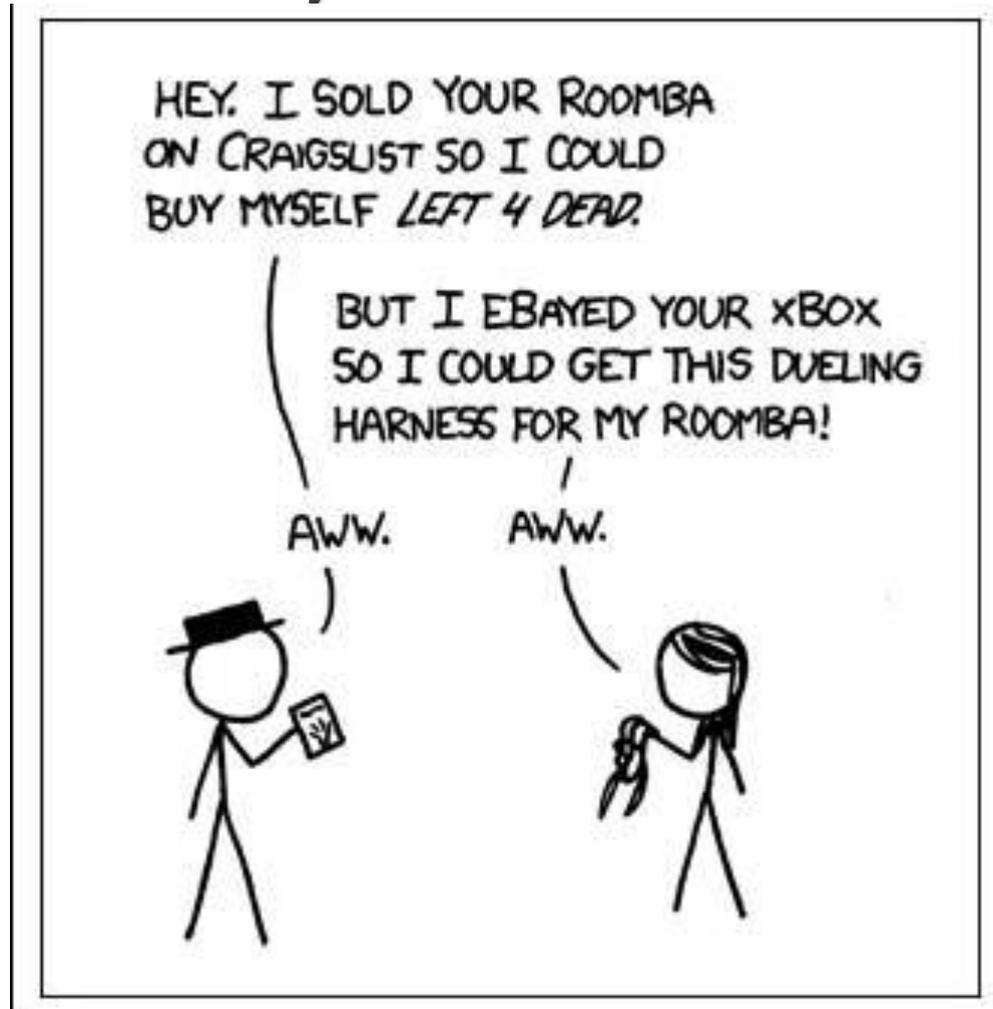
Due to the short timeline and compliance requirements for this project, staff assigned to this project will have appropriate experience. The project manager will do his or her best to provide a challenging and enjoyable work environment. Assignment to the project will not affect an individual's salary, but the project manager will write a performance evaluation and recommend appropriate rewards. If an individual is not performing as expected, the project manager will work with him or her and the appropriate functional manager to determine whether corrections can be made or if reassignment is necessary.

Attachment A: Resource histogram

# Project Communications Management

- ▶ Many experts agree that the greatest threat to the success of any project is a failure to communicate
- ▶ Many project managers say that 90 percent of their job is communicating, yet many project managers fail to take the time to plan for project communications
- ▶ Project communications management involves generating, collecting, disseminating, and storing project information
- ▶ Key outputs include a communications management plan and a project Web site

# Figure 6-10. Poor Communications ([www.xkcd.com](http://www.xkcd.com))



# Communications Management Plans

- ▶ Because project communication is so important, every project should include a **communications management plan**—a document that guides project communications
  
- ▶ The plan will vary with the needs of the project, but some type of written plan should always be prepared and address the following items:
  - Stakeholder communications requirements
  - Information to be communicated, including format, content, and level of detail
  - Identification of who will receive the information and who will produce it
  - Suggested methods or guidelines for conveying the information.
  - Description of the frequency of communication
  - Escalation procedures for resolving issues
  - Revision procedures for updating the communications management plan
  - A glossary of common terminology used on the project

# Video Highlights

- ▶ People who design new healthcare products know how important it is to communicate with both healthcare professionals and consumers when planning new products. For example, Worrell recognized that there was an information imbalance between the patient and the physician relationship. They decided to include thought-leading physicians and patients in their design process to help them develop breakthrough products. They created a short film that describes a novel approach to stakeholder communications.
- ▶ In “Design we can all live with,” you can hear the perspectives of patients, product developers, and physicians.

# Figure 6-11. Sample Communications Management Plan (partial)

## 1. Stakeholder Communications Requirements

Because this project involves a variety of clinical disciplines, the project team will use interviews, checklists, and lessons learned from past clinical workflow projects to determine the communications requirements for the project stakeholders. Each of the three clinical disciplines will have specific communications needs, in addition to those of organizational leadership that must be determined, analyzed and fulfilled.

## 2. Communications Summary

The following table summarizes various stakeholders, communications required, the delivery method or format of the communications, who will produce the communications, and when it will be distributed or the frequency of distribution. All communications produced will be archived and available on the project Web site. The project team will use various templates and checklists to enhance communications. The team will also be careful to use the appropriate medium (that is, face-to-face meeting, phone, e-mail, Web site, and so on) and follow corporate guidelines for effective communications. Note the comments/guidelines as well.

# Project Web Sites and Other Collaboration Tools

- ▶ Project Web sites provide a centralized way of delivering project documents and other communications as well as accessing collaboration tools.
- ▶ Project teams can develop project Web sites, blogs, or wikis using various tools, or their enterprise project management software might provide all of the communication tools they require.
- ▶ It is important to select and use tools properly to help meet project communications requirements, and to limit the number of different tools where possible in order to avoid confusion.

# Figure 6-12. Sample Student Project Web Site

*Keeping Clean 2013*

Search this site

Home Scope Statement Team Charter & Contract Progress Report 1 Progress Report 2 Communications **Deliverables** Sponsor Evaluation Time Log Final Project Report Sitemap

Home  
Communications  
**Deliverables**  
Final Project Report  
Progress Report 1  
Progress Report 2  
Scope Statement  
Sponsor Evaluation  
Team Charter & Contract  
Time Log  
Sitemap

*Deliverables*

**Poster/Flyer:**

**HAVE YOU CLEANED LATELY? SPRING CLEAN FOR KEEPING CLEAN!**

Donate your gently used clothes, electronics, furniture and more!

Tabling will be held for donations in Christianson Center (Augsburg College) on:  
Tuesday March 5<sup>th</sup> 11:20-3:30  
Wednesday March 13<sup>th</sup> 11:20-3:30  
Tuesday March 26<sup>th</sup> 11:20-3:30  
Wednesday March 27<sup>th</sup> 11:20-3:30  
Or contact us at [keepingcleanyardsale@gmail.com](mailto:keepingcleanyardsale@gmail.com)

All donations will go to a HUGE yard sale that will be held at Augsburg on April 5<sup>th</sup> in Oren Gateway from 11am-8pm. Proceeds will go toward Scholarships for [StepUP](#) students.

Google site from a class project. Team used Google docs to estimate and track hours, prepare charter, progress reports, etc.

# Project Stakeholder Management

- ▶ Project stakeholder management planning involves determining strategies to effectively engage stakeholders in project decisions and activities based on their needs, interests, and potential impact.
- ▶ Outputs of this process are a stakeholder management plan and project documents updates.

# Stakeholder Management Plans

- ▶ In addition to information found in the stakeholder register, a stakeholder management plan can include the following:
  - Current and desired engagement levels
  - Interrelationships between stakeholders
  - Communication requirements
  - Potential management strategies for each stakeholder
  - Methods for updating the stakeholder management plan

# Figure 6-13. Sample Stakeholder Management Plan

Name	Title	Power/ Interest	Project Engagement	Potential Management Strategies
<b>David Waters, MD</b>	Executive Medical Director	High / Medium	Supportive	Dr. Waters is always interested in projects that improve patient care. He is the chief physician and can help us gain their buy-in.
<b>Danielle Scheerer, MD, PhD</b>	Chief Quality Officer	High / High	Leading	Dr. Scheerer is charged with improving patient care, but she rarely serves as project champion. She believes this project will improve patient outcomes and reduce costs to AHS significantly. We need to keep her close to the work and bring her in when we meet clinical resistance. She is a result-oriented person who will make things happen.
<b>Casey Lidwell, MHA</b>	Chief Analytics Officer	Medium / Low	Supportive	Casey is supportive, but his commitment is to provide the data required by those on the clinical phase of the project. His interest is to meet their needs, but he has no personal commitment to the project and has several other high priority projects on his plate. He was chosen as the Phase I champion by the sponsor in order to improve his project commitment, but we need to work to keep him engaged.

# Project Risk Management

- ▶ PMI defines a project **risk** as an uncertainty that can have a *negative or positive* effect on meeting project objectives
- ▶ Note that some people only view risks as negative and call positive risks opportunities
- ▶ Key outputs include a risk management plan, a probability/impact matrix, risk response strategies, a risk register, and risk-related contractual agreements

# Project Risk Management

- ▶ A risk management plan documents the procedures for managing risk *throughout the life of a project*
- ▶ The general topics that a risk management plan should address include the methodology for risk management, roles and responsibilities, budget and schedule estimates for risk-related activities, risk categories, probability and impact matrices, and risk documentation

# Other Risk Plans

- ▶ **Contingency plans** are predefined actions that the project team will take if an identified risk event occurs
- ▶ **Fallback plans** are developed for risks that have a high impact on meeting project objectives, and are put into effect if attempts to reduce the risk are not effective; sometimes called contingency plans of last resort
- ▶ **Contingency reserves** or **contingency allowances** are funds held by the project sponsor that can be used to mitigate cost or schedule overruns if known risks occur
- ▶ **Management reserves** are funds held for unknown risks.

# Figure 6-14. Sample Risk Management Plan (partial)

## 1. Methodology

The project team will review information related to clinical projects that either changed clinical workflows based off of best practices, or that directly impacted the intensive care units. The team will use a variety of risk identification techniques, including brainstorming, interviews of project and clinical leadership, and risk-related checklists.

## 2. Roles and Responsibilities

Jeff Birdwell, the project manager for Phase I, will be responsible for leading the team and other stakeholders in performing risk-related activities for both phases. As detailed tasks and deliverables are determined, the project manager will delegate those tasks as appropriate.

## 3. Budget and Schedule

As specific risk-related tasks and deliverables are determined, budget and schedule information will be provided.

## 4. Risk Categories

Risks will be categorized based on risk source and risk impact. Risk sources will be technical, clinical, leadership, resources, funding, project management, and environment. Risk impact categories will be scope, budget, quality, and schedule.

## 5. Risk Probability and Impact

Risk probability will use five probability scales: 0-20%, 21-40%, 41-60%, 61-80%, and 81-100%. Each of those probability ranges will be assigned a value of 1, 2, 3, 4, and 5, respectively. The project impact choices are defined as follows, and will also be defined values of 1 through 5.

# Identifying Risks

- ▶ **Risk events** refer to specific, uncertain events that may occur to the detriment or enhancement of the project
  - **Negative risk events** include the performance failure of a product produced as part of a project, delays in completing work as scheduled, increases in estimated costs, supply shortages, litigation against the company, and strikes
  - **Positive risk events** include completing work sooner than planned or at an unexpectedly reduced cost, collaborating with suppliers to produce better products, and obtaining good publicity from the project
  - You can chart the probability and impact of risk events on a matrix

# Figure 6-15. Sample Probability/Impact Matrix for Qualitative Risk Analysis

	0-20%	21-40%	41-60%	61-80%	<80%
Failure				Risk 3	Risk 1 Risk 2
	5	10	15	20	25
Severe			Risk 5	Risk 4	
	4	8	12	16	20
Moderate	Risk 7		Risk 6		
	3	6	9	12	15
Minimal	Risk 8				
	2	4	6	8	10
None	Risk 9				
	1	2	3	4	5

**Probability**

**Impact**

# Planning Risk Responses

## Negative Risk Responses

- ▶ Risk avoidance
- ▶ Risk acceptance
- ▶ Risk transference
- ▶ Risk mitigation

## Positive Risk Responses

- ▶ Risk exploitation
- ▶ Risk sharing
- ▶ Risk enhancement
- ▶ Risk acceptance

# Risk Registers

- ▶ A **risk register** is a document that contains the results of various risk management processes and is often displayed in a table or spreadsheet format
- ▶ It is a tool for documenting potential risk events and related information, including:
  - An identification number for each risk event
  - A rank for each risk event (usually high, medium, or low)
  - The name of the risk event
  - A description of the risk event
  - The category under which the risk event falls
  - The **root cause**: The real or underlying reason a problem occurs
  - **Triggers**: Indicators or symptoms of actual risk events
  - Potential responses to each risk event
  - The risk owner, or person who will own or take responsibility
  - The probability of the risk event occurring
  - The impact to the project if the risk event occurs
  - The status of the risk event

# Figure 6-16. Sample Risk Register

#	Rank	Risk	Description	Trigger(s)	Risk Score	Prob	Impact	Source	Root Cause	Primary Response	Potential Response	Watch Dates	Owner	Status
R13	1	IHI Vent bundle not accepted by clinicians.	AHS clinicians are considered the best of the best – they train the doctors of tomorrow. As such they are sometimes slow to adopt practices not developed or tested at AHS.	<ol style="list-style-type: none"> <li>1. Clinicians not registering for training.</li> <li>2. Clinicians not attending project meetings.</li> <li>3. Clinicians talking bad about project.</li> <li>4. Clinicians do not follow guidelines.</li> </ol>	16	4	4	Clinical Leadership	Culture	Mitigation	<ol style="list-style-type: none"> <li>1. Have clinical leadership start communicating the need to reduce HAC (compliance, financial) now.</li> <li>2. Project team to start collecting data from published research supporting the IHI bundle.</li> <li>3. Clinical project champion to talk up the value of the IHI bundle in quality meetings.</li> </ol>	Phase II	Sponsor	Open

# Risk-Related Contract Decisions

- ▶ Work done by outside suppliers or sellers should be well documented in **contracts**, which are mutually binding agreements that obligate the seller to provide the specified products or services, and obligate the buyer to pay for them
- ▶ Project managers should include clauses in contracts to help manage project risks by using:
  - Incentive or penalty clauses
  - Certain types of contracts, such as fixed-price contracts, to reduce their risk of incurring higher costs than expected
  - Competition for supplying goods and services to help reduce negative risks and enhance positive risks on projects

## Figure 6-17. Sample Guidelines for Contract Decisions

**Contract signing:** All contracts must be reviewed by the AHS legal department before being signed by the seller. Once reviewed and approved by AHS legal, the seller must sign the contract and deliver to AHS via mail or fax. Once received AHS legal will then sign the contract and return to the seller via mail or fax. Only the AHS legal department has the right to sign contracts on behalf of AHS.

**Contract termination clauses:** These clauses list circumstances under which the buyer and/or seller can terminate a contract and how final payment will be settled. All the contracts must include a termination clause.

**Incentive clauses:** These clauses provide incentives for the seller to provide goods or services at certain times, of certain quality, and so on. Incentive clauses can include extra payments or profit sharing, if appropriate.

**Penalty clauses:** These clauses specify penalties that will be applied when the seller does not provide goods or services as specified in the contract. For example, if a product is delivered late, the seller might be required to pay a certain dollar amount for each day the product is late.

**Fixed price contracts:** To minimize the negative risk of paying more than planned for specific goods or services, AHS issues fixed priced contracts, which specify that the seller agrees to a fixed price and bears the risk if it costs more to provide the goods or services than originally assumed. [This is a type of risk transfer, as AHS is paying more for fixed price contracts but the seller assumes the risk.]

# Project Procurement Management

- ▶ Project procurement management includes acquiring or procuring goods and services for a project from outside the organization
- ▶ As the business world continues to become more competitive and global, more and more projects include procurement, often referred to as outsourcing
- ▶ Key outputs include make-or buy decisions, procurement management plans, procurement statements of work, procurement documents, source selection criteria, and change requests

# Make-or-Buy Analysis

- ▶ **Make-or-buy analysis** involves estimating the internal costs of providing a product or service, and comparing that estimate to the cost of outsourcing
- ▶ Many organizations also use make-or-buy analysis, often called a lease-or-buy analysis, to decide if they should purchase or lease items for a particular project
- ▶ Example: Assume you can lease an item you need for a project for \$800/day. To purchase the item, the cost is \$12,000 plus a daily operational cost of \$400/day. How long will it take for the purchase cost to be the same as the lease?
- ▶ See the solution in the text, p. 260

# Figure 6-18. Sample Make-or-Buy Analysis

**Background:** AHS needs to train 1200 nurses, 128 respiratory therapists, and 92 physicians in the use of the IHI Ventilator Bundle and new AHS workflows required to support the bundle. All training will be conducted online.

**Decision Being Analyzed:** Development of Computer Based Training (CBT) program.

**Option 1: (Make):** Use in-house training team to develop the CBTs. Resources may not be available. Training developer cost per hour: \$40. Estimated hours required (+/- 20%): 280.

*Total: \$11,200 (280 hours X \$40 per hour)*

**Option 2: (Vendor: TechTalk):** Outsource development to AHS' normal CBT provider. Note: Work can't be started for at least 14 months. Not a realistic option. Training developer cost per hour: \$50. Estimated hours required (+/- 10%): 190

*Total: \$9,500 (190 hours X \$50 per hour)*

**Option 3: (Vendor: All About Training):** Outsource development to a CBT provider found online. In business for 1 year. Training developer cost per hour: \$60. Estimated hours required (+/- 10%): 260.

*Total: \$15,260 (260 hours X \$60 per hour)*

**Option 4: (Vendor: Greek Geeks):** Outsource development to a CBT provider recommended by TechTalk. In business for 9 years. Training developer cost per hour: \$70. Estimated hours required (+/- 5%): 160.

*Total: \$11,200 (160 hours X \$70 per hour)*

**Recommendation:** We believe that Option 4, Greek Geeks, is the best option. They will commit to not going 5% over their estimated hours, and they received great reviews for a similar CBT.

# Procurement Management Plans

- ▶ A procurement management plan is a document that describes how the procurement processes will be managed, from developing documentation for making outside purchases or acquisitions to contract closure
- ▶ Some projects must follow government directives, such as the Federal Acquisition Regulation (FAR), which provides uniform policies for acquisition of supplies and services for executive agencies in the U.S.

# Types of Contracts

- ▶ **Fixed-price or lump-sum contracts** involve a fixed total price for a well-defined product or service
- ▶ **Cost-reimbursable contracts** involve payment to the seller for direct and indirect actual costs
- ▶ **Time-and-material contracts** are a hybrid of both fixed-price and cost-reimbursable contracts
- ▶ Unit pricing can also be used in various types of contracts to require the buyer to pay the supplier a predetermined amount per unit of service

# Figure 6-19. Sample Procurement Management Plan

**Guidelines on Types of Contracts:** To reduce AHS' risk, contracts for the VAPR project should be fixed price as often as possible. When goods or services cannot be well defined, time and material contracts should be considered. The representative from the contracting department will work with the project manager to determine the appropriate contract type for each contract developed.

**Standard procurement documents or templates:** AHS' procurement department has all required templates, forms, documents, and processes (instructions) posted on the AHS Procurement intranet site. The project team will review these documents and templates and use them as often as possible. Any exceptions will be discussed with and approved by Procurement.

**Guidelines for creating procurement documents:** AHS' intranet site provides guidelines for creating many procurement documents. The VAPR project team should review their current work breakdown structure and scope statement to provide the basis for contract work breakdown structures and statements of work.

**Roles and responsibilities:** Jeff Birdwell, project manager and PMO representative, is the main contact for all procurement matters directly related to the VAPR project. Procurement and legal will coordinate all activities with and through him.

# Procurement Documents: Requests for Proposal or Quote

- ▶ A **Request for Proposal (RFP)** is a document used to solicit proposals from prospective suppliers
  - A **proposal** is a document in which sellers describe what they will do to meet the requirements of a buyer
- ▶ A **Request for Quote (RFQ)** is a document used to solicit quotes or bids from prospective suppliers
  - A **bid** (also called a quote) is a document prepared by sellers providing pricing for standard items that have been clearly defined by the buyer
- ▶ An **Invitation For Bid (IFB)** is a document used to solicit bids on items that are considered standard items or commodities.
- ▶ A **Request for Information (RFI)** is a document used to identify potential sellers that may respond to a subsequent RFP.

# Figure 6-20. Sample RFP (partial)

**Project Name:** Ventilator Associated Pneumonia Reduction (VAPR) Project

**RFP Name:** Computer Based Training Module Development

## **Purpose of RFP**

Academic Health Systems (AHS) is modifying clinical workflows to better align with Institute for Healthcare Improvement (IHI) identified best practices. Because all clinical care changes require that all staff who are involved in direct patient care undergo training on the changes, AHS utilizes computer-based training (CBT) in order to more efficiently deliver the training. This RFP is for the development and production of the CBTs required for this clinical workflow change.

## **Background Information**

AHS employs approximately 10,000 full time employees and is the third largest employer in the state and the largest in the county. Being an academic medical center, their goal is to provide leading-edge healthcare technology to their patients, ensuring they get the best care in the state. As healthcare is ever evolving, AHS must also be ready to modify their practices based on proven techniques, protocols, or processes adopted by other organizations. One of these best practices is a series of five patient care elements that have been proven to reduce the incidence of Ventilator Associated Pneumonia. The bundle, referred to as the IHI Ventilator Bundle, requires a shift in patient care protocols and as such these changes must be documented and staff must be trained before the protocols may be implemented on the patient care floors.

# Contract Statements of Work

- ▶ A **contract statement of work (SOW)** is a description of the work that is to be purchased
- ▶ It is a type of scope statement that describes the work in sufficient detail to allow prospective suppliers to determine if they are capable of providing the goods and services required and an appropriate price
- ▶ It should be clear, concise, and as complete as possible, describe all services required, and include performance information, such as the location and timing of the work

# Figure 6-21. Sample Contract Statement of Work (partial)

## Scope of Work:

1. The seller must produce three computer-based training modules for Nursing (RN) workflow changes, Respiratory therapist (RT) workflow changes, and Physician (MD) workflow changes.
2. The RN and RT modules must be no more than one hour in duration each, and each module must be broken down into multiple sub-modules, each no more than ten minutes in duration. This is to allow the staff to complete their respective module in small time bites.
3. The MD module must be no more than 30 minutes in duration, and must be broken down into multiple sub-modules, each no more than 5 minutes in duration.
4. Each major module must have a test at the end of no more than 20 questions. These questions may be broken down by sub-module as long as each sub-module has at least 5 questions at its end, with a total of at least 20 for all sub-modules for each group (RN, RT, MD).
5. General content to be provided by the seller based on interviews conducted by the seller.

## Location of Work:

The seller can perform the work at any location. The seller must physically meet with representatives from AHS in our facility at least twice during the term of the contract, with weekly written status updates provided by the seller.

# Source Selection Criteria and the Supplier Evaluation Matrix

- ▶ After doing a thorough evaluation of potential suppliers, many organizations summarize evaluations using a **supplier evaluation matrix**—a type of weighted scoring model
- ▶ Suppliers are often evaluated on criteria related to cost, quality, technology, past performance, and management

# Figure 6-22. Sample Supplier Evaluation Matrix

Criteria	Weight	Raw Scores			Weighted Scores		
		Vendor 1	Vendor 2	Vendor 3	Vendor 1	Vendor 2	Vendor 3
Past performance	15%	70	95	100	10.5	14.25	15
Cost	20%	80	70	70	16	14	14
Technological Approach	40%	100	75	70	40	30	28
Management Approach	15%	90	100	60	13.5	15	9
Financial Stability	10%	85	100	100	8.5	10	10
<b>Weighted Scores</b>		<b>425</b>	<b>440</b>	<b>400</b>	<b>88.5</b>	<b>83.25</b>	<b>76</b>

# Chapter Summary

- ▶ Successful project managers know how important it is to develop, refine, and follow plans to meet project goals.
- ▶ This chapter summarizes the planning processes and outputs for quality, human resource, communications, stakeholder, risk, and procurement management.
- ▶ Samples of several planning documents are provided for the VAPR project.