Teaching Project Management to Healthcare Professionals: A Much Needed Skill

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Objectives

- Describe the growing need for healthcare project management (PM)
- Recognize PM basic terms and processes
- Explain sample outputs applied to a healthcare project
- Review course approaches and nuances
- Identify next steps

Growing Need for Healthcare Project Management: Challenges & Opportunities

A project is a(n):

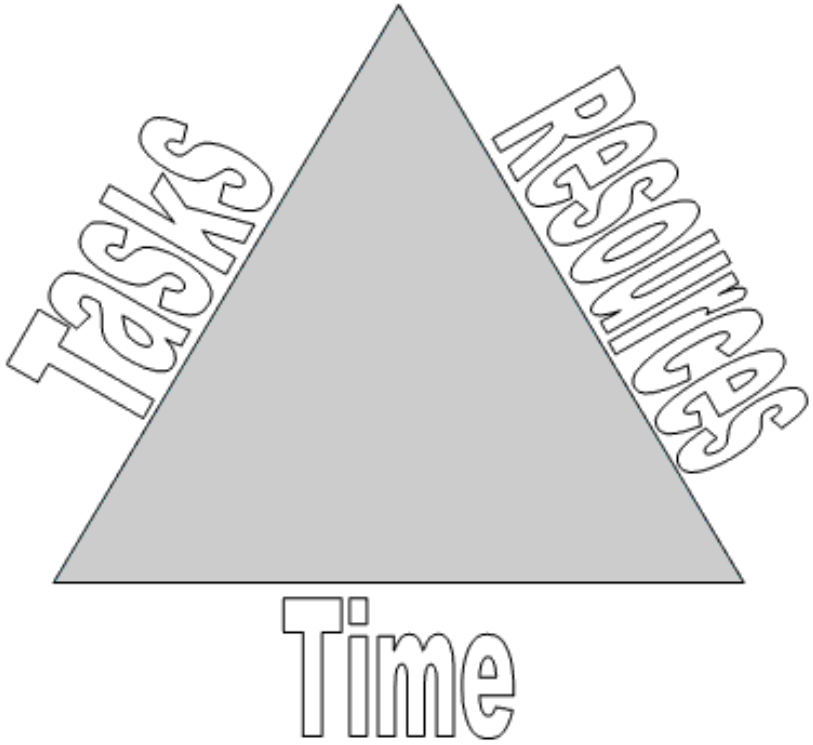
A. Temporary endeavor

B. Unique undertaking

C. Specific set of interrelated tasks, deliverables, and milestones

D. Change in the status quo

E. All of the above

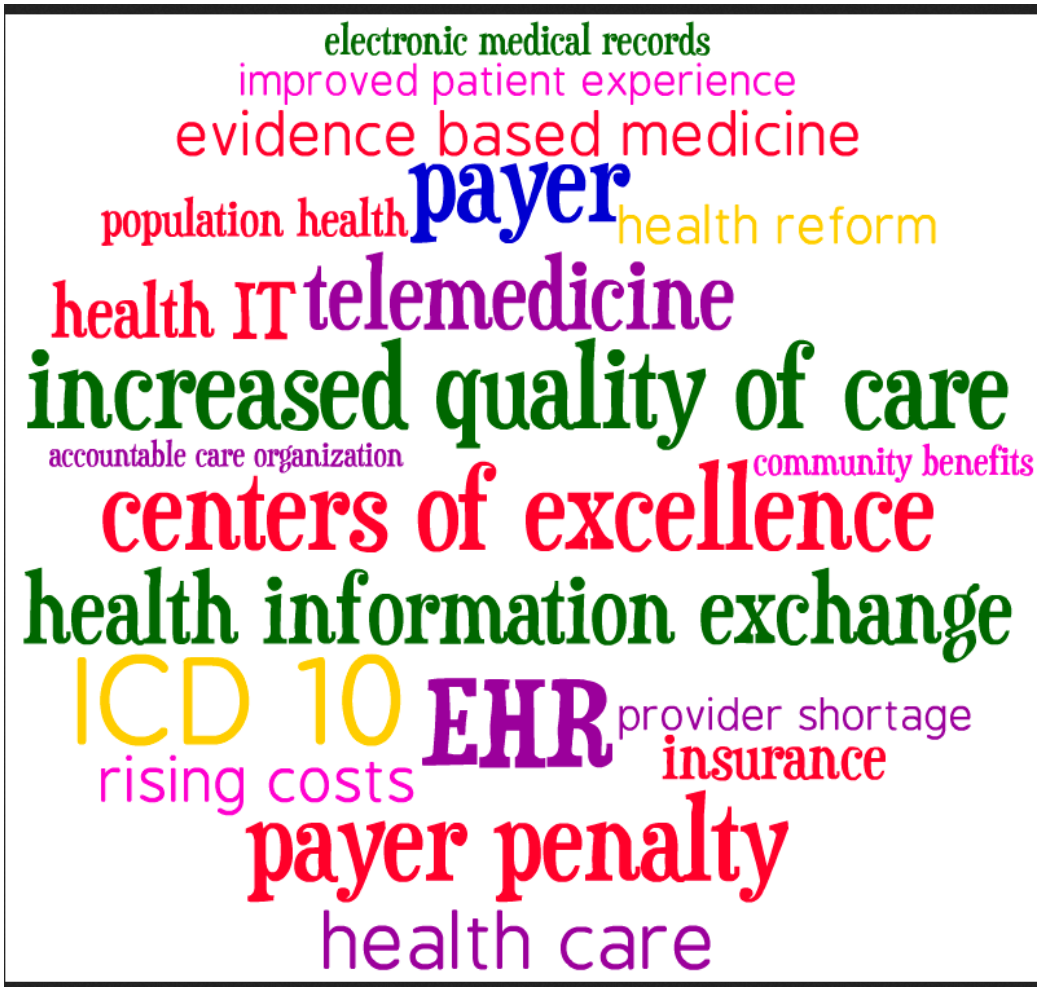


- A **project** is “a temporary endeavor undertaken to create a unique product, service, or result.”*
- Projects end when their objectives have been reached, or the project has been terminated.

*Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Fifth Edition* (2013), p. 3.

The Wizard of Oz

Healthcare Projects?



Healthcare Projects are Disruptive!!!

Success Rates of Change Projects

Standish Group, Chaos Study (2011)

Why?

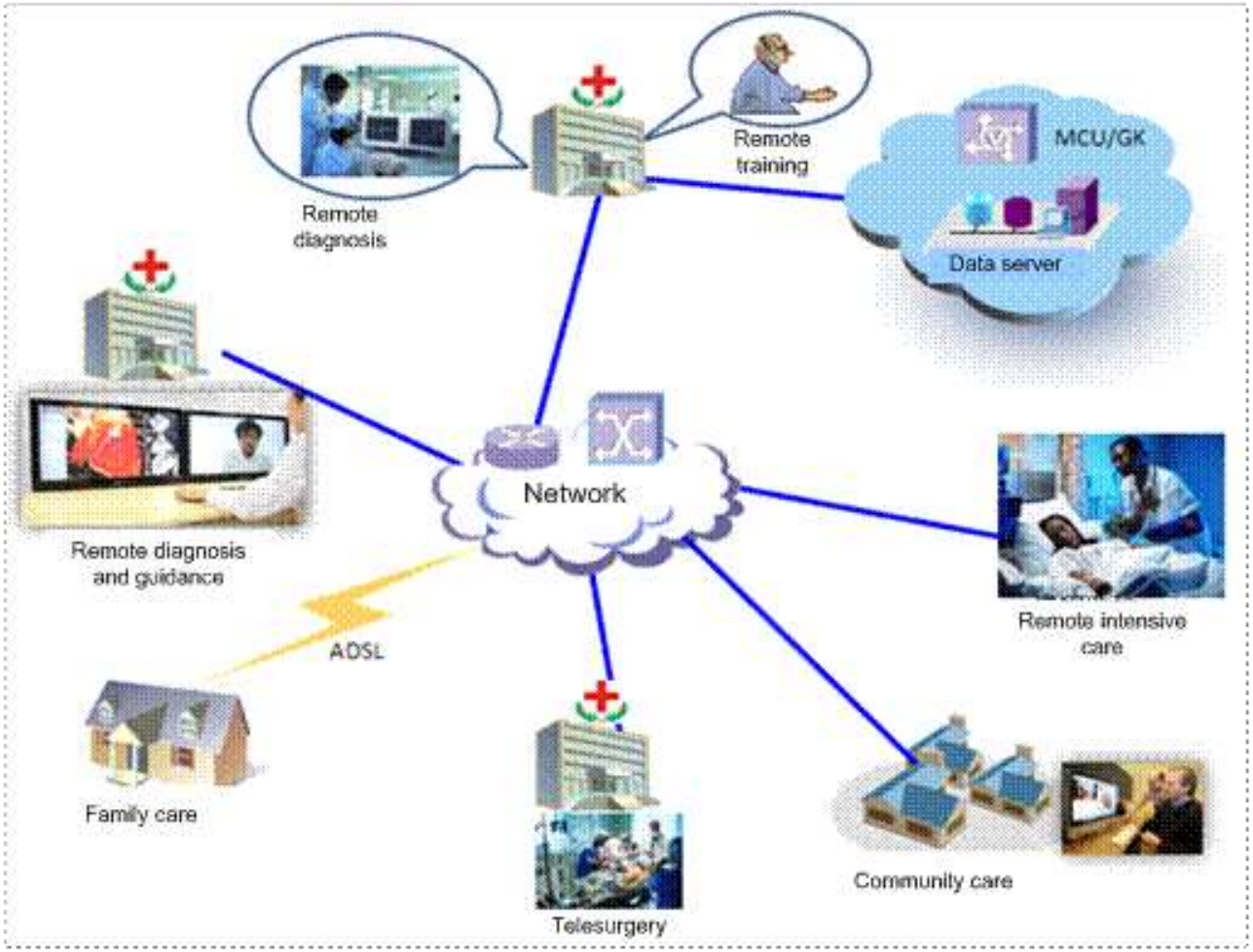
The Bull Survey 1998
Chaos Report 1995
OA SIG Study 1995

Gertner 2012
KPMG Survey 1997
Chaos Study 2011

Policy Changes

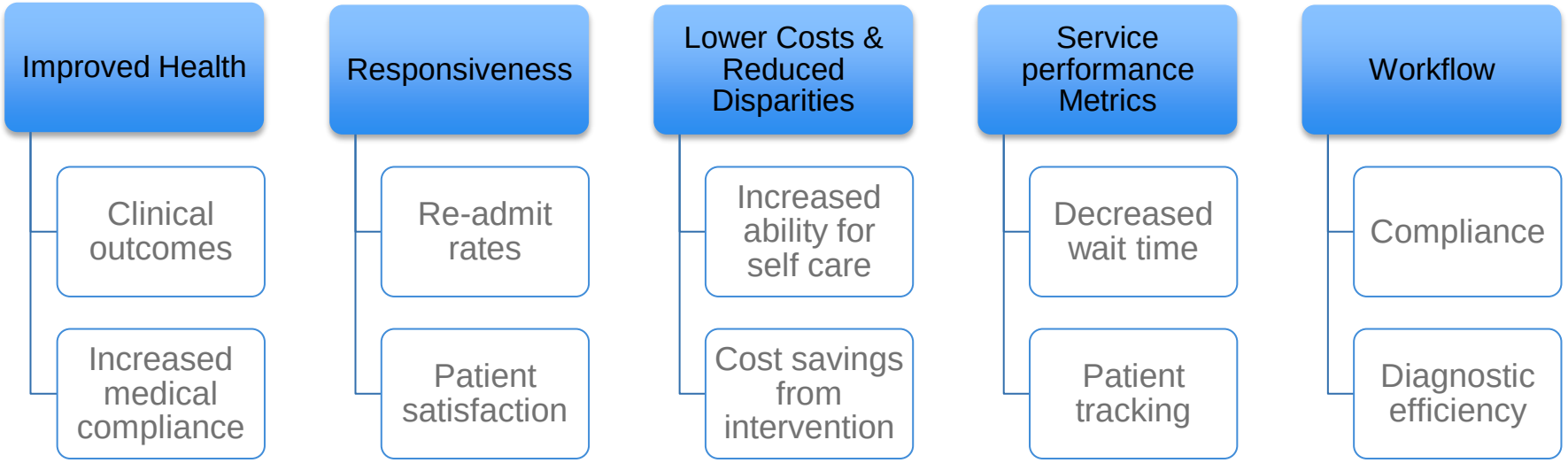
Personal and Controversial

Intra & Inter Organizational



Grant Funding

Measurement & Metrics



Help? Project Management Best Practices

Change management and project management methodologies; defined roles and responsibilities; and specific, measurable, attainable, realistic, and time-bound goals were used in the implementation. This process has supported organizational change, thereby promoting high-quality, safe, and equitable care through widespread expectations of culturally competent care delivery across the entire network.

Gertner, Eric I., Judith N. Sabino, Erica Mahad, Lynn M. Deitric, Jarret R. Patton, Mary Kay Grim, James F. Geiger, and Debbie Salas-Lopez. "Developing a Culturally Competent Health Network: A Planning Framework and Guide." Journal of Healthcare Management 55, no. 3 (2010): 190-204.

Education & Training Need

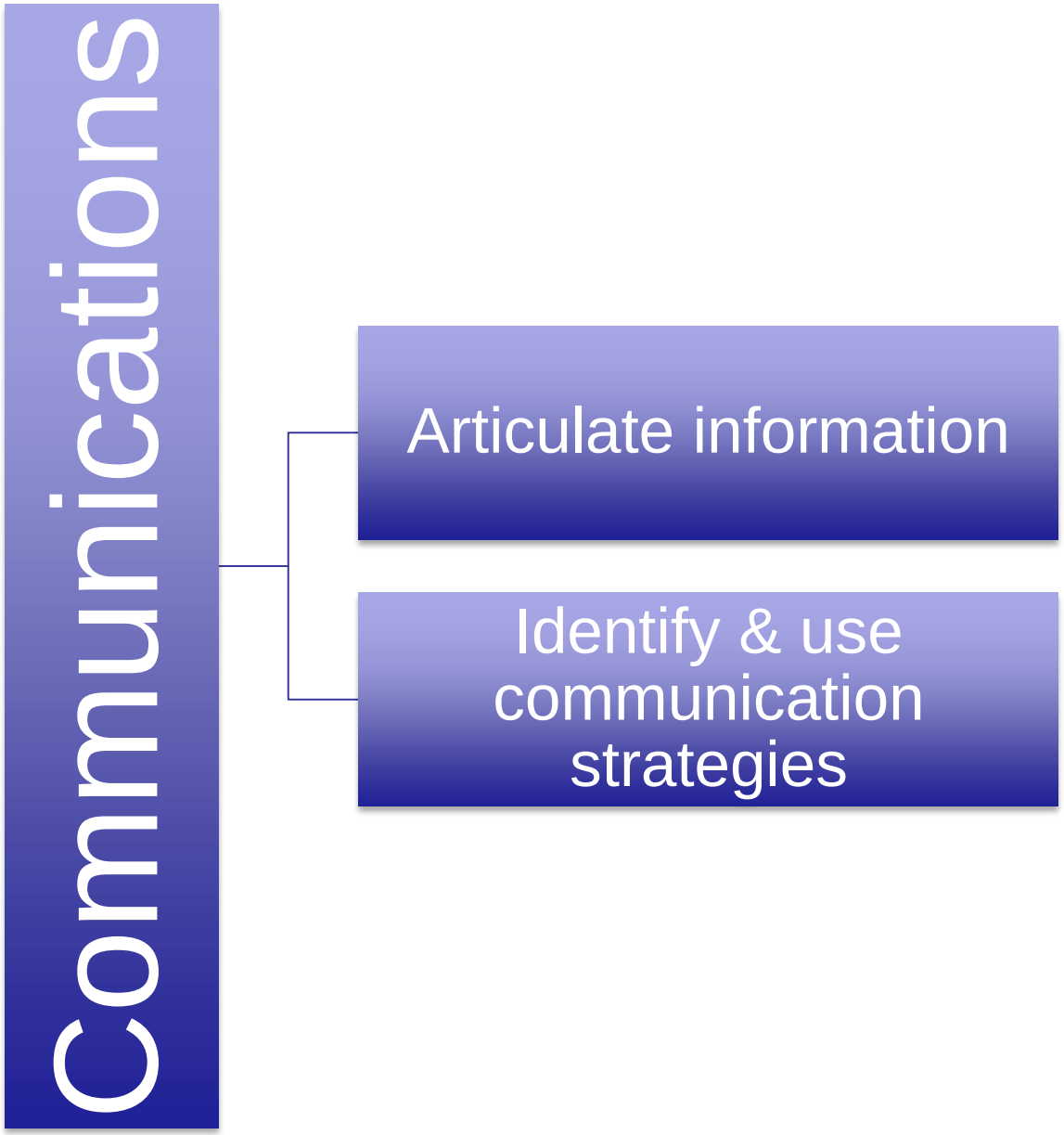
Healthcare workers do not understand the differences between service work and project work. They understand activities to provide better service to patients, but they have not been trained to make more radical, disruptive changes that challenge the status quo.*

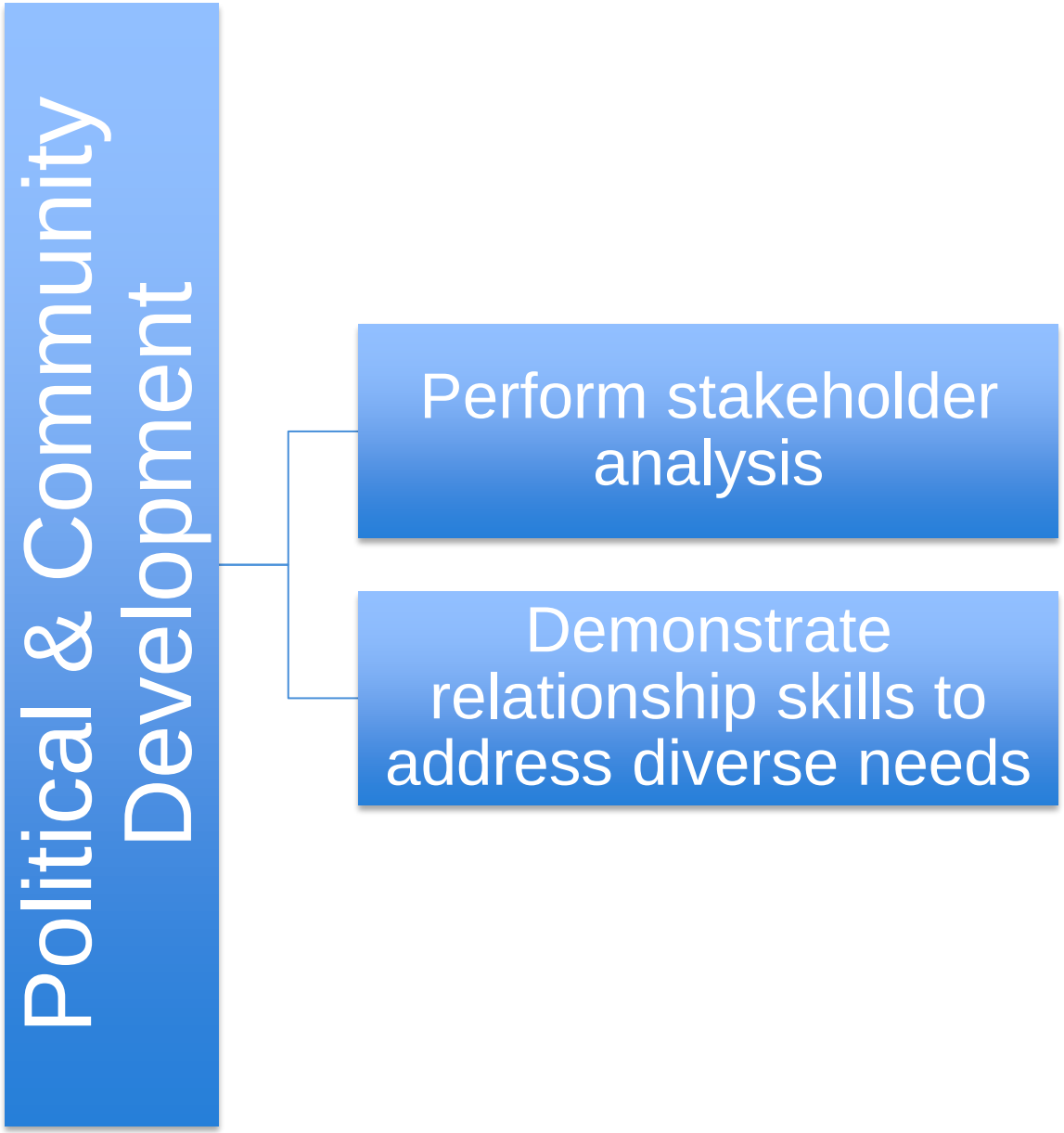
*Francois Chiocchio et al, “Stress and Performance in Health Care Project Teams,” Project Management Institute (2012)

COMPETENCIES


Leadership
Commit to execution of strategy
Describe & apply change mgt. methods


Management
Design & implement business plans
Work with & through people to achieve org. goals
Identify & apply planning tools
Identify & address stakeholder needs


Communications
Articulate information
Identify & use communication strategies


Political & Community Development
Perform stakeholder analysis
Demonstrate relationship skills to address diverse needs


Critical Thinking
Project future scenarios & prioritize alternatives
Ask right questions
Confidence to make decisions in uncertainty
Identify & apply creative, flexible problem solving methods
Learn from mistakes

PM Basic Terms and Processes

Project Management Framework*

*Note: This figure and sample documents are from *Healthcare Project Management* text by Schwalbe and Furlong (2013).

Process Groups Matching Game

Key Term	Definition or Characteristic
1. Initiating	A. Purpose is to guide execution
2. Planning	B. A project charter is created
3. Executing	C. Usually takes the most time and money
4. Monitoring and Controlling	D. Lessons learned and transition plans are created
5. Closing	E. Measure progress toward achieving project goals

PM Tools and Techniques by Knowledge Area

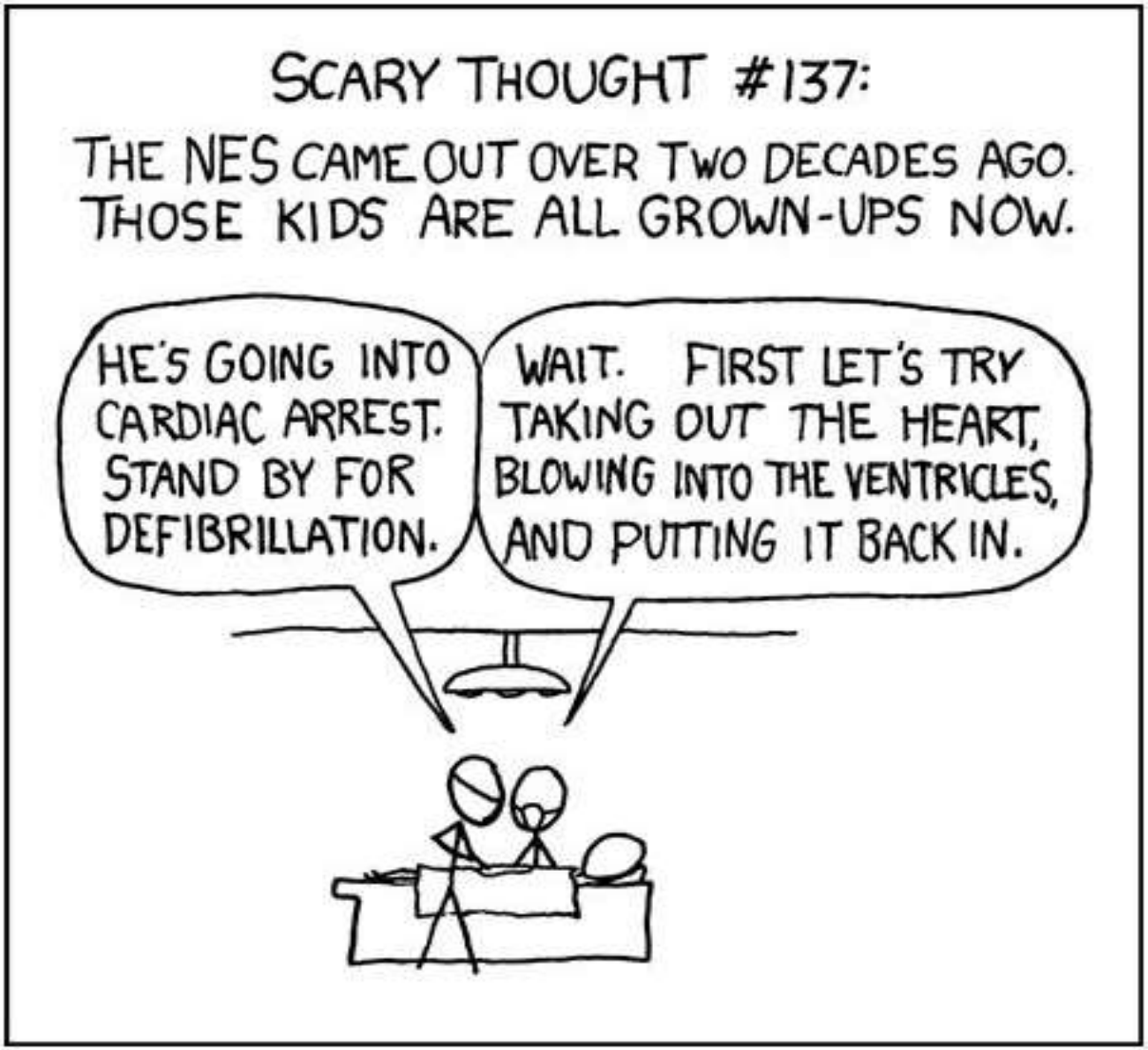
Knowledge Area/Category	Tools and Techniques
Integration management	Project selection methods, project management methodologies, project management plans, project management software, change requests, change control boards, project review meetings, lessons-learned reports
Scope management	Scope statements, work breakdown structures, mind maps, statements of work, requirements analyses, scope management plans, scope verification techniques, and scope change controls
Time management	Gantt charts, project network diagrams, critical-path analyses, crashing, fast tracking, schedule performance measurements
Cost management	Net present value, return on investment, payback analyses, earned value management, project portfolio management, cost estimates, cost management plans, cost baselines
Quality management	Quality metrics, checklists, quality control charts, Pareto diagrams, fishbone diagrams, maturity models, statistical methods

PM Tools and Techniques by Knowledge Area

Knowledge Area/Category	Tools and Techniques
Human resource management	Motivation techniques, empathic listening, responsibility assignment matrices, project organizational charts, resource histograms, team building exercises
Communications management	Communications management plans, kickoff meetings, conflict management, communications media selection, status and progress reports, virtual communications, templates, project Web sites
Risk management	Risk management plans, risk registers, probability/impact matrices, risk rankings
Procurement management	Make-or-buy analyses, contracts, requests for proposals or quotes, source selections, supplier evaluation matrices
Stakeholder management	Stakeholder registers, stakeholder analyses, issue logs, interpersonal skills, reporting systems

Similarities in Healthcare Projects vs. Other Industries

- Projects still include all 10 knowledge areas and 5 process groups
- Projects have the same attributes and constraints
- The same tools and techniques apply
- Consumers keep expecting more for less



Source: xkcd.com

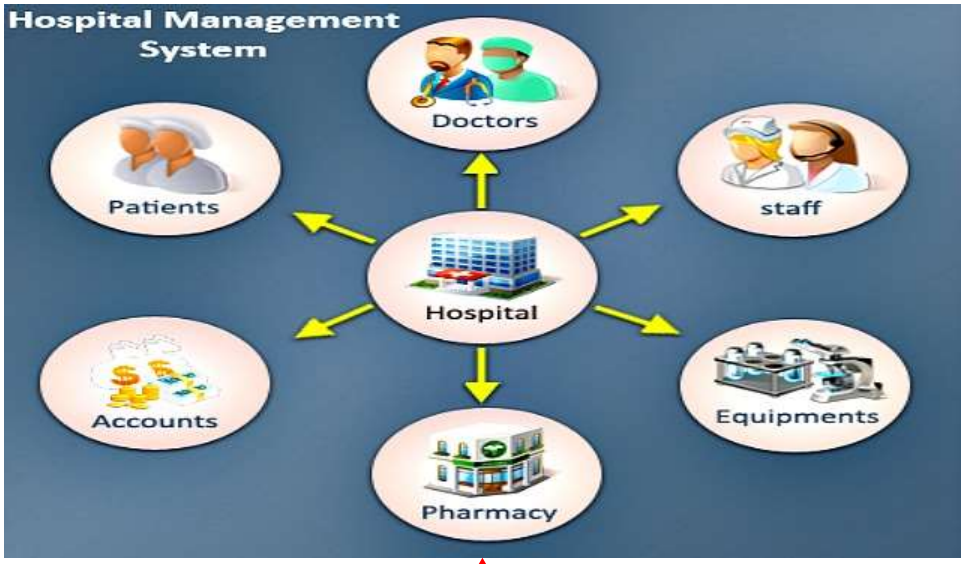
What's Different About Healthcare Project Management?

- There are two "camps" of people: clinical/philanthropic vs. enterprise marketplace viability and sustainability
- Projects often have separate phases – technical and clinical
- Project management is not as mature/practiced in healthcare
- Many projects affect workflow, and patient care must take priority

Project to Process

Project

Routine Operations



Make sure that the project does not break the current flow

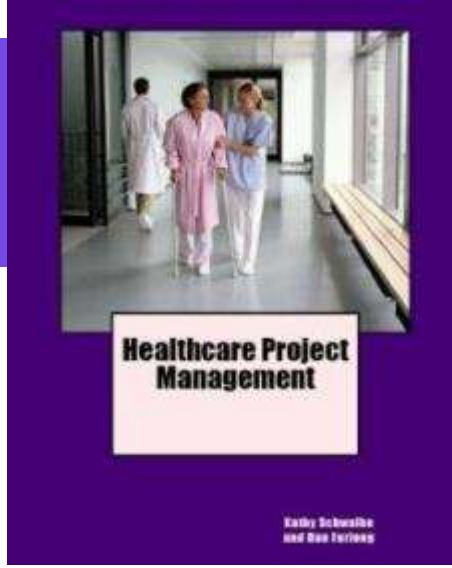
Suggestions From Recent Study*

- We need to train healthcare workers in PM, emphasizing collaborating on achieving project goals and understanding their roles on project teams, which may differ from their roles in their day-to-day work.
- Management also needs to structure project teams by properly planning workers' time and payment to allow them to successfully engage in project work.

*Francois Chiocchio et al, "Stress and Performance in Health Care Project Teams," Project Management Institute (2012)

Healthcare PM Table of Contents

Approach



- Opening case
- Explain key concepts
- Provide real-world examples with references of what went right, what went wrong, best practices, media snapshots, healthcare perspectives, and video highlights
- Apply concepts with samples from running case on Ventilator Associated Pneumonia Reduction (VAPR)
- Closing case

Sample Outputs in New Book

- Initiating: business case, stakeholder analysis, charter
- Planning: project management plan, scope statement, requirements traceability matrix, WBS, project schedule, cost baseline, quality metrics, human resource plan, project dashboard, probability/impact matrix, risk register, supplier evaluation matrix, stakeholder management plan
- Executing: deliverables, milestone report, change requests, project communications, issue logs
- Monitoring and controlling: earned value chart, accepted deliverables, quality control charts, performance reports
- Closing: project completion form, final report, transition plan, lessons-learned report, contract closure notice

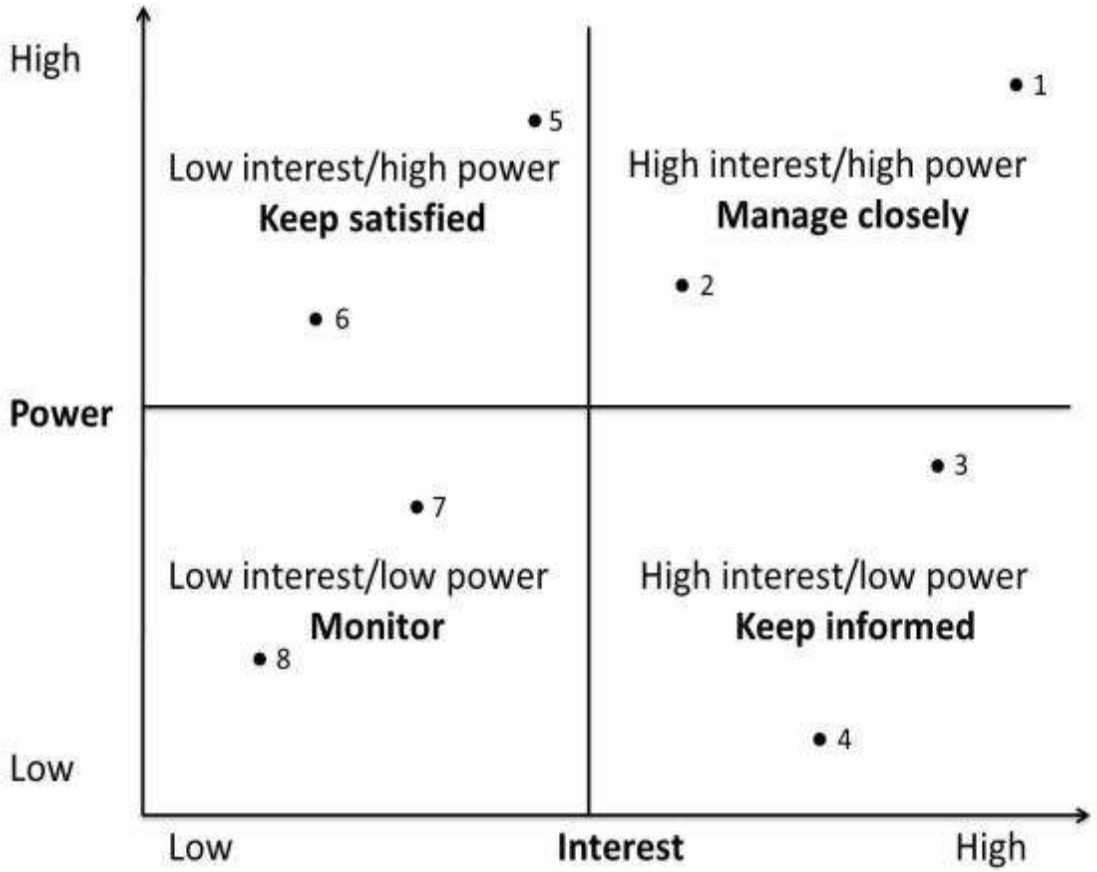
Business Case Executive Summary

- **Background**
  - Ventilator Associated Pneumonia (VAP) has been identified by the IHI as a preventable condition
    - The IHI has developed a bundle of five care elements, that when followed in their entirety, has been proven in independent studies to reduce the incidence of VAP by at least 50%
  - CMS has adopted the CDC's method for identifying patients with VAP and will no longer pay for the treatment of VAP, considering it a Hospital Acquired Condition (HAC)
    - Takes effect in 19 months
    - All major third party payers are expected to follow suite immediately thereafter
  - AHS identified 212 cases of VAP last calendar year
  - VAP rates have increased 8% over the past 5 years at AHS
  - VAP, or complications as a result of VAP, can result in death
    - for 17% of VAP patients over 65
    - for 8% of VAP patients under the age of 2
  - VAP is expensive to treat
    - The cost to treat VAP averages $17,000 per patient
    - The reimbursed charges to treat VAP averages $23,000 per patient
    - At 212 cases last year, we were paid $4.9M by payers, incurred $3.6M in costs, resulting in $1.3M in profit
  - If AHS has 212 cases again next year
    - 11 patients may die under our care (based on our patient demographic and the stated averages)
    - we will not receive $4.9M in revenue
    - it will cost us $3.6M in costs
    - it will result in AHS losing a total of $8.5M (cost to treat plus lost reimbursement)
    - we may be exposed to litigation if we can't prove we are following the IHI ventilator best practices bundle
- **Solution**
  - Implement a reporting system that will alert caregivers on the floor when the IHI best practices are not being followed
  - Institute work flow changes that will hardwire the best practices into clinical care
  - Hold clinicians accountable for adhering to the best practices
  - Hold clinicians accountable for documenting adherence to the best practices
- **Cost**
  - $875,000 to $980,000 year 1
  - $0 subsequent years (support absorbed by current labor)
- **Payback**
  - Seven month payback period
- **Schedule**
  - Implemented in all units in one year

AHS Academic Health Systems
We Are Your Community Healthcare Practice

Business Case

Stakeholder Analysis Power/Interest Grid



Project Charter

Project Charter

May 21

PROJECT TITLE

Ventilator Associated Pneumonia (VAP) Reduction – "VAPR"

PROJECT TIMELINE

Start: July 1 **Projected Finish Date:** June 30

PURPOSE

VAP costs AHS over $3.6M per year in costs, and puts our patients at risk for severe and sometimes fatal consequences. VAP is considered preventable by CMS, having worked with the Institute for Healthcare Improvement to develop a set of best practices that, if followed, has been proven to reduce VAP by 50% in other healthcare facilities. AHS will implement a system to collect and report compliance with the best practices in order to better manage VAP in order to better serve our patients healthcare needs. Since VAP is considered preventable, it is no longer reimbursable by CMS or major payers as of July 1, which will also put a financial burden on our organizations.

BUDGET

The VAPR project is expected to cost $980,000 over one year, with a total TCO of $980,000 over three years.

PROJECT MANAGER

VAPR has been broken down into two phases. The first phase is a proof of concept and the data collection/reporting system and will be managed by Jeff Birdwell, PMP from the PMO's office. The second phase includes clinical process reengineering, training, and monitoring and will be managed by Pat Wager, RN, from the analytics department.

Project Charter

SUCCESS CRITERIA

This project will be considered successful if the sponsor rating is at least 8/10 upon project completion and VAP incidence rate drops by at least 50% within six months of implementation. Incidence rates will be determined based on the number of VAP events per 1000 ventilator days.

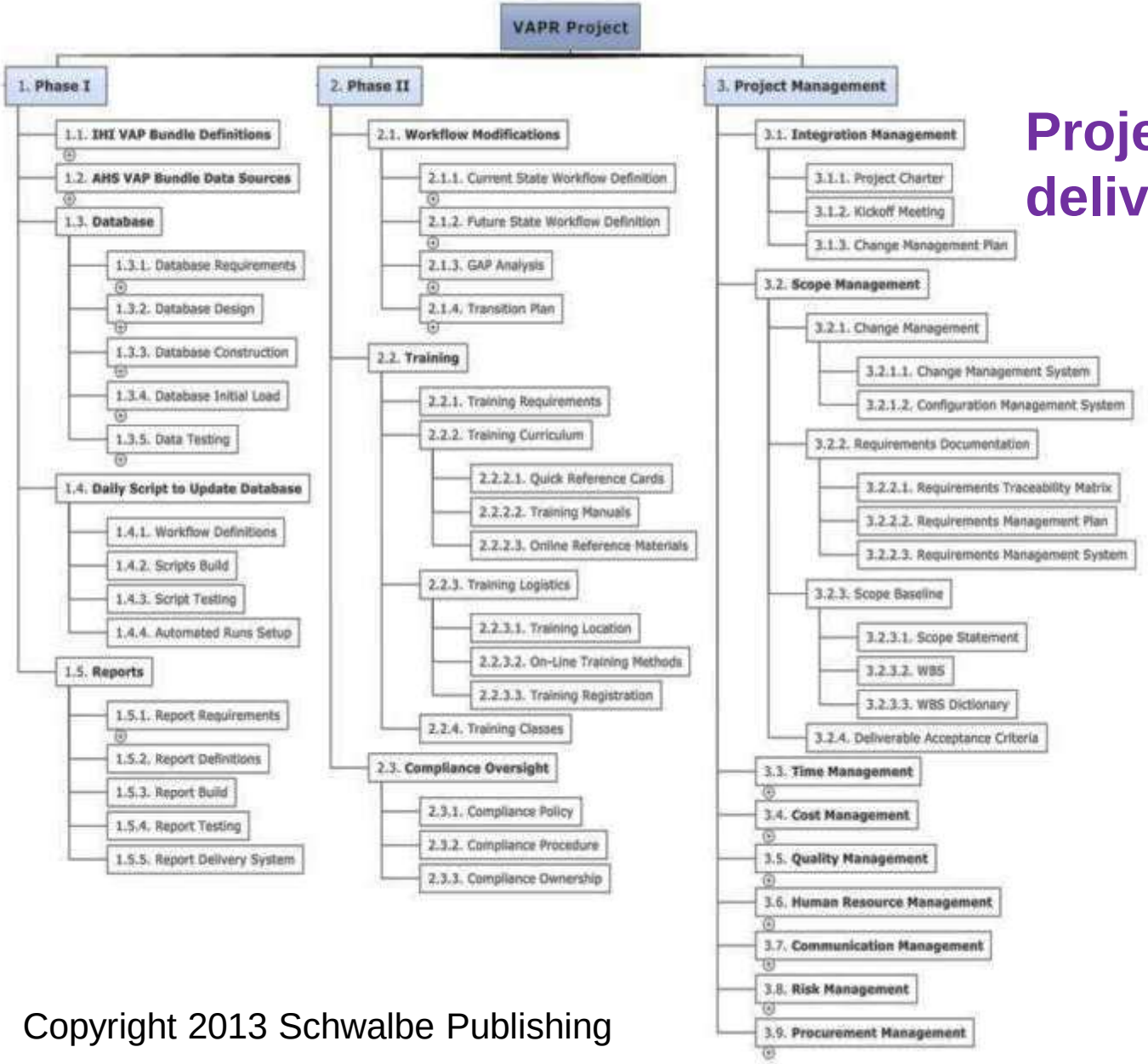
APPROACH

- All work to be completed by internal staffing, where possible.
- Project to be broken up into two major phases that will overlap their work, requiring the two project managers to work closely together throughout the project.
- Phase I, VAPRware, is concerned with the proof of concept, data collection and data reporting. It is primarily a technology project but will require the cooperation of and collaboration with analytics and nursing in order to identify the required data elements and their source systems.
- Phase II, VAPRflow, is concerned with clinical workflow reengineering, and is primarily a clinical project that will require working with the Nursing Documentation Committee and Medical Executive Committee in order to gain their input and support.
- Training to be developed and delivered by the Nurse Educator Team under the direction of the Phase II project manager. All training will be computer-based training (CBT) and will be included in annual training requirements for all clinicians.
- The cost of any work conducted on behalf of the project will be paid by the project budget, with the exception of the time nurses spend in training.

PROJECT LEADERSHIP (NAMES, ROLES, AND SIGN-OFF)

AHS Academic Health Systems
We Are Your Community Healthcare Practice

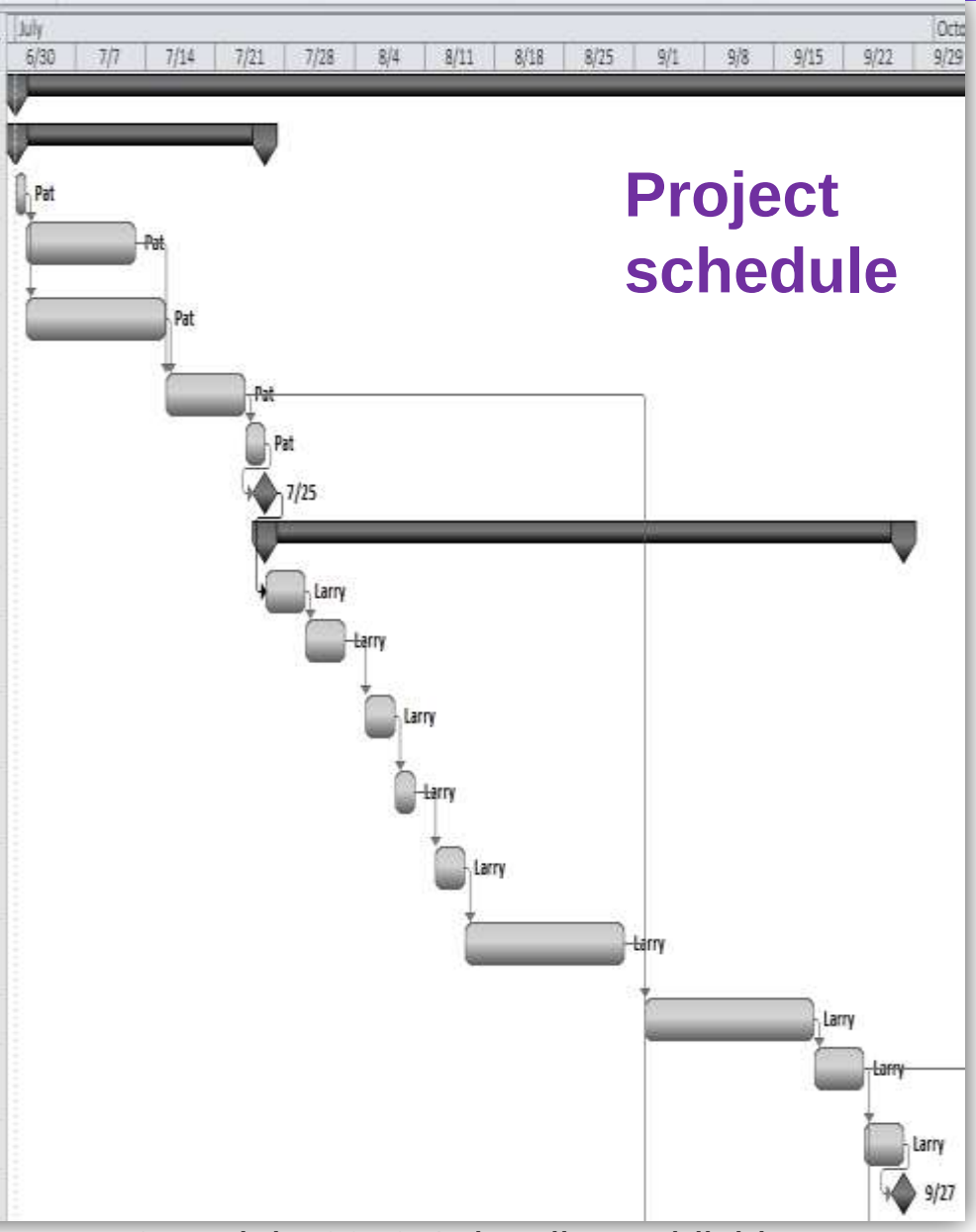
Work Breakdown Structure



Project scope/ deliverables

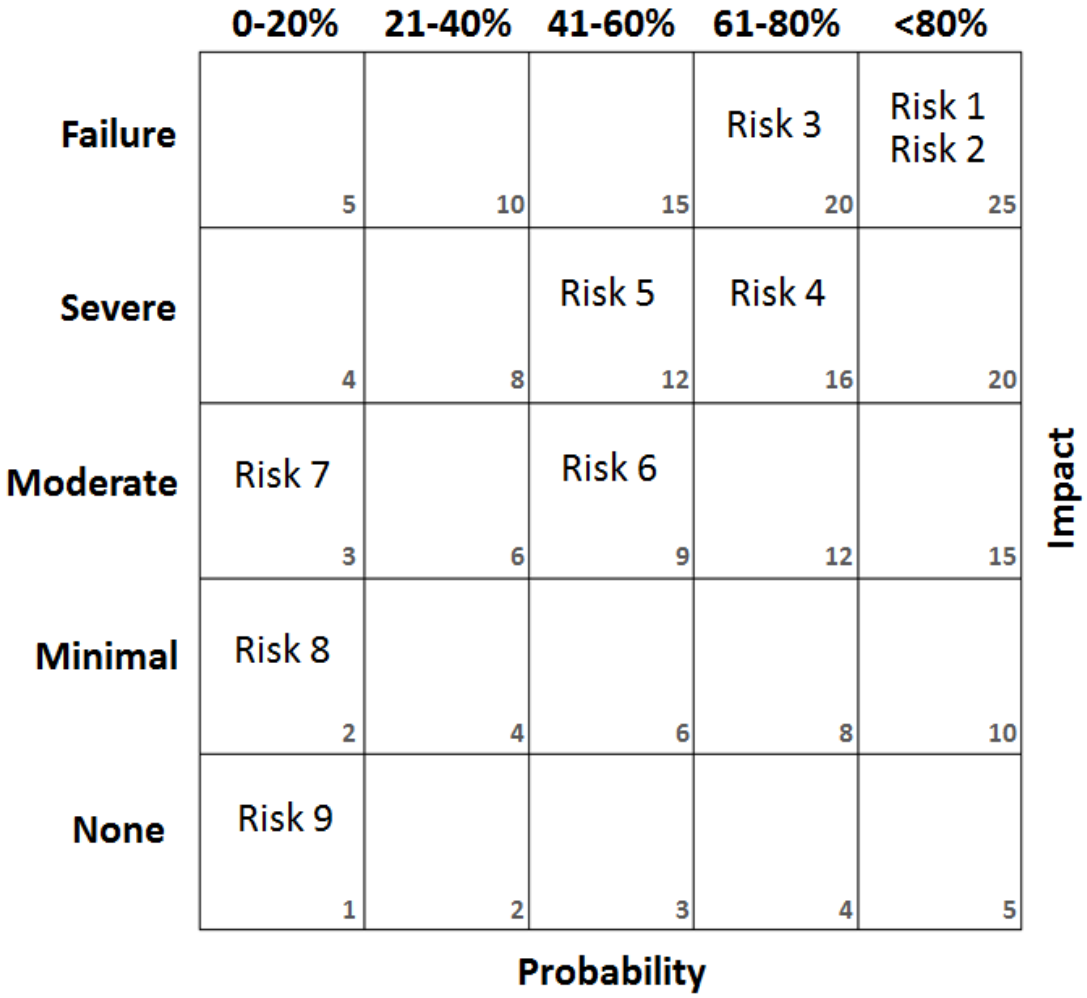
Gantt Chart

	Activity Name	Duration	Man Days	Start	Finish	Predecessors
1	**Phase I**	**244 days**	**721**	**7/1/13**	**6/5/14**	
2	**IHI VAP Bundle Definitions**	**19 days**	**28**	**7/1/13**	**7/25/13**	
3	Review IHI VAP bundle require	1 day	1	7/1/13	7/1/13	
4	Review a min of six VAP bundle research studies that	9 days	9	7/2/13	7/12/13	3
5	Identify clinical discipline that typically provides each of the	10 days	10	7/2/13	7/15/13	3
6	Create VAP bundle definition c	6 days	6	7/16/13	7/23/13	4,5
7	IHI Bundle Buffer	2 days	2	7/24/13	7/25/13	6
8	IHI Bundle Defined	0 days	0	7/25/13	7/25/13	7
9	**AHS VAP Bundle Data Sources**	**46 days**	**46**	**7/26/13**	**9/27/13**	
10	Review VAP bundle definition	2 days	2	7/26/13	7/29/13	8
11	Determine if VAP bundle elements are currently	4 days	4	7/30/13	8/2/13	10
12	Update VAP bundle definition document with corrected	3 days	3	8/5/13	8/7/13	11
13	Determine if the discipline documents the data	2 days	2	8/8/13	8/9/13	12
14	Identify the systems where the information is	3 days	3	8/12/13	8/14/13	13
15	Review systems and determine if the data is	12 days	12	8/15/13	8/30/13	14
16	Review extracted data sets for	13 days	13	9/2/13	9/18/13	15
17	Update VAP bundle definition document with system and	3 days	3	9/19/13	9/23/13	16
18	VAP Bundle Data Sources Buffe	4 days	4	9/24/13	9/27/13	17
19	Current Data Extracted	0 days	0	9/27/13	9/27/13	18



Project schedule

Probability Impact Matrix



Must identify risks to manage them

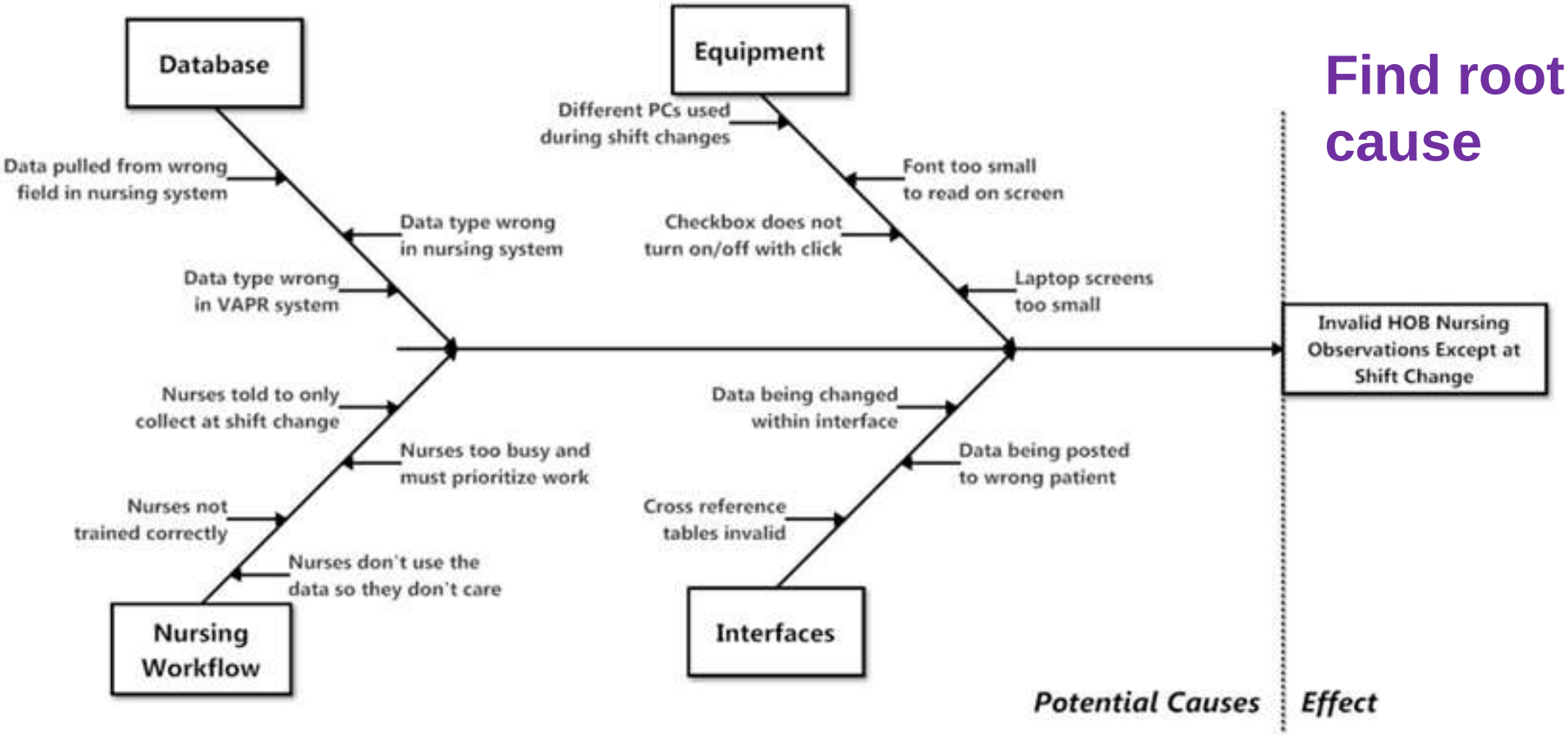
Project Dashboard

Metric	Description	Status	How Measured	Explanation
Scope	Meeting project goals	●	Earned value chart	On target
Time	Staying on schedule	●	Earned value chart	Slightly behind schedule
Cost	Staying on budget	●	Earned value chart	Under budget
VAP Bundle	Identify AHS systems with required elements	●	Percent of elements identified in AHS systems	All elements identified and available
VAP reduction	Reduce by 50% within six months	↔	Infection Control data	Cannot collect until after implementation
Percent of ICU staff trained	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

Track metrics

Cause and Effect Diagram



Progress Report

Progress Report

Project Name: Ventilator Associated Pneumonia Reduction (VAPR) Project
Project Manager Name: Pat Wager
Date: March 3
Reporting Period: February 1 – February 28

Work completed this reporting period:

- Identified and gained approval from a high VAP-incidence critical care unit to participate in the VAPR pilot program.
- Recommended and gained approval for the rollout order for remaining ICUs.
- Developed a formal workflow transition plan.
- Transition plan approved by Med Exec Committee and Quality Council.
- Awaiting transition plan approval by Clinical Workflow Council. Expected March 5.

Work to complete next reporting period:

- Review transition plan with each discipline.
- Determine training requirements for clinicians.

What's going well and why:

- Nurses and physical therapists have been engaged from the start due to the ongoing support by the CNO and CNIO.
- ICUs have been very cooperative regarding the pilot program.

Suggestions/Issues:

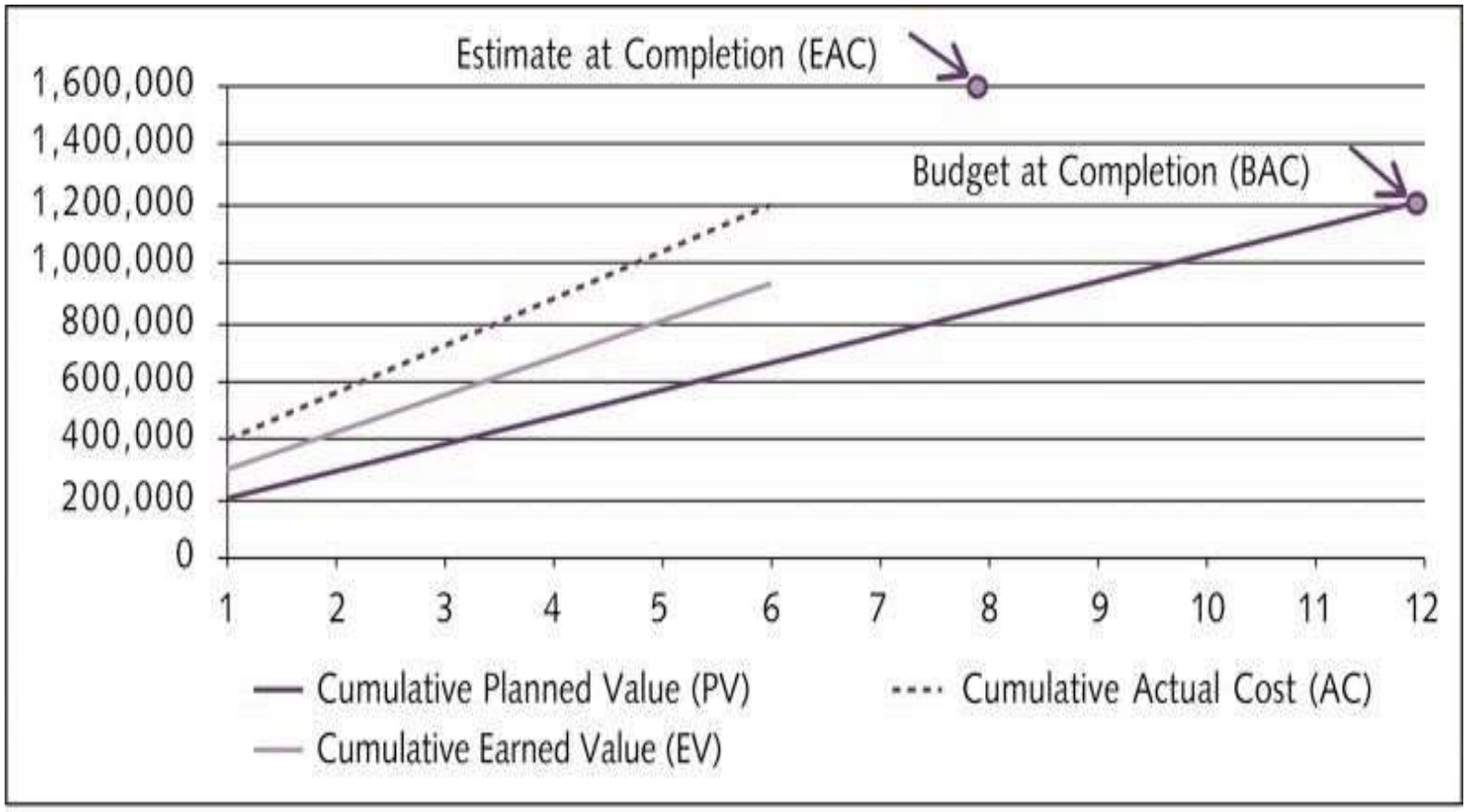
Engage the Executive Medical Director and Chief Medical Information Officer in order to help get the appropriate message to physicians about the benefits of VAPR. Our Phase II sponsor, Dr. Scheerer, is in the ideal position to work with these two physician leaders.

Project changes:

No major changes to report. The earned value chart in Attachment 1 shows planned value, actual cost, and earned value information to date. We are very close to our plans, running slightly ahead of schedule and a bit over budget. We expect to complete the project on budget and on time.

Super tool everyone should use!

Earned Value Chart



Assess progress in meeting scope, time, and cost goals

Best Practice- Earned Value Management

- The Centers for Medicare & Medicaid Services (CMS) manages approximately twenty percent of the entire Federal budget, so it is important that they use the taxpayers' dollars as efficiently and effectively as possible.

- "Once an investment—with its individual projects—is approved for funding, it falls to the investment manager and the **project managers** to insure that the projects are implemented successfully. Earned value monitoring and management provides early warning when a project is straying from its baseline plan, and shows whether actions taken to correct the situation are effective. Health and Human Services (HHS) requires that certain investments track and report on cost and schedule status monthly."*

*CMS Centers for Medicare & Medicaid Services, Division of Information Technology Investment Management Enterprise Architecture & Strategy Group Office of Information Services, "Earned Value Management Best Practices" (Nov 19, 2009).

Team Project Web Sites

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

Great communications tool

Match the tool to its purpose:

Stakeholder Analysis	Identify and assess risks
Work Breakdown Structure	Manage time/schedule
Gantt Chart	Change management/ buy-in
Business Case	Scope/deliverables
Probability/Impact Matrix	Expectations/ justification

Teaching Healthcare PM: Approaches and Nuances

Approaches

Length	Presence	Workgroup	Project Assignment
Presentation	Traditional	Team	Real Case
Seminar	Hybrid	Pair	Teaching Case
Full Course	Flip Course	Individual	Simulation
Compressed Course			

Certification Interest

Tools

Challenges and Nuances

Healthcare

Quality, real effect

Time

Group, you, client, breaks, graduation

Access to projects

Privacy, complexity, timeframe, prior knowledge

Little basis in topic

Students, some healthcare organizations, individual direction & interest, simulation, software access

Other Stuff

Simulation report (strategy, what's different)

Project Mgt. in my Future Interviews

Readings & cases

Testing

Resources (past projects, templates, PMI, YOU)

Student feedback (value & timing)

Additional Concerns?

Next Steps

Next Steps

4. Create syllabus/course

5. Improve healthcare, one project at a time!

2. Talk to us!

3. Review new book and Web site
www.healthcarepm.com

You

1. Decide if your students/employees would benefit from a course in project management

Wrap Up

Objectives Review

- Describe the growing need for healthcare project management (PM)
- Recognize PM basic terms and processes
- Explain sample outputs applied to a healthcare project
- Review course approaches and nuances
- Identify next steps

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Blackboard Access

- https://blackboard.slu.edu/