

# Southern Care Hospital

## Team 2

*Chitika Vasudeva*

*Sai Deepthi Sreepada*

*Sai Praneetha Karnena*

*Para Satishkumar Bardolia*

*Thada Manakunitsara*



## Project Sponsor Organization Background

- SCH is a large, nonprofit regional hospital located in the southeast.
- SCH has collaborated with a major medical equipment supplier's healthcare division for Six Sigma training.
- SCH employees have been trained in Six Sigma Green Belt and Black Belt programs.
- Six Sigma training has equipped SCH employees with essential skills to drive process improvements within the hospital.

## Project Background

- Southern Care Hospital (SCH) is a nonprofit regional hospital
- Contracted with major medical equipment supplier to provide Six Sigma training, including Green Belts and Black Belts.
- SCH dissatisfaction about receiving results of stress tests
- The project manager has identified 20 major activities for the project
- Project Manager will have to select four team members from available resources
- Stress test and lead time

## Benefits to Sponsor Organization

- Improved patient care through faster test result delivery
- Increased satisfaction among medical staff
- Enhanced hospital reputation
- Potential cost savings from increased efficiency
- Increased skillset among hospital personnel

## Project Stakeholders

### Internal Stakeholders

Medical Staff

SCH Radiology Personnel

SCH Administration

SCH IT Department

SCH Finance Department

Six Sigma Project Team

### External Stakeholders

Patients

Healthcare Regulators and Authorities

Insurance Companies

Medical Suppliers

## Key Objectives

**Specific:**

Reduce stress test result sign-off lead time from 3 days to 1.5 days.

**Measurable:**

Achieve a lead time of 1.5 days.

**Achievable:**

Allocate resources and utilize Six Sigma methodology effectively.

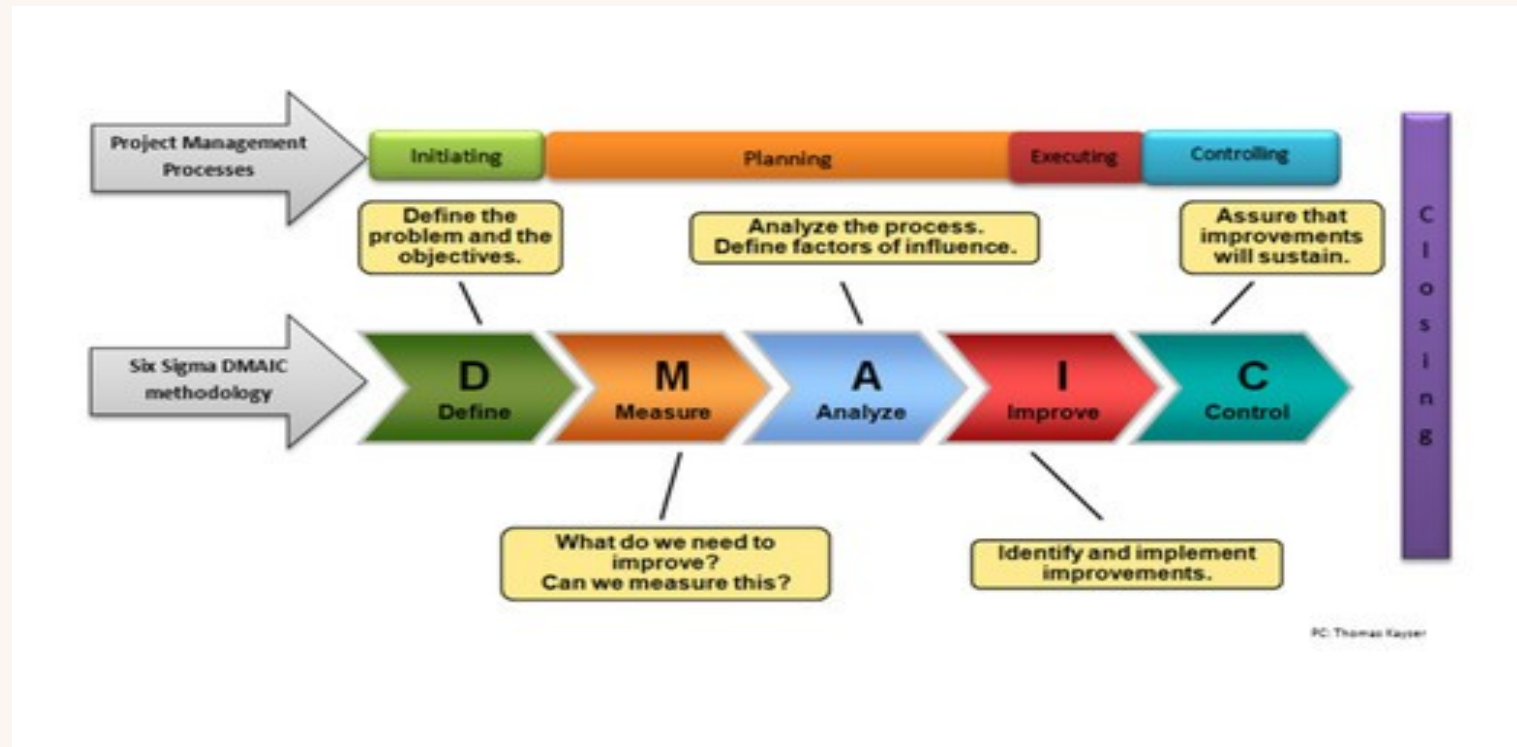
**Relevant:**

Contribute to SCH's objective of enhancing healthcare quality and efficiency.

**Time-bound:**

Achieve lead time reduction in 6 months.

## Project Life Cycle Phases



Desale, S. (2017). Integrating DMAIC with project management life cycle [Photograph]. Retrieved from [https://www.linkedin.com/pulse/integrating-dmaic-project-management-life-cycle-sonali/?utm\\_source=share&utm\\_medium=member\\_ios&utm\\_campaign=share\\_via](https://www.linkedin.com/pulse/integrating-dmaic-project-management-life-cycle-sonali/?utm_source=share&utm_medium=member_ios&utm_campaign=share_via)



## Major Deliverables

- Reduced lead time for stress test results
- Streamlined process
- Project documentation
- Training manual
- Improved patient care





## Deliverables by Phase

### Define Phase

Project Goals and Charter

Stakeholder Analysis

Process Map

CTQ Tree

### Measure Phase

Data Collection Plan

### Analyze Phase

Root Cause and Regression Analyses

### Improve Phase

Improvement Plan

Training Manual and Documentation

### Control Phase

Monitoring Plan and System

Status Reports

## Summary Budget and Schedule

Project Phase	Phase Overview	Phase Length	Phase Totals
<i>Define</i>	Define problem, improvement activity, goals and requirements	2 to 4 weeks	\$2,718 to \$5,436
<i>Measure</i>	Measure current performance	4 to 7 weeks	\$5, 436 to \$9,513
<i>Analyze</i>	Determine root cause	2 to 5 weeks	\$2,718 to \$6,795
<i>Improve</i>	Improve performance	4 to 5 weeks	\$5,436 to \$6,795
<i>Control</i>	Monitor and sustain improved performance	2 to 4 weeks	\$2,718 to \$5,436
<b>Total</b>		<b>20 ± 5 weeks</b>	<b>\$26,000 ± \$7,000</b>

**Table 2** Estimated Resource Proficiencies

Task	Resources											
	Anna Frost	Edward Young	Hazel Vaughn	Howard Payne	Joyce Snyder	Ken Inman	Nick Rogers	Peggy Moss	Peter Foltz	Roberta Jackson	Susan Osborne	Stephanie Thomas
<b>Define Phase</b>												
Establish Project Goals	98	91	86	83	90	83	92	95	91	85	82	78
Develop Project Charter	88	86	86	84	93	88	93	96	90	82	79	76
VOC Study	84	84	87	83	92	89	94	96	92	82	83	81
Develop CTQ Tree	75	75	85	80	88	94	94	97	95	78	78	78
Develop Process Map	78	78	85	80	90	88	92	94	96	75	76	74
Stakeholder Analysis	95	90	90	88	90	87	93	92	90	78	77	79
<b>Measure Phase</b>												
Collect Process Data	70	80	85	82	90	88	92	90	95	75	77	78
Develop Run Chart	75	80	84	82	86	88	92	94	90	76	75	77
Calculate DPMO	75	78	80	78	85	87	96	94	90	72	72	72
Revise Project Charter	93	90	92	91	92	88	93	95	90	85	82	80
<b>Analyze Phase</b>												
Cause and Effect Diagram	85	88	92	90	75	72	80	87	85	92	97	93
Summary Statistics and Test	65	65	68	65	70	72	85	88	80	64	63	65
Pareto Analysis	80	84	90	88	90	92	98	98	96	78	78	78
Regression Analysis	65	70	75	67	78	80	90	92	87	63	60	61
<b>Improve Phase</b>												
Develop Payoff Matrix	96	90	90	88	91	85	92	92	90	83	80	77
Identify Improvements	88	86	90	90	82	80	88	90	88	93	96	93
Develop Training Material	80	85	95	90	91	88	90	86	88	83	75	72
<b>Control</b>												
Develop Checklists	80	88	96	92	93	80	92	88	88	87	68	73
Develop SPC Charts	65	78	82	80	80	84	95	95	93	63	61	61
Develop Status Reports	90	95	92	93	87	80	88	89	86	86	76	72

**Table 1** Background Information on Available Project Resources

First Name	Last Name	Job Title	Education	Years of Experience	SS Rank	SS Experience	# of SS Projects	Avg Proj Savings	Hourly Rate	Availability (%)
Anna	Frost	Radiology Practice Administrator	MPH	11	GB	1	1	\$50,000	\$58	20
Edward	Young	Radiology Office Administrator	B	7	GB	1	1	\$62,000	\$36	30
Hazel	Vaughn	Radiology Supervisor	B	6	GB	2	1	\$74,000	\$40	30
Howard	Payne	Radiology Supervisor	B	4	GB	1.5	1	\$68,000	\$30	35
Joyce	Snyder	Radiology Info Sys Mgr	B	5	GB	3	3	\$112,000	\$35	50
Ken	Inman	Radiology DB Mgr	B	3	GB	1.5	2	\$95,000	\$25	50
Nick	Rogers	Adm of Special Projects	B	5	BB	3	6	\$211,000	\$33	50
Peggy	Moss	Radiology Senior Bus Analyst	MBA	6	BB	3	6	\$240,000	\$40	50
Peter	Foltz	Radiology Bus Analyst	B	3	GB	2	5	\$187,000	\$30	50
Roberta	Jackson	Senior Nurse Manager	B	15	GB	1	1	\$75,000	\$42	20
Susan	Osborne	Staff Nurse	B	8	GB	1	1	\$35,000	\$35	50
Stephanie	Thomas	Staff Nurse	B	4	GB	1	1	\$42,000	\$30	50

## Breakdown

Member Name	Avg. Proj. Savings	Hourly Rate	Weekly Avail. (%)	Weekly Avail. (hrs)	Weekly Cost (Salary)
Hazel Vaughn	\$74,000.00	\$40.00	30%	12	\$480.00
Ken Inman	\$95,000.00	\$25.00	50%	10	\$250.00
Nick Rogers	\$211,000.00	\$33.00	50%	13	\$429.00
Peggy Moss	\$240,000.00	\$40.00	50%	5	\$200.00
Total				40	\$1,359.00

## Assumptions

**Material & Testing Costs:** Stress tests are relatively simple to administer. They involve a treadmill, monitoring heart function, and 1-2 personnel. We assume these costs will not be additional to the normal expenses of Southern Care

**Overhead & Operations:** Since the project team is internal and all the necessary equipment is already available at the hospital, we anticipate no additional operational costs. Additionally, all testing can take place on the hospital premises, eliminating any potential rent expenses.

## Acceptance Criteria

### **Reduced Lead Time:**

Decrease stress test results lead time to meet medical staff's desired turnaround time.

### **Improved Patient Care:**

Enhance patient experience by reducing waiting times and ensuring timely interventions.

### **Project Documentation and Training:**

Document a complete and comprehensive manual that includes an improvement plan.

### **Compliance:**

Ensure the revised process aligns with healthcare regulations and maintains legal integrity.

## References

Project Management Institute. (2017). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, PA, USA: Project Management Institute

Meredith, J. R., Shafer, S. M. (2021). Project Management in practice (Seventh ed., pp. 71–73). Wiley & Sons.



# Q & A

