

PROJECT MANAGEMENT (PM) STRATEGIES FOR CLINICAL ENGINEERING

S. Hiremath¹ and B. Anderson²

¹Medical Technology Management Unit, Princess Margaret Hospital, Perth, Australia

²Perfect Project Palnning, Perth, Australia

INTRODUCTION: A 'project' is defined as a planned set of tasks, implemented by an effective schedule to achieve specific outcomes within the targeted time period and budget. Project Management is the planning, scheduling and controlling of project activities to meet the set objectives of the projects on time and within the budget. There are specific strategies recommended by Project Management Institute (PMI) to achieve these goals. However in clinical engineering circles often the 'reactive' maintenance strategies are used in preference to PM techniques. This paper describes author's experience in implementing PM strategies.

Quality expert Dr.J.M.Juran¹ defines a project as a problem 'scheduled for solution'. This definition forces us to recognize that projects are aimed at solving the problems and failure to properly set the scope, objectives and metrics for the project often leads to problems related to performance, cost and quality. This is explained by Dennis Lock³ as the 'triangle of objectives' as shown in fig1. The Earned Value Management (EVM) principles are applied in our project to achieve highest possible quality at the least cost and on time.

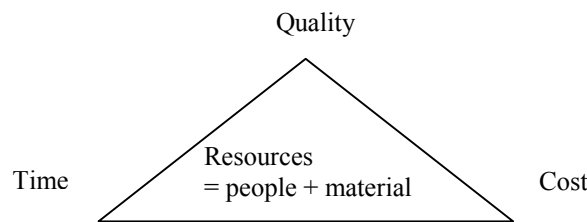


Figure 1. Triangle of objectives.

METHODS: A case of EVM is presented by Henderson, Kym² in his paper 'Earned Schedule in Action'. This paper describes an approach achieving a high and very direct level of cost and schedule integration for a project. We have used a similar approach by using Plan, Organize, Implement, Network and Train (POINT) strategies. POINT project followed the recommended iterative method of using MSP as follows: Assign Tasks, Durations, Links, Resources, Cost, test Leveling (TDLRCL). This allowed the calculation of EV and ES as a measure of improvements achieved in the maintenance program as a result of POINT project. These EV and ES analysis were applied during the quarterly review of the project performance, to ensure that the project was on schedule and there were no cost escalations or delays. MSP provided very good reports in terms of cost and schedule variance on the go. The reports are graphical and are easily understood.

RESULTS: POINT project achieved cost containment of 2-4% for maintenance budget within two years.

DISCUSSION & CONCLUSIONS: PM strategies work with Clinical engineering as well as they do with large projects, such as building the roads, if strategic PM is used effectively.

REFERENCES:

¹Godfrey, A. Blanton and Juran, J. M. *Juran's Quality Handbook: 5th Edition, ISBN 0-07-034003-X.*

²Henderson Kym, *Earned Schedule in Action, 'The Measurable News', "Summer" 2004.*

³Lock, Dennis, *Project Management: 7th Edition, ISBN 0-566-08225-X 2000.*

REDUCING WRONG GAS DELIVERY TO PATIENTS

Glenn Kennett

Flinders Biomedical Engineering, Flinders Medical Centre, Bedford Park, Australia

INTRODUCTION: Accidental delivery of the wrong gas to patients is a world wide¹ problem that can result in severe adverse patient outcomes. Air and oxygen are often located side by side at bedsides in hospitals being indexed incompatible until they reach the end of each flow meter where the threads, hose nipples and patient tubing are interchangeable. Air or oxygen can be delivered incorrectly to patients.

BACKGROUND: Flinders Medical Centre has identified and tracked wrong gas delivery to patients over the past 2 years. There have been 12 Advanced Incident Management System (AIMS) reports of adverse events: 8 involved MET (Medical Emergency Team) intervention and 1 required admission to ICU. Personally witnessing an incident during installation of "AIR Guards" and medical staff feedback indicate the mix up of gases occurs far more frequently than reported. The majority of incorrect connections occurred when patients returned from a procedure or were transferred from another clinical

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.