
January, 2013

Disclaimer: This “Financial Model for Implementing an ICU Early Physical Rehabilitation Program” (hereafter referred to as the “Financial Model” or “Model”) was designed and distributed for educational and demonstration purposes only. All financial analyses should be independently verified and tailored to the specific circumstances of any hospital. The authors take no responsibility for any negative consequences resulting from use of this Financial Model.

Note: This Financial Model is only compatible with Excel version 2007 or higher

For a full description of the Financial Model development process, please see:


Questions, comments or suggestions regarding the Financial Model should be directed to:

Dale Needham, FCA, MD, PhD
Division of Pulmonary & Critical Care Medicine, and
Department of Physical Medicine & Rehabilitation
The Johns Hopkins University
dale.needham@jhmi.edu
Introduction

This document provides a brief guide for users of the “Financial Model for Implementing an ICU Early Physical Rehabilitation Program” that was developed using Microsoft Excel. An integral part of this guide is the associated journal article (see cover page for citation) that describes the development and use of the Financial Model. The journal article provides a range of values to be considered when entering values into the Financial Model.

Instructions for Use

1. Starting in cell I7, enter appropriate data into each of the boxes (“cells”) that have a blue background. A text box will appear indicating the acceptable range of values for the cell. If an inappropriate number is entered, a message will appear explaining the acceptable range of numbers and allow you to re-enter a number. For all cells after row 22 please use the TAB key to advance to the next cell.

2. The overall Net Annual Savings (Costs) appears in cell I73. This value is calculated as the Total Cost Savings from Reduced Length of Stay (ICU + Floor) from cell I45 minus the Total Costs from cell I68. If the Total Costs of the program exceed the Total Savings (i.e., a net cost), the value appears in round brackets [e.g., ($XX,XXX) ] in cell I73.

3. Table 1 on page 2 of the spreadsheet provides a sensitivity analysis of the Net Annual Savings (Costs) associated with implementing an ICU early physical rehabilitation program given the specific number of annual ICU admissions, baseline Floor Length of Stay and baseline ICU Length of Stay that were specified in the model. Select cell B85 for optimal viewing of Table 1. See Appendix A (on last page) for further information.

Explanation of Specific Items for Entry in the Financial Model

Section (Row 5 – 18): Hospital Length of Stay (LOS) Data

Average ICU Length of Stay: Enter the average ICU length of stay (in days) prior to implementation of the ICU early physical rehabilitation program.

Average Floor Length of Stay: Enter the average floor length of stay (in days) prior to implementation of the ICU early physical rehabilitation program.

ICU Admissions per year: Enter the annual number of ICU admissions.

% Reduction in ICU Length of Stay: Enter the percent reduction in ICU length of stay assumed to occur with implementation of the ICU early physical rehabilitation program (a zero can be entered if no change in length of stay is projected); the corresponding reduction in average ICU length of stay (in days) will appear in cell I14.
% Reduction in Floor Length of Stay: Enter the percent reduction in Floor length of stay assumed to occur with implementation of the ICU early physical rehabilitation program (a zero can be entered if no change in length of stay is projected); the corresponding reduction in average Floor length of stay (in days) will appear in cell I15.

Section (Rows 20 – 34): ICU and Floor Direct-Variable Costs per Day

ICU Direct-Variable Costs per Day: Enter the direct-variable costs per day for ICU Days 1 - 5. All ICU days after Day 5 are assumed to have the same cost as ICU Day 5. Published reference values are provided in italics below the data entry fields. Direct-variable costs per day represent the daily estimate of cost savings from reducing length of stay in the ICU by one day.

Floor Direct-Variable Costs per Day: Enter the direct-variable costs per day for Floor days 1 - 5. All Floor days after day 5 are assumed to have the same cost as Floor day 5. Published reference values are provided in italics below the data entry fields. Direct-variable costs per day represent the daily estimate of cost savings from reducing length of stay on the floor by one day.

Section (Rows 48 – 68): Cost of ICU Early Physical Rehabilitation Program

PT(s)/OT(s): The total salary including benefits for the program’s physical therapist(s)/occupational therapist(s) or other rehabilitation therapy staff

Technician(s): The total salary including benefits for the program’s rehabilitation technician(s)/assistant(s) for the PT/OT

Program Coordinator(s): The total salary including benefits for the program’s coordinator(s)

Physician Leader(s): The total salary including benefits for the program’s physician(s)

Training: Training expenses for program personnel

Equipment: 7 rows are available to enter the name of equipment and cost
Appendix A – Net Annual Savings (Costs) Sensitivity Analysis

An example of Table 1 is shown below for a hospital with 900 annual ICU admissions, a baseline ICU LOS of 5.4 days and a baseline Floor LOS of 10.3 days. A decrease in ICU length of stay by 20% (1.08 days) and a decrease in Floor length of stay by 20% (2.06 days) results in projected Net Annual Savings of $773,851. The numbers in Table 1 will change based on the annual number of ICU admissions, the baseline ICU LOS value, and the baseline Floor LOS value.

Table 1: Projected Net Annual Savings (Costs) from Implementing an ICU Early Physical Rehabilitation Program, by Average Floor & ICU Length of Stay (LOS) Reductions for a hospital with 900 annual ICU Admissions, pre-intervention ICU LOS of 5.4 day(s) and pre-intervention Floor LOS of 10.3 day(s)

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<th>15%</th>
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