Business Tools

Manual
This document is intended to be used in tandem with other HELP training materials. As with all HELP materials, this document supplements but does not replace the individualized personal instruction that is necessary to ensure the effectiveness of HELP and the safety of patients, volunteers, and staff. It provides general guidance, but does not address many situations that may arise in dealing with the hospitalized elderly. Persons using the HELP techniques must continue to exercise their independent judgment about such clinical situations. You agree that the Content does not address many situations that may arise in dealing with the hospitalized elderly, and that persons using the information and techniques described in the Content must continue to exercise their independent judgment about such clinical situations. Your use of the Content is at your sole risk. THE LLC DISCLAIMS ANY AND ALL PROMISES, REPRESENTATIONS, AND WARRANTIES, EXPRESS OR IMPLIED, EXCEPT AS EXPRESSLY SET FORTH IN THE AGREEMENT, WITH RESPECT TO THE CONTENT, OR ANY PORTION THEREOF, INCLUDING WITH RESPECT TO ITS CONDITION, CONFORMITY TO ANY REPRESENTATION OR DESCRIPTION, TITLE, AND MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. In no event shall the LLC, Sharon K. Inouye, M.D., M.P.H. ("Dr. Inouye") or Hebrew SeniorLife, Inc. ("HSL") be liable to you or any third party for any loss of revenue, any incidental, special, exemplary, or consequential injury or damages, or any claims or demands brought against you related to the Content or your use of the Content, even if the LLC, Dr. Inouye or HSL has been advised of the possibility of such damages. You agree to indemnify and hold harmless the LLC, Dr. Inouye and HSL from and against any and all losses, claims, damages, suits, actions or liabilities of any kind resulting from your use of or reliance on the Content.
# Hospital Elder Life Program
## Business Tools

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Introduction

The materials and tools in this book were developed to support the design and implementation of new Hospital Elder Life Programs in acute care hospitals. They were developed through a grant from The Commonwealth Fund. However, the statements and opinions expressed in these materials are those of the authors, and not of The Commonwealth Fund. Examples and scenarios are provided to illustrate possible outcomes, but are not predictors of institution-specific results.

These materials combine a synthesis of the design principles of the Hospital Elder Life Program and the practical knowledge of the Yale program, with general suggestions that reflect common needs of hospitals and successful approaches to funding new programs.

Each organization is different. The politics and norms for program approval, management, and funding oversight will vary. The intent of the tools is to give you a good reference point from which to test assumptions and construct program management tools that will work in your environment. Although the examples are "representative" of possible results, and where appropriate may reflect documented results from the Yale program, they are not promises of results. Your results will depend upon the degree of need in your hospital, and the degree of rigor of your program.

Sample presentation materials such as an Executive Summary and a power point presentation are included, as well as the files on computer disc, so that you can customize them to meet your needs efficiently. The data collection questionnaire will provide you with the information needed to customize the Excel worksheets. The Excel worksheets are intended to provide some initial structure to the evaluation of potential case volume, staffing needs, volunteer needs, and potential impact.

It is our sincere hope that these tools save you some time in getting started, and support you in designing successful strategies for implementing the Hospital Elder Life Program in your setting. We would appreciate your feedback regarding tool usefulness, and suggestions for improvement.
Background

Hospitalization can be a pivotal point in the life of an older person, with loss of independence and subsequent institutionalization as frequent and unfortunate outcomes. The hospitalized elderly are a particularly vulnerable group because of their complex chronic conditions and special needs. 35% to 50% of patients age seventy or older experience functional, cognitive, or physical decline when hospitalized. This decline can lead to increased mortality, higher rates of institutionalization, increased need for rehabilitation services, and greater health expenditures.

Hospitals face many challenges in providing high quality care to the elderly. These patients are frail with decreased reserve, and they suffer a stunningly high rate of iatrogenic complications (29-38% of hospitalized patients). These risks are evident in the high incidence of falls, delirium, and polypharmacy being tracked in many hospitals currently.

The problems of hospitalized elderly patients have assumed particular importance since patients aged 65 and older currently account for more than 49% of all days of hospital care (The Administration on Aging: 2000, A Profile of Older Americans: 2000). Delirium complicates and extends the hospital stays of older patients, accounting for more than $6.9 billion (in 2004 US dollars) of Medicare expenditures.

As the population ages and the severity of illness index for hospitalized patients rises, we also confront a labor shortage for nursing staff. At the same time, many patients lack a primary care giver from their family who can provide extensive assistance to the patient while hospitalized. These trends overlap to create more need for supportive services for these frail patients during a period of declining supply.

The Hospital Elder Life Program (HELP)

Delirium (acute confusional state) and functional decline are common, serious and potentially preventable complications of hospitalization for older patients. While they are rarely caused by a single factor, several factors such as immobilization, adverse effects of medications, restraints, and sleep deprivation have been associated with their development. Attention to these factors to decrease the onset of delirium and functional decline requires fundamental changes in the way hospital care is delivered to older patients.

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The Hospital Elder Life Program is a comprehensive program of care for hospitalized older patients, designed to prevent delirium and functional decline. The program is intended to integrate the principles of geriatrics into standard nursing and medical care on any hospital unit, and to bring geriatric expertise to bear on patient management on the Hospital Elder Life Program patients, and ultimately to patients throughout the institution.

The program provides targeted interventions that address a broad scope of geriatric issues known to contribute to cognitive and functional decline during hospitalization. These include: cognitive orientation and stimulation activities, therapeutic activities, sleep enhancement strategies, exercise and mobilization, hearing and vision aids, feeding assistance and preventing dehydration, pastoral care, family support and education, and individualized discharge planning.

**Background Research and Outcomes**

The Hospital Elder Life Program was tested in a clinical trial, the Yale Delirium Prevention Trial. The interventions were proven successful using a multi-component strategy to prevent delirium in hospitalized older patients. In the Yale Delirium Prevention Trial, eight hundred and fifty-two older patients (70+) were enrolled; half received the HELP intervention, while the remainder received usual hospital care.

HELP interventions were implemented by an interdisciplinary team and a complement of trained volunteers.

The intervention resulted in:

- A significant reduction in the development of delirium (9.9% of intervention patients vs. 15% of usual care patients, odds ratio = 0.60, P=0.02). *New England Journal of Medicine 1999;340:669-76*

- A significant reduction in total number of days with delirium (105 vs. 161 in usual care, P=0.02).

- A significant reduction in total number of delirium episodes (62 vs. 90 in usual care, P=0.03).

- A significant reduction in functional decline (14% in intervention patients vs. 33% in usual care patients). *Journal of the American Geriatrics Society 2000;48:1697-1706*

- A reduction in use and costs of hospital services. The program was demonstrated to be cost effective for the 73% of intervention patients who were at intermediate risk of developing delirium. The costs of implementing the program were offset by the cost savings from the program. *Medical Care 2001;39:740-752*

- A dose-response relationship between adherence with the interventions and delirium reduction. Higher levels of adherence resulted in reduced rates of delirium in a directly graded fashion. *Archives of Internal Medicine 2003;163:958-964*

- A reduction in use of long-term nursing home services. Intervention was associated with a 15.7% decrease in long-term nursing home costs, and average savings of $9446 per long-term nursing home patient. *Journal of the American Geriatrics Society, 2005;52:405-409*
- A pretest/posttest quality improvement study evaluating the replication of the Hospital Elder Life Program in a community hospital. The HELP intervention resulting in both clinical and financial benefits. *Journal of the American Geriatrics Society, 2006;54:969-74.*

- Demonstrates effectiveness and cost-effectiveness of Australian replication of HELP program. *Int Med J. 2007;37:95-100*

### Program Design and Tools

The Hospital Elder Life Program has an innovative design that utilizes a small, dedicated professional staff (approximately 1.5-2 FTEs total) and a large, very well organized volunteer model to deliver direct care to the patients screened into the program, while having a broader impact on institutional care quality through the involvement and educational efforts of the dedicated professional staff.

Program design depends on hospital size and elderly population, but should include at least:

- Elder Life Specialist (bachelor or masters level generalist to coordinate volunteers, do initial patient assessment, and manage daily program needs)
- .5 Elder Life Nurse Specialist (geriatric nurse)
- .1 Geriatrician for clinical oversight
- .1 Management role, which can be one of the above positions
- 21 volunteers (enough to cover 3 shifts of 4 hours each/day, 7 days/week)

The Hospital Elder Life Program utilizes a very robust set of program tools (four program "how to" manuals and six complete volunteer and staff training videos) that include:

- Complete organizational and procedural policies
- Full organizational structure, job descriptions, and management tools
- Complete training materials
- Clinical tracking tools and protocols
- Quality assurance tools
- Program oversight tools, including volunteer assessment tools
- Methodology and recommendations for database management

Complete electronic sets of program tools are available on the HELP website, [hospitalelderlifeprogram.org](http://www.hospitalelderlifeprogram.org), or at the Portal of Geriatric Online Education, [pogoe.org](http://www.pogoe.org). The materials will facilitate simple and consistent implementation, low start-up costs, and consistent performance. Patient Intervention Tracking database software has just been released and is also available to support easy, low cost implementation and consistent reporting of results.

Program implementation, including materials and program staff, is estimated at $155,000 to $185,000 per year, for a staff sufficient to cover up to approximately 500 patients per year (depending on length of stay and on adequate volunteer availability).
Program Results – Clinical and Quality

Successful implementation of these interventions can counteract the detrimental effects of hospitalization. The effectiveness of the program for delirium prevention has been well established through a controlled clinical trial in 852 patients.²

Additional benefits of the program include:
• 34% reduction in the incidence of delirium (a reduction of approximately 5 cases per 100 patients enrolled in the program)
• Improved prevention of functional decline (Inouye, et al., 1993)
• Improvement in quality of care for older patients, including outcomes such as fall rates
• Increased patient and family satisfaction with care
• Recognition of the hospital as a Center of Excellence in provision of geriatric care
• Increased hospital volunteer base
• Enhanced public relations and community outreach opportunities
• Educational site for acute geriatric care

Program Results – Economic

Successful implementation of the program has been proven to reduce resource use (see Attachment 1 for details of savings from the study). Savings accrue primarily through cost avoidance or the reduction in expenditures that would have occurred if the program were not in place. The care plans implemented in the Elder Life Program add intensive volunteer activity while often reducing the use of pharmaceuticals, tests, and supplies. In addition, by reducing the rate of delirium and other symptoms of functional decline, the program should reduce the incidence of complications and therefore the variability in case outcomes.

The “Tools for Program Design” provided by the HELP program illustrate the potential impact that the program may have, given certain assumptions about case volume and cost structure. Results will vary by institution, influenced by program implementation, baseline performance, and cost structure.


http://www.hospitalelderlifeprogram.org
SUMMARY OF POTENTIAL BUSINESS IMPACT

- *Reduced incidence of delirium*, which is associated with mortality rates of 25-33% in the hospital setting, increased morbidity, increased length of stay, and increased nursing intensity\(^3\)

- *Reduced stress on nursing staff* to provide personal assistance to frail elderly patients, due to education of nursing staff, presence of reliable volunteer care, and program oversight

- *Reduced resource use, for example*, due to substitution of other interventions for sleep promotion (less sedatives), less antibiotic use due to fewer urinary tract infections, less MRIs and CTs, and less complications resulting in transfers to ICU (see Attachment 1) and overall lower acuity

- *Improved consistency of care* for the frail elderly resulting in more predictable length of stay and improved coordination for discharge, resulting in improved capacity for the hospital to manage capacity efficiently

- Improvements in *patient satisfaction* due to the provision of very practical personal care to assist patients in activities of daily living and support their successful return to their homes and families (market strength)

- Potential for *increased patient referrals* from primary care physicians who view the program as providing differentiated quality to their patients, ensuring continuity of care

- Increased visibility of geriatric programming within institution\(^4\)

- Improved quality of care and patient safety\(^4\)

- Enhanced staff education and training, skills enhancement, and job satisfaction\(^4\)

- Achieving hospital awards and commendations, such as JCAHO, magnet status, etc.\(^4\)

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\(^3\) Inouye SK, Schlesinger MT, Lydon TJ “Delirium: A Symptom of How Hospital Care is Failing Older Persons and a Window to Improve the Quality of Hospital Care”, *The American Journal of Medicine*. 1999; 106: 565-73.
• Increased public relations and community outreach.\textsuperscript{4}

(See Hospital Elder Life Program “Tools for Program Design” financial worksheets for illustrations of the value of volunteer labor, the cost of the program, and predicted caseloads required for breakeven performance or better)

Attachment 1: Overview of Potential Cost Savings from Proactive Management of Elderly Hospitalized Patients at Risk for Delirium through use of the Hospital Elder Life Program

Summary of the study: 852 patients age 70 or older, hospitalized for more than 2 days, and meeting criteria for risk factors for delirium, were treated with the HELP program interventions or placed in a control group receiving traditional care. The study was conducted from 1995 – 1998 in an urban 800-bed teaching hospital. The incidence of delirium in the intervention group was 34% less than in the non-intervention group.

The intervention group was documented to have a lower intensity of resource use across several categories, described below. The cost savings were sufficient to offset program costs in the most conservative scenario. Savings are highest when program resources are focused on intermediate risk patients.

<table>
<thead>
<tr>
<th>Category of Expense</th>
<th>Per Case Savings For the “Intermediate Risk” Group</th>
<th>Description of Activity associated with the savings</th>
<th>Suggested Proxy Measure for HELP Programs *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room costs</td>
<td>$143</td>
<td>Less need for private rooms</td>
<td>Overall cost per day for program patients</td>
</tr>
<tr>
<td>Nursing costs</td>
<td>$381</td>
<td>Reduction in nursing time and in use of sitters</td>
<td>Overall cost per day</td>
</tr>
<tr>
<td>Pharmacy costs</td>
<td>$50</td>
<td>42% reduction in use of psychoactive medications</td>
<td>Pharmacy cost per case and cost per day</td>
</tr>
<tr>
<td>Diagnostic procedures</td>
<td>$198</td>
<td>Reduction in CT/MRI scans, blood tests</td>
<td>Ancillary cost per case</td>
</tr>
<tr>
<td>All Other costs</td>
<td>$314</td>
<td>Less incidence of delirium reduces % of cases with ICU days; less rehab &amp; PT needed. Minimized use of Foley catheters, restraints</td>
<td>Overall cost per case, detailed tracking of bed type</td>
</tr>
<tr>
<td>Total Cost Savings</td>
<td>$1028</td>
<td>All of the above</td>
<td>Overall cost per case and LOS</td>
</tr>
</tbody>
</table>

If your hospital has detailed cost accounting capabilities, work with them to establish measures at the detailed category level. As much as possible you want to track detailed impact, compare it to non-program elderly cases with similar demographics and DRGs, and to baseline results (before the program begins).


http://www.hospitalelderlifeprogram.org
Objectives

The objective of these worksheets is to give you examples of possible program volume, program costs, and program impact. For this purpose, six worksheets have been developed:

- Data Entry Sheet: Use with Data Collection Grid
- Chart 1: Estimating Potential Patient Volume using Hospital Statistics
- Chart 2: Staffing Model: Estimating HELP Team Size based on Patient Volume
- Chart 3: Volunteer Program: Estimating Number of Volunteers Needed
- Chart 4: Demonstrating Value: Cost and Breakeven Examples
- Chart 5: Cost Effectiveness: Evaluating the Volunteer Model

These worksheets are built in one Excel file, so that assumptions you make and enter in the “Data Entry Sheet” are used throughout the charts. The examples that are given illustrate potential patient case volume ranging from 250 to 1100 patients per year.

Although the examples and calculations in the worksheets are quite plausible, and wherever possible have been built from actual program experience, they are nevertheless for illustration only. Your results will depend upon your team composition, team activity, and patient profiles.

Recommended approach

1. The first thing you should do is to “look over” a printed copy of all 6 worksheets. Try and get a flow of what is included, what assumptions have been made, and which data or perspective may be most useful to you. Think about what your hospital will want to know to make a decision to fund your program.

2. It is recommended that you use the “data collection questionnaire” [separate document] as an aid to you in gathering relevant data that is specific to your hospital. The “data collection grid” will provide the critical data to customize the worksheets for your institution.

3. After collecting data from the “data collection grid” enter this data ONLY into the first worksheet, titled “DATA ENTRY SHEET” and only in the column that indicates “Enter your data in this column”. After you enter in these data facts, the other worksheets will automatically update.

4. SAVE THE REVISED FILE!

http://www.hospitalelderlifeprogram.org
5. “TEST” the data by using it in informational interviews with key managers in the organization who may have an interest in your program. Ask for suggestions of better assumptions or creative uses. In particular, test whether there are beliefs about the value of volunteer time, about the value of reducing the incidence of delirium and its associated factors, and the degree of interest in measuring outcomes in functional status in the older patients. Using the data as a basis for getting these discussions going is very constructive. If you find support, and can enlist an analyst to build your own worksheets that better fit your institution, use it!

**Caution**

Although the examples and calculations in the worksheets are quite plausible, and wherever possible have been built from actual program experience, they are nevertheless for illustration only. Your results will depend upon your team composition, team activity, and patient profiles. For example, patient volume will be a function of the following variables (as well as others):

- Hospital size and occupancy
- Patient demographics (% >= 70)
- Geographic location of the program (is it operational in one unit, or in all units?)
- Percent of patients that are >= 70 and have LOS > 2 days
- Percent of eligible patients that are actually screened by the ELS
- Volunteer staff size, and ELS and ELNS availability

Several assumptions or program design choices will have a very significant impact on program success:

- Which medical floors or units your team will cover; too few locations will limit potential patient caseload, too many complicates volunteer supervision, training, and takes longer for “walking from place to place”.
- Ensuring complete coverage of assigned patients by either volunteer staff or Elder Life Specialist; measuring the percentage of time that the recommended interventions are completed (called adherence rate) is very important.
- Funding of dedicated staff for the Elder Life Specialist role and the Elder Life Nurse Specialist role; these are key to the successful implementation and maintenance of a program and provide many of the benefits that ensure results.
Critical Assumption: Patients meeting the Screening Criteria

A special mention will be made here of one critical assumption regarding the percentage of eligible patients $\geq 70$ years old and with length of stay $> 2$ days, which meet the program enrollment criteria and are enrolled in the program. Because you will not initially have data on this, we are recommending that you continue to use the 50% experience from Yale and documented in the published articles. Basically, when the Elder Life Specialist screens for patients who are not terminally ill, not incoherent, have at least 1 risk factor for delirium, etc, about 50% of the patients will be recommended for the program and the remainder will not.

[Refer to the HELP Organizational and Procedural Manual, Volume II, The Clinical Process, Section 1, “Screening and Enrollment Procedures” for screening criteria.]

It is the strong recommendation of the program authors that these criteria be followed. Case volume is the biggest driver of program costs. Program impact is most pronounced on the patients that fit the “intermediate risk group” classification. Although there is nothing wrong with considering a broader application, if you have adequate funding and staffing for it, the best use of scarce resources will be to focus on the recommended target group of patients.
**Purpose of the Data Collection Questionnaire**

This is intended as an aid to help you in the collection of relevant data about patient demographics and hospital utilization that will help you design a program that will maximize its positive impact on your hospital. **Data gathered through this process should allow you to customize the excel worksheets to fit your needs** and provide realistic estimates of case volume, staffing needs, volunteer needs, and likely impact.

In order to customize the data spreadsheets you only need a small amount of fairly easily available data. We will focus on the collection of that data in the grids on page 2 and 3.

Collecting data in the other arenas (quality measures and cost opportunities) will require significant collaboration with managers in the hospital who are already studying these trends. One of your goals as a program sponsor is to assess what is necessary and appropriate to gather within your hospital setting and culture; what will be required to get program funds approved, and what will be desirable as baseline data to support program sustainability (ongoing program support).

The “supplemental questionnaire” is *optional* and intended to help you with the collection of broader data related to hospital needs and strategy that will help you position the Elder Life Program most successfully within your institution. Although you can probably obtain the required data without going through some of the steps recommended under methodology, we recommend considering some of these steps and making contact with key managers who may have an interest in the potential contributions of your program. Doing this early may build early support for the program, increasing its odds of success.

When you have gathered the data on the next two pages (hospital utilization data and salary data), go to the “data entry sheet” (the first worksheet) of the Excel file titled “TOOL WORKBOOK” and enter the data in the right hand column.

This will update the model to give estimates and examples that are more representative of your hospital. These are still ESTIMATES and EXAMPLES only.
### HOSPITAL DATA:

**Required data set to customize the excel spreadsheets**

*Recommendation*: ask someone in finance to complete this grid for you, and to document the data source, so that you can use it for repetitive reporting.

*“Tag” refers to the row identifier for data entry into the “data entry sheet” of the Excel Worksheets*

<table>
<thead>
<tr>
<th>“Tag”</th>
<th>Description of Data Request</th>
<th>Data</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td># of staffed beds in the hospital</td>
<td></td>
<td>Often staffed are less than licensed, due to nursing shortage or lack of demand</td>
</tr>
<tr>
<td>B</td>
<td>Hospital occupancy rate (of staffed beds)</td>
<td></td>
<td>High occupancy rates may indicate capacity issues, and impact where the program will be most helpful</td>
</tr>
<tr>
<td>C</td>
<td>Average Length of Stay (ALOS) for all cases</td>
<td></td>
<td>Expect this to be lower than the next two.</td>
</tr>
<tr>
<td>D</td>
<td>Average Length of Stay (ALOS) for patients &gt;= 70 years old</td>
<td></td>
<td>Important to estimating # of days for volunteer visits</td>
</tr>
<tr>
<td>E</td>
<td>Average Length of Stay (ALOS) for patients &gt;= 70 years old and with LOS &gt; 2 days</td>
<td></td>
<td>This is the “best” proxy for estimating the likely LOS of the patients who will be enrolled in the HELP program.</td>
</tr>
<tr>
<td>F</td>
<td>Total annual admissions</td>
<td></td>
<td>Simple volume indicator</td>
</tr>
<tr>
<td>G</td>
<td>Admissions to general medicine units (modify this according to the sites designated for your program, for instance surgical units)</td>
<td></td>
<td>Assumed that general medicine units are the focus of the HELP program – modify this according to your program</td>
</tr>
<tr>
<td>H</td>
<td>Admissions to general medicine units for patients &gt;= 70 years old</td>
<td></td>
<td>If you plan to establish the program in other areas, such as SURGERY, then ask for admissions to THOSE units.</td>
</tr>
<tr>
<td>I</td>
<td>Admissions to general medicine units for patients &gt;=70 years old AND with LOS &gt; 2 days</td>
<td></td>
<td>Same as above regarding WHICH units. These cases are the core focus of the HELP program</td>
</tr>
</tbody>
</table>
**Tools to Support New Program Design**

**Data Collection Questionnaire**

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**SALARY & BENEFITS DATA:**

Required data set to customize the excel spreadsheets

**Recommendation:** ask someone in Human Resources, or a Department Administrator to provide you with local estimates for these items. You will need to make an assumption about who will fill the Program Director role (MD, RN, or other) because this will impact the salary cost for this partial FTE.

“Tag” refers to the row identifier for data entry into the “data entry sheet” of the Excel Worksheets

Benefits percentages are higher for staff than for MDs, given the different salary levels. For example, FICA taxes to the employer are a higher percentage cost for lower salary levels. The same is true for health care benefits, and certain other benefits.

<table>
<thead>
<tr>
<th>“Tag”</th>
<th>Description of Data Request</th>
<th>Data</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>Estimated annual full time salary for the Elder Life Specialist role [ELS] (usually a BA or MA level)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>Estimated annual full time salary for the Elder Life Nurse Specialist [ELNS] (an RN or APRN with geriatrics experience)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>Estimated annual full time salary for a Geriatrician (MD); The Medical Group Management Association 2001 Compensation median for Geriatricians is $157,092, as a placeholder.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Estimated annual full time salary for a Program Director (could be any of the positions above, or someone else).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>Estimated benefits rate for the ELS, ELNS, and program director (staff benefits rate)</td>
<td>This is usually a well-known assumption used in most department budgets.</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Estimated benefits rate for Geriatrician (MD rate)</td>
<td>This is usually a well-known assumption used in most department budgets.</td>
<td></td>
</tr>
</tbody>
</table>
Methodology Recommendations

- The Medical Director, V.P. of Medical Affairs, or other individual at your institution with oversight responsibilities for patient and physician information access and use should approve requests for information. This will make it easier to get information from support staff who are cautious about data dissemination and patient confidentiality.

- The Approved Request should be in writing, and should be supported by a face-to-face meeting with the staff member who will be responsible for running reports or releasing information; this allows for request clarification and compromise, to balance the “ideal” data and the data that may be available in a timely and non-disruptive fashion from existing sources.

- Show the staff person the worksheets you will be using, so that they understand how the data will be used. Ask for input and suggestions regarding other data that may be useful.

- After initial review of data, it is advisable for the requestor to schedule a follow-up meeting with the staff member/data source, and possibly with a manager who has used the data in the past (Medical Director) to assist in interpretation of the report.

- Always remember and repeat that you are looking for “representative” data that will allow you to do some estimation, or early stage interventions; it does not have to be perfect, although it is always helpful to UNDERSTAND the data’s imperfections.

- When reviewing sample reports, always clarify how you might get it in the future, whether it is a customized report or a “canned” report, and how “hard” it was to get, so that you can use this information when deciding what data to use for ongoing measures of program impact.

CAUTIONS ABOUT USE OF THE DATA WORKSHEETS

Remember, there are other assumptions built in throughout the model that you should think about, test, or eventually substitute with your own estimates or facts, when they are available. Examples include:

- Estimates of the amount of time that each team member spends with each patient
- Estimates of the split of time between direct patient care and program tasks such as training and attending meetings
- Assumptions about whether the program director is the RN, the MD, or another person, which impact salary levels.
- Estimates about the likely resource use savings; we used some examples supported by Yale’s study; you will need to eventually measure and document your own savings.
The excel worksheets are intended to help you organize and plan your program, and to give you a sound starting point for program justification when working with your administration. They are a tool, but cannot predict the actual results that your program will achieve due to differences in setting, implementation, and patient needs.

**OPTIONAL: SUPPLEMENTAL QUESTIONNAIRE**

**[Supplemental questions to help with Politics and Strategy]**

(Ask BOTH the Utilization Management Director (or equivalent role) AND a manager from Finance or Inpatient Billing these questions, if possible.)

1) Hospital Elder Life Programs contain the following features:
   a) A focus on practical interventions (such as early ambulation, feeding assistance, etc.) that have been proven to reduce the onset of delirium and other complications in elderly hospitalized patients
   b) Care plans that generally result in more personal attention (the interventions) and less use of pharmaceuticals and medical supplies.
   c) Strong advocacy for consistent, well-documented care processes
   d) Improvement in the skills of floor nurses to recognize and manage geriatric problems
   e) Significant use of well supervised volunteers to provide time and labor intensive care to hospitalized elderly patients

Can you identify other initiatives currently underway, under discussion, or recently completed that have overlapping or complementary objectives? If so, whom might we talk to for more information?

2) What reports are routinely generated to track adverse outcomes such as “falls” or “drug errors”? 
3) Are you actively looking at issues of quality and utilization among our geriatric patients? What are the concerns? What are the goals?

4) Is there a Cost Accounting system? What methodology is used by our hospital for approximating the cost of different bed types or the utilization of resources? If so, what types of reports are available? Will we be able to track the results with our patients compared to similar patients not enrolled in our program? What will be necessary to do this? Do you have suggestions?

5) The Hospital Elder Life Program may contribute significantly to “cost avoidance” through reducing resource use that drives cost/day, and possibly reducing LOS for some Medicare patients. Also, the program reduces the onset of delirium during hospital stays. Are there other programs that have been funded based upon quality measures or estimated cost avoidance, rather than income production? For example, Utilization management, or Formulary initiatives? Initiatives to reduce “falls”? To reduce use of “sitters”? To reduce need for patient restraints? If so, who could I talk with to learn more about their methodology for tracking contribution vs. cost?

[Ask the finance person these questions.]

6) What is the “BUDGET CYCLE” of the institution? Of the faculty practice (if applicable)? [i.e. is it calendar year or fiscal year, and when does fiscal year begin?]

7) What is the “budget process and timetable” applicable to new programs? In our institution, what are the options for budget consideration? Are there required formats? Can I get a copy?

8) If our program is implemented, we will have several staff positions; who could we talk with regarding human resource issues, estimated salary rates, etc?
Hospital Elder Life Program (HELP)

Helping to Maintain Cognitive, Physical, and Emotional Well-being in Hospitalized Older Patients
What Is the Hospital Elder Life Program?

- A comprehensive program of care for hospitalized older patients, designed to PREVENT delirium and functional decline

- Based upon award winning clinical trial that demonstrated clinical effectiveness

- Demonstrated cost-effectiveness through lower resource use during hospitalization

- Target patients = >70 year olds with LOS > 2 days
HELP Program Goals

- Maintain physical and cognitive functioning throughout hospitalization (through daily interventions)
- Maximize independence at discharge
- Assist with the appropriate transition from hospital to home or step-down setting
- Improve geriatric skills of staff throughout the general medicine units
Key Interventions of the Program

- Daily visitor program with structured cognitive orientation
- Therapeutic activities program
- Early mobilization
- Non-pharmacologic sleep protocol
- Hearing and vision protocol
- Feeding and fluid assistance
- Geriatric patient care education for unit nurses
How Are Volunteers Utilized?

- Utilizes a small team, comprised of a new role, the “Elder Life Specialist” (ELS) and an advanced practice geriatric nurse, the “Elder Life Nurse Specialist” (ELNS), with support from a geriatrician.

- Uses structured program with detailed orientation and oversight to engage a VOLUNTEER force of 20+ individuals to provide 3 shift, 7 day/week coverage to several hundred elderly patients per year.

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How Are Volunteers Utilized?

- Volunteers attend 16 hours of classroom training, followed by precepted practice. They participate in periodic retraining and a formal quality assurance process.
- Volunteers are scheduled for 3-4 hour shifts, with 3 shifts/day or 21 per week.
- Each volunteer will work with 4-6 patients per shift, carrying out the interventions and documenting activities.

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• Program is focused on specific geographic units where many elderly patients fitting the criteria are admitted
• All patients >=70 with expected LOS >2 are screened by the ELS: Approximately 50% will meet criteria for program
• ELS will do initial patient needs assessment and build a plan of volunteer care, using program protocols
What the Patient Experiences

- Lots of attention: encouragement and support to participate in getting better
- Predictable cycle each day with access to “someone who can listen”
- Volunteers can help identify patient needs and communicate with staff: Volunteers do not discuss clinical issues with patients
- Consistent support for orientation, mobility, and therapeutic activities
- Sleep protocol is patient friendly & expedites recovery
What the Nursing Staff Experiences

- Non-clinical needs of patient are effectively met by volunteers and ELS, reducing interruptions and demands on floor staff
- In-services on geriatric topics and regular interdisciplinary rounds
- Oversight by ELNS assists floor staff in identifying geriatric needs and coordinating care plans and discharge plans
- Reduced rate of delirium and fewer iatrogenic complications increases quality and confidence

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What Results Can Be Expected?

- Clinical trial documented a drop in onset of delirium from 15% of cases to 9.9%, or a 34% reduction
  - Improved quality of care!
  - Reduced complications and resource costs
  - Less need for patient restraints
- Increased scores on cognitive functioning tests
- Smoother discharges, fewer re-admissions
Ways the Program May Fit Our Needs

- Very consistent with quality initiatives to reduce adverse effects of drugs, reduce drug errors, reduce falls, etc.
- Responsive to patient and family needs for more consistent patient support (often for non-clinical tasks)
- Best management of patient care in our elderly medical admissions may reduce LOS and create capacity for other cases, while reducing costs
Strategic Opportunities

- Given the growing elderly population and the increasing severity of illness upon hospitalization, HELP program may fit well into a broader line of “geriatric care”
- Help improve predictability and cost effectiveness of low DRG reimbursement medical diagnosis
- Can be a base for market differentiation in quality and service
Additional Benefits

- The use of well trained and supervised volunteers delivers patient care in a cost-effective manner.
- ELS and ELNS supplement the skilled care provided by floor staff. The consistency of coverage may improve nursing morale and retention.
- This is an excellent program for community outreach and public relations.
- Volunteer program and outreach may support workforce recruitment goals.
What Does It Cost?

• Initial team staffing
  – 1.0 Elder Life Specialist (initial patient assessment and volunteer management)
  – .5 Elder Life Nurse Specialist (patient assessments and care triage)
  – .1 geriatrician (patient rounds, education)
  – .1 program director (could be ELNS or geriatrician)

• Cost is approximately $155,000/year
Leverage Through Case Load

• Initial case load may be approximately 250 patients, incremental team growth can support case load of >500 patients, for < $200k.
• Mature program cost per patient estimated at $250/case or $35/day of patient care.
• Volunteer model provides much needed labor at an effective cost of <$3/hour (allocating volunteer management costs across volunteer hours).
• Clinical trial documented savings per case of > $1000 in patients with “intermediate risk”
  
  – Reduced pharmacy costs
  – Reduced ancillary costs (MRI/CT/lab)
  – Reduced room and nursing costs (bed type, service intensity factors)
  – Reduced supply use (such as Foley catheters)
  – Reduced use of PT and rehab
Do We Need It at Our Hospital?

Consider our:

- Number of admissions for older adults?
- Complications of care and need for improvement?
- Shortage of nurses and other caregivers?
- Use of sitters?
- Concerns re capacity, LOS, and resource use?
- Transfers to ICU due to complications?
Keys to Program Success

- Strong, consistent leadership, and support from physicians and nurses
- Collaborative-style in ELNS and ELS
- Successful volunteer program, ensuring continuity and full shift staffing
- Commitment to measurement of impact, and continuous improvement
- Proactive coordination with other initiatives and programs, such as discharge planning, quality committees
What “Start-up” Efforts Are Required?

- The HELP program is well defined, with full training, clinical tracking, and management tools already developed by the Yale program, and available electronically at no cost.
- Need to assess our own patient volume and needs, to focus our efforts on appropriate inpatient units and measures.
- Need to commit funds for core team, and begin the implementation process.
Suggested Next Steps

- Communication with stakeholders
- Data collection to identify the “right place to start” and the potential case load
- Collection of baseline data for potential program patients (>=70 yrs old, length of stay > 2 days) including location, cost per case, LOS, and DRG
- Identification of financial support to get started
- Recruitment of staff
- Training
**Summary: The HELP Program**

- Is an organized, focused intervention with proven results
  - It reduces the incidence of delirium in hospitalized older adults
  - It maximizes independence at discharge
  - It improves the geriatric skills of hospital staff

*Given the demographics of our population, the special needs and risk factors of older adults, and the priorities of our hospital, this program is timely and appropriate!*

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Role of Volunteers in the Elder Life Program

Volunteers play a critical role in the program, and carry out core non-clinical activities for patients (such as walking, feeding, and sleep preparation) that are vital to good patient care. Their contributions help to reduce patient demand on the nursing staff, thereby reducing work stress on unit nursing and nursing aid staff. The volunteers and the overall impact of the program also reduce the need for "sitters".

This worksheet illustrates the VALUE of the volunteer time, if compared to incremental paid FTEs.

### Program Staff Costs

<table>
<thead>
<tr>
<th>Estimated Patients/Year in Program</th>
<th>Four Scenarios at Different Patient Volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>250</td>
</tr>
<tr>
<td><strong>Team Members (FTEs)</strong></td>
<td></td>
</tr>
<tr>
<td>&quot;ELS&quot;: Elder Life Specialist (BA or MA)</td>
<td>$54,600</td>
</tr>
<tr>
<td>&quot;ELNS&quot;: Elder Life NURSE Specialist</td>
<td>$77,817</td>
</tr>
<tr>
<td>Program Director</td>
<td>$84,500</td>
</tr>
<tr>
<td>Geriatrician</td>
<td>$186,897</td>
</tr>
<tr>
<td><strong>Total Team Size</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Direct Costs</strong></td>
<td></td>
</tr>
<tr>
<td>FTE's of ELS needed for Volunteer management</td>
<td>0.20</td>
</tr>
<tr>
<td>FTE's of ELNS needed for Patient Care</td>
<td></td>
</tr>
<tr>
<td><strong>Cost of training, supervision, and assistance (ELS and ELNS %)</strong></td>
<td>$14,811</td>
</tr>
</tbody>
</table>

### Volunteer Cost Effectiveness

<table>
<thead>
<tr>
<th></th>
<th>250</th>
<th>500</th>
<th>800</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volunteer hours provided for patient care</td>
<td>3,500</td>
<td>7,000</td>
<td>11,200</td>
<td>14,000</td>
</tr>
<tr>
<td>Volunteer total visits provided (at 100% coverage)</td>
<td>5,250</td>
<td>10,500</td>
<td>16,800</td>
<td>21,000</td>
</tr>
<tr>
<td>Estimated average # of Volunteers (at 1 shift/week/volunteer)</td>
<td>17</td>
<td>34</td>
<td>54</td>
<td>67</td>
</tr>
<tr>
<td>Indirect cost of volunteers, per hour of volunteer assistance</td>
<td>$4.23</td>
<td>$2.51</td>
<td>$1.81</td>
<td>$1.64</td>
</tr>
<tr>
<td>Indirect cost of volunteers, per volunteer patient visit</td>
<td>$2.82</td>
<td>$1.67</td>
<td>$1.21</td>
<td>$1.10</td>
</tr>
<tr>
<td>Indirect cost per volunteer per year</td>
<td>$882.60</td>
<td>$522.65</td>
<td>$377.49</td>
<td>$342.67</td>
</tr>
<tr>
<td>Volunteer Hours converted to FTE equivalents at 1900 hrs/year/FTE</td>
<td>1.8</td>
<td>3.7</td>
<td>5.9</td>
<td>7.4</td>
</tr>
</tbody>
</table>

### Contribution of Volunteer Labor to Patient Care Needs (in a tight labor market)

<table>
<thead>
<tr>
<th></th>
<th>250</th>
<th>500</th>
<th>800</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of time, if Using Paid Employees at $10/hr + 30% benefits</td>
<td>$49,811</td>
<td>$99,621</td>
<td>$159,394</td>
<td>$199,242</td>
</tr>
<tr>
<td>Excess of &quot;paid employee cost&quot; over cost of training (ELS, ELNS)</td>
<td>$35,000</td>
<td>$82,080</td>
<td>$139,123</td>
<td>$176,241</td>
</tr>
<tr>
<td><strong>&quot;Coverage&quot; of total HELP program costs, if contributed</strong></td>
<td>46%</td>
<td>63%</td>
<td>75%</td>
<td>78%</td>
</tr>
</tbody>
</table>

This means, "If you hired staff to do this work (assist in the feeding, ambulation, and sleep enhancement tasks being performed by volunteers), it would cost you approximately $159,000/yr. If you value labor time, the contribution of the volunteers would cover 91% of the total Elder Life Program costs (before counting cost savings from LOS, resource use, etc). This also does not count the direct clinical care provided by the Elder Life Nurse Specialist and the patient care and case management provided by the Elder Life Specialist."