Evidence-Based Medicine and Long-Term Care: Improving Outcomes in Pennsylvania Nursing Homes

Beryl Goldman
Richard Lee
Malcolm Morrison
Sue Nonemaker
Barry Fogel, Moderator
Today’s Presentations

- PA Department of Health Nursing Home Best Practices Project – Lee
- Organizing Evidence-Based Quality Improvement – Morrison
- Project Implementation – Goldman
- Project Evaluation – Nonemaker
- Summary Comments – Fogel
- Panel Discussion
Questions

- What are the lessons of the project?
  - Process improvement
  - Clinical outcomes of process changes
  - Barriers to change

- What is the current state of the art of evidence-based QI for nursing homes?
  - For what outcomes is the evidence the best?
  - Action recommendations
The Pennsylvania Project

Richard Lee
Deputy Secretary for Quality Assurance
Project Focus: Nursing Facilities in Pennsylvania

- 743 nursing homes
- 91,588 licensed beds
- 4 regions
- 9 field offices
- 5 facilities per surveyor
- 615 beds per surveyor
Project Concepts

- Provide positive assistance for improving quality of care in nursing homes
- Use existing data sets, measurement tools and quality standards for better outcomes
- Develop cost-neutral, outcomes-based best practices that are effective in improving quality of care
Features of Project Operations

- Protocols for targeting specific residents
- Familiar mandated processes (e.g., MDS assessments) as a vehicle for introducing change
- Cost comparable to that of usual care – No incremental cost for substituting one process for another
- Effective training techniques using nurse educators
Phase 1 Activities

- 12-2001: Public kick-off
- 2-2002: Workshop for non-participating facilities
- 6-2003: Workshop with participating facilities on Phase 1 outcomes
- 11-2003: Media event at Montgomery County Geriatric and Rehabilitation Center
- 3-2004: Legislative updates
- Positive articles in trade publications
Phase 1 Research Design

- Selected protocols for study: ADLs, pain, and depression
- Match intervention and control sites
- Apply intervention
- Measure changes
Phase 2 Activities

- Continue with original three protocols
  - Ongoing nurse educator support
- Add new protocols
  - Urinary incontinence
  - Pressure ulcers
- Outcome analysis
Phase 3 Activities

- Make protocols available to all providers
- Disparity analysis
- Quality assurance committee activities
Present Status (8-2004)

- Phase 1 successful
- Phase 2 proceeding on schedule
- Phase 3 to begin next fiscal year
- Positive media coverage
- Empirical evidence of efficacy
Project Organization

Malcolm Morrison, Ph.D.
Chief Executive Officer
Morrison Informatics
**Major Goals**

- Identify trends and problems in quality indicators and outcomes in Pennsylvania’s long-term care facilities.
- Identify methods to change adverse quality indicators and outcomes using evidence-based best practices. Utilize changes in measurable quality indicators to facilitate and measure change.
- Design, implement and evaluate results of evidence-based best practices pilot projects to improve quality indicators.
- Provide documentation to enable project replication.
Project Team

- Project management and organization
  - Morrison Informatics, Inc. (Mechanicsburg, PA)
  - Clifton Gunderson, LLP (Towson, MD)

- Evidence-based protocol development, training materials and project evaluation – Hebrew Rehabilitation Center for Aged Research and Training Center (Boston, MA)

- Project implementation – The Kendal Corporation (Kennett Square, PA)

- Public information and communications – Sacunas & Saline (Harrisburg, PA)
Project Advisory Groups

Stakeholders Advisory Group
- Major long-term care organizations
- Hospital and healthcare organizations
- Medical directors organization
- Health law and advocacy organizations
- State Department of Health
- State Department of Public Welfare
- Center for Medicare and Medicaid Services (CMS)
- Nursing home residents

Executive Advisory Group – PA Department of Health
- Administration
- Office of Policy and Legislative Affairs
- Office of Legal Counsel
- Press Office
- Office of Quality Assurance
- Bureau of Facility Licensure and Certification
- Division of Nursing Care Facilities
- Intra-governmental Long Term Care Council
Project Communications

- Invitational workshops for participating long-term care facilities
- Conferences for all long-term care facilities
- Legislative briefings on project results
- Presentations at national conferences
- Articles and monographs in professional, research and trade publications
Project Description

- Quality improvement protocols in specific clinical problem areas (ADLs, pain, depression, etc.)
- Cost-effective processes with costs comparable to those of usual care
- Use of familiar government-mandated data collection instruments (MDS) and documentation
- Training techniques and materials suited to the skill levels of staff implementing new processes
- Use of formal quality monitoring protocols
- Evidence-based reporting of results

- Selection of care protocols
  - Review of quality data from over 700 facilities
  - Review of evidence for specific protocols

- Testing of care protocols
  - 20 facilities selected for research, from 100 volunteers
  - 10 intervention sites, 10 controls
  - 12 month implementation, one protocol per test site
  - Faculty advisory panel
  - Training by nurse educators
  - Reference manual and protocol materials
  - Quality assurance monitoring
  - Outcome analysis

- 24 months
- Over 60 facilities participating
- Continuation of Phase One protocols
- Testing multiple protocol implementation
- Testing of two additional evidence-based Best Practices Protocols
- Overall summary and preparation for statewide implementation
Implementation Details

Beryl Goldman
Best Practices Implementation Director
Kendal Outreach, LLC
Staffing

- Nurse Educators
  - Extensive long term care experience
  - Good communication and teaching skills
  - Ability to motivate and encourage staff
  - Interest in raising the standards of care in long term care
  - Willingness to drive long distances
Process at Test Sites

- Contract
- Project coordinator
- Advisory panel
- On-site staff training
- Ongoing support and monitoring by nurse educators
Advisory Panel

- Key ingredient in project success
- Philosophy
  - This is a major initiative
  - “This is how we do things now”
- Support by administration
- Identifies strategies for implementing project protocols and removing barriers
On-Site Staff Training

- Begins with administration and advisory panel
- Includes all staff to be involved with the program (for each outcome)
- Includes plans for training new employees
- Periodic updates and refreshers as needed
Training Program

- Importance of the selected protocol
- Tools needed to:
  - Target residents for inclusion in the program
  - Assess, plan and approach the resident with the targeted problem
  - Monitor the resident
  - Monitor the program
Nurse Educators’ Responsibilities

- Note facility-specific issues that may affect the program (e.g., change in ownership)
- Plan with facility advisory panel
- Demonstrate techniques used in the protocols
- Monitor staff attendance at training sessions
- Review care plans and records to ensure that targeted residents are receiving specified interventions
- Monitor facility adherence to the program
Challenges

- Attendance at in-service training sessions
- Turnover of administrative staff
- Turnover of clinical staff
- Follow-through with documentation
- Follow-through with ongoing staff education
Lessons Learned

- Obtain administrative “buy-in”
- Get a strong and influential project coordinator
- Make the new processes part of organizational culture
- Minimize competing programs
- Simplify documentation
MDS-Based Evaluation: Depression and Related Outcomes

Sue Nonemaker, MS, RN
Hebrew Rehabilitation Center for Aged
Boston, MA
Evaluation Team

- Sue Nonemaker, MS, RN
- Katherine Murphy, PhD, RN
- John N. Morris, PhD
- William McMullen, PhD
Evaluation Question

- How do the outcomes of care differ between facilities that follow best practices and those that render usual care?
  - What is the impact of implementing best practices on Quality Indicators (QIs)
  - What is the impact of implementing best practices on rates of decline?
Methodology

- Facilities studied have “average quality” at baseline on the outcome of interest
- Facilities in both Eastern and Western PA
- Four facilities received intervention, four were controls
- Outcomes were calculated from MDS data collected pre- and post-intervention
  - 1-3/2002
  - 1-3/2003
Measurement

- Primary outcomes were Quality Indicators (QIs)
- These are facility-level prevalence or incidence rates
- QIs were calculated by dividing the number of residents with a given condition (or with a given change in condition) by the total number of residents
- Improvement was defined as a favorable change in the rate from the beginning to the end of the observation period
Quality Indicators Studied

- Worsening of depressed or anxious mood
- Little or no activity
- Worsening cognition
- Worsening communication
- New or persistent delirium
- Significant weight loss (by MDS definition)
- Inadequate pain management (pain severe at any time or frequently worse than mild)
## Results

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Main Findings

- Depression rates decreased 8% in the experimental group and increased 18% in the control group.
- Experimental facilities’ QIs improved dramatically in two areas:
  - Inadequate pain management – 61%
  - Little or no activity – 69% decrease
- Summing across all QIs experimental facilities improved by 22% while controls worsened by 15%
Main Findings – (2)

- Experimental facilities’ QIs were “worse” at baseline than control facilities’
- Experimental facilities’ QIs consistently improved
- Control facilities’ QIs worsened dramatically in two areas:
  - Worsening communication – 42% higher rate
  - Weight loss – 100% higher rate
Conclusions

- The Depression Management Best Practice program was associated with improvement at one year in the Depression QI and in six QIs associated with symptoms of depression.
- Effects on pain management and low activity were especially strong.
- The intervention appears to be effective.
- Further studies are suggested.
Evidence-based best practice programs in nursing homes can have measurable benefits.

Outcomes with well-defined, widely accepted protocols and clear-cut interventions may be easiest to change – e.g., pain control.

Painstaking planning and work with stakeholders is needed to implement.

Stable commitment by administration is needed to keep projects on course despite turnover of staff and competing demands on staff time.
Questions from the Moderator

- What incentives or other means could be used to facilitate administrative buy-in and consistent support?
- How might technology be used to make the training process more efficient and consistent?
- What outcomes should be targeted first by a nursing facility or LTC health system?
  - For which outcomes is the evidence best?
  - For which outcomes are best practice interventions most effective?
  - For which can outcomes be measured with greatest reliability and validity
  - For which are the change management problems the least?