Adverse Events in Long Term Care

Setting adverse events in context

Geoff Anderson, MD, PhD
Faculty of Medicine, University of Toronto

Outline

- Defining and measuring quality of care
- Quality of care related to medication
- Some results from research in Ontario nursing homes
- Next steps

Quality of Care

Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge

IOM, 1990

Key Concepts

- Desired health outcomes
  - Patient preferences and informed consent
  - Functional status not narrowly defined medical outcomes
  - Patient satisfaction is a component of quality

Key Concepts

- Increase the likelihood of beneficial outcomes
  - Quality not identical to outcome
  - Good process is the key

Key Concepts

- Current Professional knowledge
  - Importance of evidenced-based care
  - Room for expertise
  - Knowledge is not static, life-long learning is essential

Key Concepts

- Systems of care
  - Care is provided by a team
  - System there to provide support for high quality care
  - Access to information is essential

Quality Assessment – Measuring Quality

- Structure – availability of the required resources and knowledge
- Process – actions that are consistent with current knowledge
  - Doing the right things – appropriateness
  - Doing them right – competence
- Outcome – goals of care

Structure

- Facilities – existence of specified equipment and organization
- Personnel – knowledge and training of those providing care
- Measured using check lists or exams
- Easy to measure, easy to intervene
- Necessary but not sufficient

Process

- Assessment of actions or activities
  - Appropriateness – is the activity likely to benefit the patient
  - Competence – was the activity done in the correct fashion (technical and interpersonal)
- Based on existing data or chart audits
- Measured using either implicit judgments or explicit criteria

Process

- Easy to measure and potentially strong links to outcomes
- Provides a good target for improvement interventions

Outcomes

- Physiological, functional and self-perception including patient satisfaction
- Net to look at net effects that provide the balance between benefits and harm
- Need to risk-adjust outcomes for preexisting and external factors that affect outcomes
- Need to be linked to process measures for improvement

Why Measure Quality?

- Accountability – health care system allocated resources and rights and payers (public) deserve to know what they are doing
- Improvement – measurement of quality is essential first step in improving quality

Problems with Quality of Care

- Underuse – failure to use effective medications that could provide benefit
- Overuse – use of medications that are likely to have little or no benefit and that could result in harm
- Misuse – avoidable adverse events

Underuse

- Commonly observed in care for the elderly but not limited to this age group
- The use of BB in treatment of patients with hx of AMI – around 65 to 70%
- The use of warfarin in patients with non-valvular atrial fibrillation – around 50%

Underuse of Beta-Blockers by Hospital

Hospital	% of patients on BB within 90 days of discharge
St. Michael’s	74%
Ottawa Civic	69%
Mount Sinai	51%
TTH	56%

Overuse of Drugs

- Some drugs may not help but rather harm patients or the population
  - Antibiotics for viral pharyngitis
  - Long acting sedative hypnotics in the elderly
  - Ca channel blockers in some cardiac patients
  - Neuroleptics in LTC patients

Misuse

- Doses that are too small or too large
- Drug-drug interactions that are avoidable
- Order entry

Quality Issues

- Much of modern medical care is very good but quality problems are not uncommon
- Problems are ubiquitous but not evenly distributed across institutions or providers
- Measurement techniques becoming better and information more public

Quality is not the Only Issue

- Costs are also an issue
- Cost-effectiveness analysis makes it possible to bring costs and outcomes together
- Measures the net costs of a service (expenditures minus savings) as well as outcomes

Quality and Cost-effectiveness

- Overuse implies intervention with no benefit and is not cost-effective
- Misuse implies intervention with no benefit and is not cost-effective
- Underuse implies not intervening when benefit is available and may not be cost-effective

Quality and Patient Safety

- The avoidance, prevention, and amelioration of adverse outcomes or injuries stemming from the processes of health care. These events include "errors," "deviations," and "accidents”
- Errors of omission = underuse
- Errors of commission = overuse or misuse

Responding to Quality Concerns

- Public information on quality as part of accountability strategies
  - Part of consumer choice model in the United States
  - Part of Patients Charter in UK
  - Part of federal and provincial government policy in Canada

Responding to Quality Concerns

- Measurement of quality is improving faster than our understanding of how to improve quality
- Two related approaches
  - Continuing education
  - Continuous quality improvement (CQI)

Research of Quality of Medication Use in Ontario LTC

- Research team based at U of T, Baycrest and ICES
- Funded under at CIHR NET grant
- Focus so far has been on potential overuse and some aspects misuse

Beers Criteria

- Defined on the basis of an expert panel process
- Drugs that should always be avoided
  - Barbituates
  - Chlopropamide
- Drugs that are rarely appropriate
  - Diazapam
  - chlodiazpoxide

Ontario Data 2001

	Nursing Home	Community
Number	58,719	1,216,900
% always avoid	0.84	0.99
% rarely app	2.26	3.26

Use of neuroleptics in LTC

- Drugs originally used for major psychoses
- New class of atypical neuroleptics felt to have fewer side effects
- New indication – behavioural and psychological symptoms of dementia (BPSD)
- Strict guidelines for their use in US nursing homes

Study methods

- April 1998 to March 2000
- 19,870 individuals newly admitted to LTC
- No hx of schizophrenia or other major psychoses
- No prior use of neuroleptics
- Used ODB claims to look at drug use and OHIP claims to look at physician visits

Results

- 17% received a script for a neuroleptic within 100 days of admission
- 24% received a script within first year
- Of those receiving the neuroleptics
  - almost 10% had an initial dose that was higher than recommended maximum
  - 86% did not have contact with a geriatrician or psychiatrist in the 60 days prior to first script

Next Research Steps

- New grant to look at structure, process and outcomes at the individual facility level
- Expand work to look at some specific underuse issues (AMI, DM)
- Development of information for public, payers, managers and providers

Next Steps

- Set the notion of safety and adverse events in the larger context of quality of care
- Develop better ways to assess real world safety of drugs through improved pharmaco-surveillance
- Drugs safety is distinct from the safe use of drugs
- Expanded efforts to improve prescribing practice

Conclusions

- Safety and quality are related issues
- Our ability to measure quality of care is improving and there is an appetite for that information
- We need be able to respond that information with efforts to improve quality