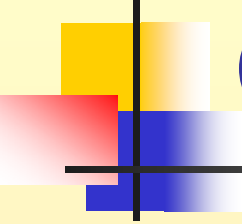




Improving and Reforming Long-Term Care

Part 2 - Clinical Decision Making and Problem Solving

The Foundation of Competent Care



- Provide evidence-based care
 - by using the
 - Care delivery process
 - to perform effective
 - Clinical problem solving and decision making
 - based on accurate
 - Problem definition and cause identification
 - that results from effective
 - Collection and analysis of information

Name LL

Age 74 Doctor-

Conf. Date-

RELATIONSHIPS BETWEEN PROBLEMS, DISEASES, TREATMENT/CARE

PROBLEMS

Group 1-Overall health
Potential for injury
Infection/contagion
Prolonged disease/disability
Instability
Impaired life support systems

Group 2-Nutrition/metabolism

Excess fluid volume
Fluid volume deficit
Bleeding
Altered nutrition status
Impaired skin integrity
Altered oral mucous membranes
Altered body temperature

Group 3-Urinary/fecal function

Urinary incontinence
Other altered urinary elimination
Constipation
Diarrhea
Bowel incontinence

Group 4-Activity and exercise

Activity intolerance
Ineffective airway clearance
Altered breathing pattern
Impaired gas exchange
Decreased cardiac output
Altered health maintenance
Impaired mobility
Self-care deficit

Group 5-Psychosocial concerns

Disturbed self-concept
Depression
Dysfunctional grieving
Altered family process
Social Isolation/Leisure activity intolerance
Impaired verbal communication
Ineffective individual coping
Family coping: potential growth
Spiritual distress

DIAGNOSES

Urinary tract infection

Pneumonia

Septicemia staph

Acute respiratory failure

Dehydration

L Hypokalemia

Delirium

Gastritis

L GI bleeding

Atrial fibrillation/SVT

Congestive heart failure

? brain abscess

Antibiotic-induced colitis

L Diarrhea

? Hypernephroma, R kidney

TREATMENT/CARE

Rocephin

Ritampin

endocarditis

L embolus, L big toe

KCl

? Risperdal

prilacid

(Carafate)

(Pepcid)

? Amiodarone

Lasix

? Vasotec

Inderal

Fkgyl

Cardura

Ecotrin

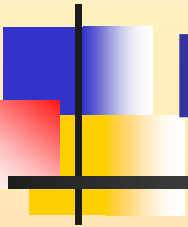
Vit C

Multivit.

Ativan

Mini-mental score

24



Evidence-Based Care

What are the key elements of evidence-based care?



“Evidence-Based” Care

- Term is widely used
 - Unclear if meaning is widely understood
- Desirable approaches to “evidence-based care” identical for all disciplines
 - Same process, regardless of background or training



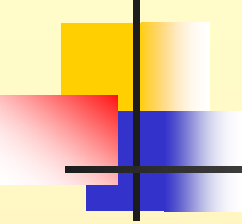
Evidence-Based Care

- Requires bringing together
 - Adequately detailed evidence about the patient
 - Pertinent evidence about desirable approaches to issues identified in the patient
- Apply science and medicine in the proper context for each individual (phronesis)



Evidence-Based Care

- Shortchanging process is problematic
 - Leads to speculative conclusions and actions based on guesswork
- Treatment out of context may be inadequate—if not dangerous
 - May fail to resolve symptoms and causes
 - May be irrelevant
 - May cause additional problems
 - May impede attainment of desired goals



Clinical Problem Solving and Evidence-Based Care

- True evidence-based care applies
 - Proper techniques
 - Including a systematic approach to gathering information and making decisions
 - The care delivery process
 - Valid clinical information
 - Including a sufficiently detailed understanding of a patient and his/her symptoms

Universal Problem-Solving Approaches



■ Auto repairs

- Describe problem fully
 - Including symptom details
- Don't offer premature diagnosis
 - May lead to inappropriate services

■ Delivering care

- Describe problem fully
 - Including symptom details
- Don't offer premature diagnosis
 - May lead to inappropriate and ineffective care

Universal Problem-Solving Approaches



■ Auto repairs

- Avoid unnecessary costly procedures
- Beware of misdiagnosis and associated costs
- Avoid high-priced routine services

■ Delivering care

- Avoid unnecessary costly interventions
- Beware of misdiagnosis and related costs and complications
- Avoid high-priced consultations for routine care

Care Delivery Process

Advantages

- Consistent with key biological principles
- Most relevant and effective way to manage individuals with complex links between causes and consequences, especially
 - One-to-multiple
 - Multiple-to-one
 - Multiple-to-multiple



Improving and Reforming Care

How must initiatives to improve
LTC be consistent with key
biological and philosophical
principles?



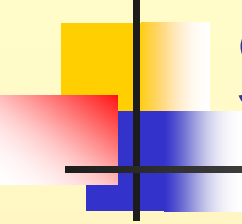
Applying the Principles

- Knowledge and skills of individuals may vary within and across care settings
 - However, biology and physiology do not
- Initiatives must promote effective care
 - Effectiveness depends on how well staff and practitioners apply basic principles of clinical problem solving and decision making



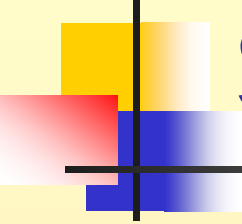
Optimizing Practice and Performance

What approaches enable optimal clinical decision making?



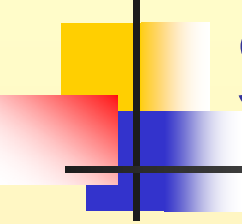
Effective Clinical Problem Solving and Decision Making

- Through the years, there have been efforts to identify
 - How clinicians solve clinical problems and make diagnoses
 - Criteria for successful clinical decision making
 - Reasons for diagnostic (cause identification) fallacies
 - Strategies to avoid them



Effective Clinical Problem Solving and Decision Making

- Problem solving expertise
 - Varies greatly among clinicians
 - Depends on what they know and how they apply their knowledge
- Effective clinicians share certain attributes
 - Know more and apply their knowledge better
 - But what do they know more of, and how do they do better than others do?



Effective Clinical Problem Solving and Decision Making

- Techniques not unique to health care
 - Comparable to approaches that apply to all human endeavors
 - Concerning how to gather and examine evidence, draw conclusions, make decisions
 - Require ability to investigate thoroughly and consider a lot of information in an orderly fashion
 - Involve basic skills of induction and deduction



Induction and Deduction

- Induction

- Drawing general conclusions based on review of pieces of information
 - If B, C, and D are true, then A must be the reason

- Deduction

- Drawing specific inferences from general principles or starting points
 - If A is true, then B, C, and D follow from it



Induction and Deduction

- What are some common clinical situations in long-term care that involve induction and deduction?
 - What are the starting premises and how do we assess their validity?
 - What are the conclusions, and how do we know that they follow from the starting premises?
- How does all of this impact care?



Effective Clinicians: Attributes

- Know how to apply induction and deduction effectively
 - Their starting premises are sound
 - Their deductions are plausible
 - Open to testing and reconsideration
 - They know how to test their hypotheses
 - They know when to reconsider their hypotheses and abandon if necessary



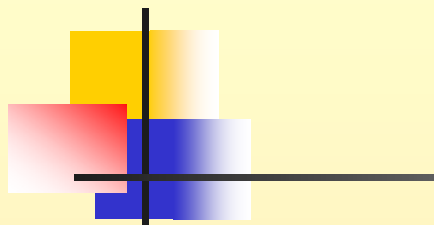
Effective Clinicians: Attributes

- Know how to gather and interpret evidence to test their working hypothesis
- Know how to analyze information
 - Including distinguishing its relevance
- Can provide a rationale for their conclusions and recommendations
 - Based on probabilities and evidence, not just speculation

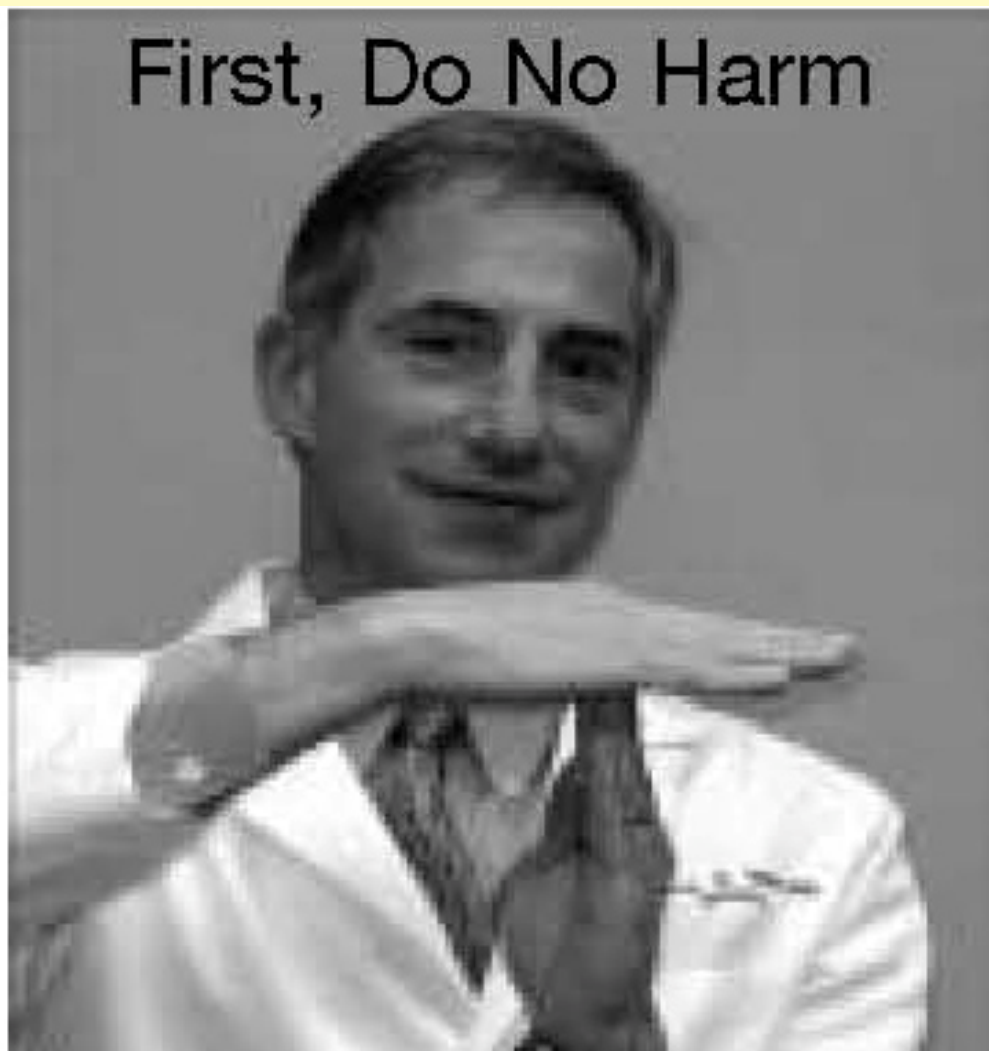


Effective Clinicians: Attributes

- Likely to recognize symptom patterns, recall similar cases accurately
- More likely to apply their knowledge effectively
- Do not just rely on recall or assumptions
- Have a rationale for ordering diagnostic tests and interpreting results
 - Not just on a “fishing” expedition



First, Do No Harm

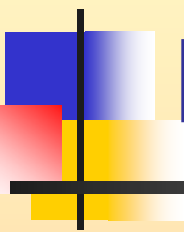


Initiate a Time-Out



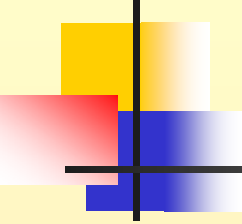
Less Effective Clinicians

- More limited pattern recognition
- More errors in recall and matching
- Limited ability to formulate hypotheses and apply deductive reasoning
- Tend to rush to a solution (i.e., implement treatment)
 - Before understanding what they are treating or formulating a framework to identify possible causes



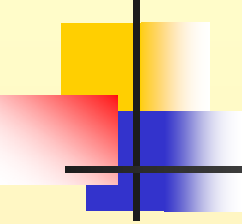
Clinical Problem Solving and Decision Making

How do effective clinical problem solving and decision making permit delivery of evidence-based care?



Clinical Problem Solving and Evidence-Based Care

- Effective clinical problem solving and decision making are essential to desirable care
- Every nursing home does some clinical problem solving and decision making
 - For better or worse
- Inadequate clinical problem solving often leads to undesirable outcomes and avoidable complications



Clinical Problem Solving and Evidence-Based Care

- True evidence-based care applies
 - Proper techniques
 - Including a systematic approach to gathering information and making decisions
 - The care delivery process
 - Valid clinical information
 - Including a sufficiently detailed understanding of a patient and his/her symptoms



Care Delivery Process

What is the care delivery process and why is it essential for high quality, evidence-based care?



Care Delivery Process

- Recognition / Assessment
- Problem definition
- Diagnosis / Cause identification
- Goals identification
- Intervention selection / planning care
- Monitoring



Care Delivery Process

- A universally relevant approach
- Compatible with key principles
- A series of steps
 - Related to assessing and managing causes and consequences of illnesses and impairments
- Essential for evidence-based problem solving and decision making
 - Minimize diagnostic fallacies, complications₀

Desirable Care Process Objectives



- 1) Identify sequence of events (history) underlying patient's current situation
- 2) Identify consequences (i.e., risks / complications / problems / impairments)
- 3) Define issues correctly
- 4) Identify causes, and define links among causes and between causes and consequences

Desirable Care Process

Objectives

- 5) Identify how treating causes is likely to affect consequences
- 6) Identify treatment priorities
 - What needs to be treated first in order to address a chain of events and relationships
- 7) Identify how to balance interventions to avoid causing or exacerbating complications
- 8) Monitor results / adjust approaches



Cause Identification

How does competent cause identification, including diagnosis, facilitate evidence-based care?

Accuracy in Cause Identification



- In medicine, “diagnosis” refers to activities associated with trying to identify causes of medical and psychiatric symptoms and conditions
- Principles underlying effective medical diagnosis
 - Are philosophical and strategic, not scientific or medical
 - Can be applied to any situation

Challenges of Cause Identification



- Effective care requires seeking and interpreting evidence to identify likely causes of symptoms, impairments
 - Based on patient-specific evidence
- Ineffective care may result from shortcomings in seeking and interpreting information to identify causes



The Three Human Dimensions

PSYCHOSOCIAL

FUNCTIONAL

PHYSICAL



Causes and Consequences

Complications →	One	Multiple
Causes		
One	+ / +	+ / + + + +
Multiple	+ + + + / +	+ + + + / + + + +

Challenges of Cause Identification



- Most causes of problems in LTC have a few basic presentations, for example
 - Falling, anorexia, altered mental function
- Clinical problems often require additional data gathering, thought, and reasoning
 - Not just superficial impressions and haphazard speculation

Challenges of Cause Identification



- It is essential to gather and use evidence to try to validate hypotheses (tentative opinions and conclusions)
- It is essential to know how to test and refine initial opinions and reformulate conclusions
 - As data are obtained and the clinical picture evolves



Cause Identification: Strengths and Weaknesses

- Pattern recognition as an approach to diagnosis has significant limitations
 - Same symptoms could reflect diverse causes in different patients
 - Requires symptom details to differentiate
- Skilled clinicians are more likely to understand how to identify causes of new symptoms in individuals with pre-existing conditions



Context of Cause Identification

- Context is critical part of cause identification
 - Inadequate just to know facts about an illness or condition, such as prevalence or typical presenting symptoms
- Knowing probability that certain conditions are present in certain situations
 - e.g., increasing confusion, anorexia
- Key: match facts AND sequence of events to the patient's story



Details Are Vital

- What are some examples of situations where details of history can help
 - Distinguish causes?
 - Identify how causes and consequences relate?
 - Help target appropriate interventions and minimize inappropriate, ineffective, and unsafe care?



Details Are Vital

- Symptom details are essential to identify causes and choose interventions effectively
- Superficial symptom statement (e.g., the “chief complaint”) is never enough to guide diagnosis and treatment
 - Essentially, results in little more than guesswork



Practitioner Role

- Health care practitioner's involvement often essential to definitively diagnose causes and select proper treatments
- Supposedly better trained in
 - Using full care delivery process
 - More advanced clinical problem solving and decision making
 - Superior cause identification
 - More detailed assessment



Practitioner Role Needs Help

- Practitioners often need to supplement information
 - They need to listen and question
- Practitioners need help in to gather all of the data needed for effective clinical problem solving and decision making
 - Only sometimes interact directly with patients
 - Rely heavily on staff to collect and report detailed patient information

Improving the Care Delivery Process



- How can everyone help improve the care delivery process and related clinical problem solving and decision making?
 - Direct care staff
 - Individuals of various professional disciplines
 - Physicians, including the medical director
 - Administrator, other management and supervisors



Cause Identification Errors

What mistakes are made in seeking and identifying causes of symptoms and condition changes, and how can these be avoided?

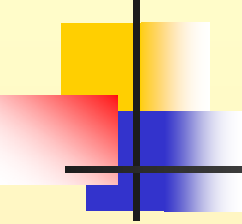


Fallacies and Errors

- In any aspect of life, problem solving occurs with varying degrees of success
- Clinical problem solving fallacies and errors are very common in health care, including long-term care
- Ineffective clinicians misapply techniques, skip key steps, or shortchange key approaches

Clinical Problem Solving

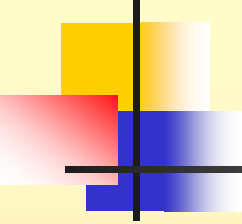
Fallacies



- Errors related to estimating probability
- Errors related to revising probability

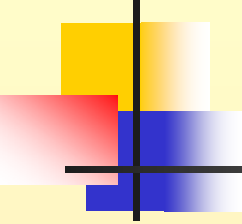
Clinical Problem Solving

Fallacies



- Errors related to estimating probability
 - Overestimate frequency of vivid or easily recalled events
 - Underestimate frequency of events that are either very ordinary or difficult to recall
 - Common to mistakenly attribute symptoms to incorrect cause
 - Because of inadequate pattern recognition
 - For example, similarity to a familiar or commonly occurring condition

Clinical Problem Solving Fallacies



- Errors related to revising probability
 - Effective clinical decision making requires using detailed information to revise diagnostic probabilities
 - Mistakes may occur because of
 - Insufficient information
 - Inadequate revision attempts



Improving Problem Solving

- What are some situations where clinical problem solving fallacies are likely to occur?
- What can be done to try to reduce the occurrence of such fallacies and improve overall clinical problem solving and decision making?



Clinical Judgment

What does “clinical judgment” mean, and what are the criteria for its appropriate exercise?



Clinical “Judgment” and Decision Making

- Clinical decision making is a definable skill
 - Requires adherence to specific principles and processes
- Judgment is needed to apply general principles to specific cases
- Requires drawing conclusions at various steps of the care delivery process



Clinical “Judgment” and Decision Making

- Some judgment errors are inevitable
- Justifiable claim to clinical judgment
 - Erroneous conclusions or undesired outcomes, despite following the care delivery process faithfully
- Unjustifiable claim to clinical judgment
 - Erroneous conclusions or undesired outcomes, due to failure to follow the care delivery process faithfully



Clinical “Judgment” and Decision Making

- Failures of clinical problem solving and decision making process impact judgment
 - For example, failures to collect enough information, clarify information, include relevant differential diagnostic options, retest hypotheses to try to confirm initial conclusions

Sound Support For Clinical Judgment



- Process adherence: key to evaluating whether care is safe, effective, and person-centered
 - As much as, or more than, results
- Effective clinicians willingly and clearly explain (i.e., give evidence and reasoning behind) clinical judgments
 - Including basis for diagnostic decisions and treatment recommendations



Sound Support For Clinical Judgment

- Ineffective clinicians either cannot or will not provide such explanations
 - “Because I said so”
 - “Because someone said to do it”
- Not appropriate to hide behind claim of “clinical judgment” to excuse lack of a plausible rationale for decisions and actions



Claims to Expertise

Who is an “expert” in long-term care?



Expertise: The Cascade of Clinical Competence

- Providing evidence-based care by using the
 - Care delivery process to perform competent
 - Clinical problem solving and decision making based on effective
 - Problem definition and cause identification that results from effective
 - Collection and analysis of information



Expertise

- There are many claims to expertise
 - Among those who work in, consult in, oversee, manage, study, or speak about long-term care
- However, factual knowledge does not necessarily = being able to apply information in specific situations and cases
 - Clinical practice = *applied* knowledge



Expertise: Foundation

- Expertise has an identifiable foundation
- Experts can consistently provide or evaluate evidence-based care
 - By using clinical problem solving methods and the care delivery process to apply extensive factual knowledge
 - By providing a plausible, verifiable rationale for their decisions and actions



Expertise: Foundation

- Criteria for expertise are not discipline-dependent
 - The same clinical problem solving and decision making processes apply universally
 - Although they may involve different issues and be done to varying degrees
- Experts know their limits and when to seek help
 - Regardless of the discipline or profession



Levels of Expertise

- It is possible to define various levels of clinical expertise
 - By identifying functions and tasks in clinical decision making related to steps in the care delivery process
- This permits comparing and contrasting clinical capabilities of clinicians of all disciplines



Problems of Overextended or Underused Competence

- Significant problems can arise when clinical decision makers
 - Lack adequate knowledge and skill
 - Exceed scope of their knowledge and skill
 - Do not apply relevant knowledge and skill to clinical problem solving



Providing High Quality Care Without a Lot of “Experts”

- Long-term care facilities can give more competent care without a lot of “experts” if their staff and practitioners
 - Follow essential principles and processes
 - Competently and consistently perform all parts of the care delivery process
 - Use valid clinical evidence effectively
 - Try to minimize cause identification-related fallacies and misconceptions