

The Basis For Improving and Reforming Long-term Care
A series by Steven Levenson, MD, CMD

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EXECUTIVE SUMMARY

The Basis For Improving and Reforming Long-Term Care

This four-part series (with Part 4 divided into two segments) has been written to analyze and try to give direction to the efforts to try to improve and reform long-term care. The citations for these articles, which have appeared in the Journal of the American Medical Directors Association (JAMDA), are as follows:

- 1) Levenson SA. The basis for improving and reforming long-term care, Part 1: The foundation. *J Am Med Dir Assoc* 2009; 10: 459–465.

- 2) Levenson SA. The basis for improving and reforming long-term care, Part 2: Clinical problem solving and evidence-based care. *J Am Med Dir Assoc* 2009; 10: 520–529.

- 3) Levenson SA. The basis for improving and reforming long-term care. Part 3: Essential elements for quality care. *J Am Med Dir Assoc* 2009; 10: 597–606.

- 4a) Levenson SA. The basis for improving and reforming long-term care. Part 4: Identifying meaningful improvement approaches (Segment 1). Levenson SA. *J Am Med Dir Assoc* 2010; 11: 84–91.

- 4b) Levenson SA. The basis for improving and reforming long-term care. Part 4: Identifying meaningful improvement approaches (Segment 2). *J Am Med Dir Assoc* 2010; 11: xx-xxx.

Supported by detailed discussion and numerous references, this series has presented in depth the following key points:

- There have been longstanding efforts to reform nursing home care
- Despite progress, problems and concerns persist
- Current approaches to improvement and reform may be part of the problem
- Genuine reform requires a comprehensive, biologically sound strategy
- Improvement and reform require competent clinical problem solving and decision making
- Everyone involved in care must apply evidence-based care correctly and consistently
- There are ways to identify genuine expertise among those who provide, manage, and oversee long-term care
- Meaningful improvement strategies could be implemented promptly
- There are key components of a comprehensive reform strategy

Longstanding efforts to reform nursing home care

For several decades, there have been efforts to “reform” nursing homes. After more than 3 decades of such efforts, and despite evidence of improvement in many facets of care, there are still many issues.

Problems and concerns persist

Despite the reform efforts, calls for additional reform continue unabated. To date, no

tactic or approach has succeeded nationwide in consistently facilitating good performance or correcting poor performance. Despite some significant improvements, the overall public, political, and health professional perception of nursing homes is often still negative.

Therefore, we might ask just what has been accomplished to date, and whether it is on the right track. It is unclear whether these efforts are based on understanding root causes of quality defects.

Current approaches may be part of the problem

Presently, a potpourri of approaches and a push to “fix” the problem have overshadowed efforts to correctly define the problems and identify their diverse causes. Ultimately, we must assess whether the efforts to improve nursing home care quality are consistent with critical elements needed to provide desirable care.

Understanding must precede action. Before we can reform nursing homes, we must understand what needs to be reformed. Many people are trying to educate and inform nursing homes and their staff, practitioners, and management about what to do and not do, and how to do it. But only some of that advice is sound. Only some of the current efforts to try to improve nursing home quality and to measure it are on target. Many of the measures used to assess the quality of performance have limited value in guiding overall quality improvement.

Genuine reform requires a comprehensive, biologically sound strategy

True reform of health care—including long-term care—requires a strategy. A key part of that strategy is that the care must conform to some universal and enduring biological and philosophical principles. These key principles relate to improving attributes of care quality; especially (but not limited to) whether care is safe, effective, efficient, and person-centered. Otherwise, alleged reform is likely to be a misnomer and an illusion.

These ideas have implications for nursing homes as well as the disciplines and individuals who provide care. There are also broad implications for public policy—including initiatives to oversee and improve the care—and for evaluating the relevance and effectiveness of those efforts.

Improvement and reform require competent clinical problem solving and decision making

Clinical problem-solving and decision-making activities are occurring continually in all long-term care facilities. But only some facilities and their staff and practitioners do them well.

Clinical problem solving and decision making processes are the means to enable safe, effective, efficient, and person-centered care that reflects key principles discussed in the initial article in this series. The techniques used in clinical decision-making and problem-solving activities are not unique to health care. The care delivery process is the means for applying these principles to deliver care.

Evidence-based care must be applied correctly and consistently by all disciplines

There is much talk about applying “evidence-based care” in all settings, including the nursing home. However, the term is widely misunderstood and only sometimes applied properly. True evidence-based care requires combining scientific evidence with sufficiently detailed evidence about the individual patient.

There are ways to identify genuine expertise

There are ways to identify characteristics of “experts” in long-term care, regardless of discipline, as well as factors that distinguish levels of expertise. Experts have the skill and judgment to apply knowledge effectively to individual patient situations. Based on these criteria, only some of the claims to expertise in caring for, advising about, or overseeing long-term care residents and patients are warranted.

Meaningful improvement strategies could be implemented promptly

Ultimately, relatively uncomplicated and inexpensive strategies have the potential to bring dramatic progress. Despite the challenges of the current environment, these proposed strategies could potentially be applied with little delay and immediate benefits.

There are key components of a comprehensive reform strategy

We may identify five key elements of care processes and practices that can help attain multiple desirable quality objectives. Based on this, a number of key strategies can tie reform efforts together.

There needs to be more willingness to rethink the issues and reconsider current approaches. Initiatives and proposals to improve and reform long-term care must support and/or promote critical elements such as the care delivery process and clinical problem solving and decision making activities. It is necessary to critically scrutinize and modify the conventional wisdom and to suppress “political correctness” that continues to inhibit vital critical inquiry and dialogue that are needed to define issues correctly and make additional progress.

It is important to rethink the research effort as a force for meaningful change, including the questions being asked and the scope of answers being sought. A shift to overcoming implementation challenges is needed.

It is essential to address issues of jurisdiction (the apparent “ownership” of assessment and decision making over patient problems or body parts) and reductionism (the excessive management of symptoms and problems without proper context) that result in fragmented and problematic care.

Issues of knowledge and skill also need to be addressed, with greater emphasis on key generic and technical competencies of staff and practitioners, in addition to factual knowledge. Ultimately, vast improvement is needed in applying care principles and practices, independent of regulatory sources.

Reimbursement needs to be revamped so that it helps promote care that is consistent with human biology and other key concepts. At present, it is often inconsistent with these critical realities, and thus it tends to promote biologically unsound and unnecessary or inappropriate care.

Finally, improving long-term care will require a coordinated societal effort. All social institutions and health care settings need to address their own shortcomings and contribute constructively in order to improve and reform nursing homes and health care generally. It is not helpful to scapegoat nursing homes for what are effectively far more universal problems of care, practice, and performance.

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<i>Why are there still concerns about nursing home care despite longstanding improvement efforts?</i>	p. 1-2
<i>What is the place of health care, including medical care, in long-term care?</i>	p. 2
<i>What key concepts influence the provision of desirable, competent care?</i>	p. 2-3
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<i>What is the care delivery process and how is it consistent with these key biological principles?</i>	p. 4
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Part 2: Clinical Problem Solving and Evidence-Based Care (October, 2009)	This PDF file, p. 8-17
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<i>How do capable clinicians effectively solve problems and make decisions?</i>	p. 9
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<i>What is management’s key role in the success of a nursing home’s care delivery process and, ultimately, the quality of its care?</i>	p. 25-26
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<i>What is the current state of nursing home care, and how could it be improved further?</i>	p. 28-29
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<i>fragmented and problematic care, and why and how do they need to be addressed?</i>	
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<i>What do other social institutions and segments of the health care system need to do in order to contribute constructively to improving and reforming nursing homes and health care generally?</i>	p. 45

The Basis for Improving and Reforming Long-Term Care, Part 1: The Foundation

Steven A. Levenson, MD, CMD

For several decades, there have been efforts to “reform” nursing homes. Despite this, the calls for such reform continue unabated. Therefore, it might lead us to ask just what has been accomplished to date, and whether it is on the right track.

True reform of health care—including long-term care—requires a strategy. A key part of that strategy is that the care must conform to some universal and enduring biological and philosophical principles. Otherwise, alleged reform is likely to be a misnomer and an illusion.

This article—the first in a series—identifies those key principles and their relationship to improving

attributes of care quality; especially, whether care is safe, effective, and person-centered. It considers the implications for nursing homes as well as the disciplines and individuals who provide care. It then suggests broader implications for public policy—including initiatives to oversee and improve the care—and for evaluating the relevance and effectiveness of those efforts. (*J Am Med Dir Assoc* 2009; 10: 459–465)

Keywords: Nursing home reform; quality of care; public policy; oversight and regulation of care

Currently, there is much talk about health care “reform.” The word “reform” may be defined as “improving by alteration or correction of errors or defects and putting into a better condition,” and also as “making changes for improvement in order to correct abuses.”¹

It is often commented that, despite its attributes, the American health care system leaves much to be desired.² Not only is the care costly, but quality varies widely. Considerable effort and money are spent to compensate for inadequate, inappropriate, and even hazardous care.³

Thus, much public discourse has been devoted to criticizing various aspects of health care, and then trying to “reform” all of it. Aspects of care that allegedly need reforming include its availability, safety, effectiveness, timeliness, efficiency, and equitability.^{4,5} Examples of specific areas of concern about care quality include improving patient satisfaction, care transitions and the problem of repeat hospitalizations of postacute care patients. Many reform strategies focus on issues such as expanding insurance and modifying reimbursement, organization of care, quality measurement and reporting, and documentation and record keeping.

There have been many efforts to “reform” long-term care and improve its quality for at least several decades. For example, a Medline Search using Reference Manager on the terms

“(quality of care OR quality) AND (nursing homes OR long-term care) AND (America OR United States)” gave more than 6000 results.⁶

The continuing, almost unrelenting concerns and complaints about nursing homes might make one ask just what has been accomplished, to date. Many “reformers” insist that reform is impeded by the failure to implement their ideas fully.

To what extent have these efforts really brought about meaningful change and set appropriate expectations? Has “reform” not happened because the right ideas have not been implemented or because reform efforts have been misguided, or some of each?

Thus, there are alternative explanations for why long-term care still has significant weaknesses. Perhaps, reform efforts have not succeeded fully to date because they lack a cohesive strategy, or they have somehow missed key elements, failed to recognize key causes (including the root causes) of issues, or they have promoted some erroneous, outmoded, or inadequate approaches to addressing complex problems. In any situation, it is unlikely that twice as many incorrect or inadequate approaches will double the improvement.

Perhaps, reform can be attained by tossing multiple “solutions” from diverse directions at a problem and assuming that some of them will stick. More likely, though, true reform of anything requires a cohesive strategy and a meaningful plan, based on understanding what we are trying to improve, why it needs improvement, and the diverse causes of imperfections and problems. It also helps to identify the desired end point, the means for attaining desired improvement, the options for changing things, the obstacles to implementing reform, and the possibilities for overcoming those

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obstacles. Otherwise, despite substantial effort, we may accomplish little, make things worse, or waste scarce resources.

Health care is a human endeavor that influences, and is influenced by, all other social institutions (government, education, family, business/commerce, and so forth).⁷ The oversight of such care, the attempts to change performance, and related consequences for allegedly inadequate performance all influence the provision of that care. They also reflect related beliefs and methods; for example, concepts of normality and truth, how to investigate and draw conclusions, and how to attribute cause and effect.

Therefore, to reform health care, it is essential to look at both direct and indirect influences on the providers of health services and the ways and settings in which they provide it. The purpose of this series is to examine the factors that have influenced long-term care and to scrutinize efforts at reform and the issues that help or impede improvement. This first article focuses on some critical foundations for care, and their relevance as a basis for all of these “reform” efforts.

UNIVERSAL AND ENDURING PRINCIPLES

If we are trying to improve the safety and effectiveness of air travel, we would want to ensure that airlines fly and maintain the planes correctly; ie, consistent with physics principles such as gravity and inertia.⁸ For example, it would be problematic to expect airplanes to routinely fly faster than the speed of sound (they might disintegrate because of shock waves) or to encourage them to take off before they had exceeded their “stall speed” (they would crash). It would be imprudent to focus excessively on less consequential matters (for example, the quality of the in-flight services and the cost of air travel) until we knew that at least the passengers would not be injured or die before reaching their destination.

Safe, effective, efficient, and person-centered care has an unmistakable biological foundation. Therefore, meaningful reform requires that care adequately reflect that foundation. Valuable oversight and reform efforts must reinforce desired performance and practice, and they should not promote inappropriate approaches, inhibit correct approaches, or overlook the key issues. Unless the basics are present, no other measures, however well intended, can improve the overall situation significantly.

A few key principles underlie any efforts to reform health care, including long-term care (Table 1). First, every human being has 3 key dimensions: physical, functional, and psychosocial.⁹ The physical dimension reflects the coordinated activity of all organ systems, based on underlying biochemical activities. The functional dimension consists of an individual’s activities to survive and meet personal needs. The psychosocial dimension relates to an individual’s function in the context of other human beings (eg, families and societies).

Physiology is defined as “the processes and functions of an organism.”¹⁰ At any given moment, human function results from the cumulative activity of all organ systems fueled by coordinated biochemical activities (eg, proteins, hormones). Although physiological activity alone does not guarantee

Table 1. Key Principles Underlying Attempts to Reform Health Care

- Care must recognize links among physical, functional, and psychosocial dimensions
- Care must be consistent with human physiology, including homeostasis
- Care must recognize that symptoms have causes
- Care must recognize that symptoms and causes exist in various relationships, and that defining those links is crucial to providing safe, effective, efficient, and person-centered care

satisfactory personal or psychosocial function, adequate physiological function is a key prerequisite.

Human beings are remarkably complex systems that perform diverse functions. The central nervous system (CNS) directs the body (to move, eat, drink, breathe, and so forth) so that the body will protect and preserve the CNS. Thoughts and feelings, and the extent to which they protect and enhance individual function, depend on maintaining an effective chemical balance (eg, enzymes, neurotransmitters, electrolytes). For example, medication effects and side effects, hyponatremia, hypothyroidism, and adrenal insufficiency or excess can all profoundly influence mood, behavior, and function.

“Homeostasis,” a key physiological principle, implies that an organism maintains relative stability through constant internal adjustment.^{11,12} Living organisms, including humans, do this with many primary and backup mechanisms. For example, the kidneys and urinary tract, skin, lungs, central nervous system, gastrointestinal tract, and cardiovascular systems, as well as hormones and other chemicals are all involved in maintaining fluid and electrolyte balance.

When they function effectively, organ systems and their related biochemical activities adjust to compensate for stresses, including imbalances and impairments. Changes in one or more of these systems or substances lead to changes in others in an attempt to maintain or restore balance. But disease and significant organ failure can cause imbalances and impair a person’s physiological reserve capacity. For example, age and illness typically impair a frail older individual’s capacity to adjust to stresses and maintain critical internal balances.

Personal and psychological homeostasis are similar in concept to physiological homeostasis. Individuals strive to maintain an internal balance and adequate function, to try to survive and thrive in the context of their personal and social setting. Personal and psychological homeostasis require adequate physical homeostasis, but they also depend on social and cultural influences; for example, how a person avoids and responds to uncomfortable situations such as those that cause pain or frustration. All thoughts and emotions have a biological basis, which is necessary but not sufficient for personal and psychological function.

HEALTH, ILLNESS, AND IMPAIRMENT

According to the World Health Organization (WHO), health can be defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”¹³ Only some human beings have complete

well-being and no physical, functional, or psychosocial impairments. Health care alone is not likely to produce complete well-being in all 3 dimensions, but it can affect them profoundly, for better or worse.

While it alone cannot guarantee psychological stability and adequate personal function, physiological stability is a key precursor of adequate personal and psychosocial function. Physical impairment occurs when organs and the body's supporting biochemical activity are inadequate to maintain homeostasis. Personal impairments can occur when unstable or inadequate organ and chemical activity impede sufficient personal and psychosocial function, especially when the body is under physical or psychological stress. Substantial impairment of one or several organ systems (eg, coronary artery disease, chronic obstructive pulmonary disease, and diabetes) is a common cause of impaired personal function.

Causes and Consequences

The consequences of illness and related conditions are referred to by terms such as symptoms, complications, side effects, and impairments. Thus, another key principle is that all consequences including symptoms (eg, pain, pruritus, nausea) and syndromes (ie, collections of signs and symptoms such as falling, weight loss, or altered mental function) have causes. Furthermore, causes and consequences occur in 4 major patterns and relationships (Tables 2 and 3). The challenge for those providing care in any setting is to clarify the links between causes and consequences, as a basis for choosing pertinent treatment and other interventions.¹⁴

The Long-Term Care Population

The population of nursing homes includes short-stay patients and long-term residents. Regardless of the reason for, the source of payment for, or the duration of their stay, everyone who receives care and services in nursing homes shares certain characteristics (Table 4).

Most long-term care residents and many postacute care patients have diseases and impairments (or risk factors for them) that challenge their capacity to maintain enough physical stability to support adequate personal and psychosocial function. In long-term and postacute care, a few common problems (altered nutritional status, self-care deficit, fluid volume deficit) and conditions (eg, diabetes, pneumonia, chronic obstructive pulmonary disease) occur repeatedly. Many symptoms (eg, confusion, lethargy, altered mental status, anorexia, dizziness and falling) reflect the combined effects of acute illnesses, chronic conditions, and side effects or complications from medications and other treatments.^{15,16}

Table 2. Links between Causes and Consequences of Illness and Impairment

Causes	Consequences	
	One	Multiple
One	+/+	+/+ + + + +
Multiple	+ + + + / +	+ + + + / + + + + +

Relatively few short-term or long-term care recipients in nursing homes have conditions that fall into the one-to-one category (ie, a single condition has a single consequence). Instead, most circumstances fall into the multiple-to-multiple, multiple-to-one, or one-to-multiple categories; ie, they have several conditions and/or multiple consequences of their conditions.

Implications for the Provision of Care

As noted, "health" can be defined as more than just the absence of illness. A key goal of all health care (in the broader sense) is to effectively integrate interventions and services to maximize the effectiveness of any individual's physical, functional, and psychosocial dimensions. A key goal of medical care can then be stated as helping individuals attain and preserve the best possible physiological function to enable the greatest possible personal and psychosocial function, within the limits of what is treatable or correctable.

Of course, even the most rational and orderly health care does not always bring the most desirable results. Yet, as in all settings, long-term care is most likely to be safe, effective, and person-centered when it is consistent with, and does not conflict with, these enduring and universal principles. The quality of care (and, in turn, the quality of life) for each care recipient depends heavily on the skill of care providers at identifying the links between the causes and consequences of a person's physical, functional, and psychosocial conditions and issues.

Traditionally, various health and residential care settings have focused primarily on either causes or consequences. For example, hospitals concentrate primarily on diagnosis and treatment of medical illness, and nursing homes and assisted living facilities primarily on addressing consequences (impairments and disabilities).

In common terms, "quality of life" and "quality of care" are inseparable in all settings. Continuing attempts to distinguish "medical" and "social" models of care are based on serious misconceptions. Physical, functional, and psychosocial aspects are relevant in all settings to varying degrees, although their relative prominence will vary, depending on the situation.

In the long-term care facility, all 3 dimensions are relevant to the care of each person. Once physiological stability is attained, personal function and quality of life may be the predominant concerns. But, a more intensive medical focus may be needed when there are potentially remediable causes underlying declining function, frequent acute changes of condition, or persistent or intermittent medical instability.

Furthermore, all care should be consistent with understanding the well-defined relationships among illness, impairment, and disabilities and handicaps (Table 5). It is vital to define and link an individual's impairments and disabilities with their underlying causes and contributing factors.¹⁷ These efforts are key to attaining good-quality care and to assessing the quality of the care.

Biologically Sound and Unsound Care

Biologically sound care reflects physiological reality; for example, that the actions of all organ systems are integrated

Table 3. *Examples of Links between Causes and Consequences*

Causes	Consequences	
	One	Multiple
One	<ul style="list-style-type: none"> - Fall → fracture → impaired mobility - Viral gastroenteritis → vomiting - Bipolar disorder → delusions 	<ul style="list-style-type: none"> - COPD (advanced) → altered breathing patterns, impaired gas exchange → activity intolerance, self-care deficit - CVA → impaired mobility + self-care deficit + altered nutritional status + altered mood + impaired verbal communication
Multiple	<ul style="list-style-type: none"> - [CVA + dementia + chronic renal failure + colitis r/t antibiotic use] → hydration risk 	<ul style="list-style-type: none"> - [New CVA + diabetes + ischemic cardiovascular disease + previous neurological disease + chronic renal failure] → [impaired mobility + self-care deficit + altered nutritional status + impaired fluid balance + pain + risk of altered skin integrity]

COPD, chronic obstructive pulmonary disease; CVA, cerebrovascular accident; r/t, related to.

and that a symptom or risk may have multiple causes or multiple symptoms may have a common cause (Table 5). Biologically sound care is not likely to occur when parts of the body are assigned to individuals in various disciplines, who then control the decision making about causes and interventions. In those situations, the care plan is more likely to reflect a loose combination of separately derived conclusions, not a tightly integrated approach derived from understanding the patient. For example, in rendering postacute care, it is incompatible with biology to compartmentalize and manage patients as being admitted for “rehabilitation” or “wound care” or “IV therapy.” These may represent the basis for reimbursement, but they are only small parts of a bigger foundation for effective care.

In long-term and postacute care, a few common problems (altered nutritional status, self-care deficit, fluid volume deficit) and conditions (eg, diabetes, pneumonia, chronic obstructive pulmonary disease) occur repeatedly.¹⁸ Many symptoms (eg, confusion, lethargy, altered mental status, anorexia, dizziness and falling) reflect the combined effects of acute illnesses, chronic conditions, and side effects or complications related to medications and other treatments.

There is much talk about “interdisciplinary” versus “multidisciplinary” care in long-term and postacute care. Whatever the name, coordinated and integrated care of a patient with multiple issues (ie, the care of a patient with [Condition A + Condition B + Condition C + Condition D + Condition E]) is consistent with biology because it takes each condition, risk, or problem in context. But, fragmented or uncoordinated care (the [Care of Condition A] + [Care of Condition B] + [Care of Condition C] + [Care of Condition D] + [Care of Condition E]) reflects

Table 4. *Characteristics of Care Recipients in Nursing Homes*

- All have physical, functional, and psychosocial dimensions
- All have underlying biological function, including organ systems and supporting biochemical activities
- All need to optimize physical and personal homeostasis, to the extent possible, in the context of their underlying illnesses and impairments
- All have some identifiable relationships between causes and consequences

biologically unsound care, because each issue is viewed and managed as a distinct entity.

In all settings, desirable care identifies (1) the sequence of events (history) underlying the patient’s current status and needs; (2) the links among causes, and between causes and consequences (ie, risks/complications/impairments); (3) whether treating causes is likely to have a meaningful impact on consequences; (4) treatment priorities (ie, what needs to be treated first in order to address a chain of issues); and (5) how to balance the treatment of causes and consequences to avoid causing or exacerbating complications.

A universally relevant approach (the “care delivery process”) that is compatible with those principles has been identified. The care delivery process is a set of steps based on philosophical principles related to assessing and managing the causes and consequences of illnesses and impairments in human beings, with a goal of trying to attain and maintain optimal physical function in the context of, and as a foundation for, personal and psychosocial function.¹⁹

Because it is consistent with the key principles as discussed herein, the care delivery process is the most relevant and effective way to evaluate and manage individuals who have, or are at risk for, medical illnesses and functional and psychosocial impairments. It emphasizes careful problem definition and cause identification, reflecting evidence about the importance of patient history in making diagnoses^{20,21} and the challenges of identifying relationships among causes and consequences.

Implications for Disciplines Providing Care

The care provided by licensed health care practitioners and other professionals must also be consistent with these principles. Although the knowledge and skills of practitioners and other professionals may vary within and across settings, biology and physiology (for example, homeostasis and cause-and-effect relationships) do not.

Diverse disciplines participate in providing long-term care. Their roles and related tasks fall into several categories (Table 6). Several factors (eg, training, experience, and skills) influence their ability to perform those tasks.

Table 5. *Implications of Key Relationships among Illnesses, Impairments, and Disabilities*

Relationship	Implications for Care
<ul style="list-style-type: none">- Impairments often have multiple simultaneous causes- Impairments often combine to cause disability- Impairments may often be prevented or improved by treating underlying causes- When interventions cannot reverse impairments, they may lessen their severity or help reduce their progression to disability- Interventions that strengthen homeostatic balance and maintain or improve physiological reserve capacity may prevent or correct physical impairment and minimize disability	<ul style="list-style-type: none">- It is important to identify all causes of impairments, to the extent possible, and to determine which ones can be addressed and to what extent- It is important to identify which impairments are causing disability and see how they can be minimized by addressing the underlying causes as well as the impairments themselves- It is important to try to optimize a person's physical condition, and to not do things that undermine the biological basis for personal and psychosocial function, in order to achieve the best possible function and psychological stability- Depending on the situation and underlying causes and consequences, interventions (including medical treatments) may be beneficial, inconsequential, or harmful

For example, regardless of whether someone with anorexia and weight loss is assessed by a physician, dietician, nurse, or others, the symptoms have underlying causes. There may be multiple causes of this problem or there may be additional symptoms (eg, altered mental function, falling) attributable to a common cause (eg, multiple adverse consequences of a medication). There are more and less effective ways to evaluate and manage anorexia and weight loss, none of which depend on who is involved. It is a problem of practice and performance if a practitioner or health professional knows only how to perform a limited assessment of someone with anorexia, or does not know how to manage underlying causes of weight loss.

Thus, effective long-term care depends on how well, in the aggregate, staff and practitioners apply basic principles of clinical problem solving and decision making. The number of individuals or disciplines involved in assessing and managing residents/patients is relatively unimportant. For example, one individual can potentially use the care delivery process successfully to assess and manage symptoms and risks, whereas many individuals may fail to do so because collectively they fail to follow the care delivery process correctly.

The preceding leads us to ask questions such as the following: What is the status of clinical practice in long-term care? What is right and wrong about such practice? Are those who currently make clinical decisions qualified to do so? Who is an "expert" and what qualifies he or she to diagnose and treat complex patients? What is the physician's role, and who is qualified to perform physician tasks when physicians are unwilling or unable to do so?

Table 6. *Categories of Staff and Practitioner Functions*

<ul style="list-style-type: none">- Observers, data collectors, describers, measurers, calculators, documenters- Information analysts- Problem-and-risk definers- Cause identifiers- Care-and-treatment selectors, reviewers, adjusters- Care-and-treatment deliverers

The Oversight and Improvement of Care

Currently, many projects and activities are devoted to assessing, overseeing, and trying to improve the quality of long-term care. If the care must adhere to certain principles, then meaningful efforts to improve and reform long-term care should either (1) be consistent with, or at least not contradict, those principles, and (2) promote, or at least not undermine, adherence to those principles.

For example, efforts to advance "person-centered" care should not just promote psychosocial aspects of quality of life, but should acknowledge and support competent, balanced clinical care that helps maximize physical function and homeostasis that are critical to quality of life. Regulatory oversight should promote—or at least, not inhibit—all aspects of the care delivery process, not just assessment and care planning. Initiatives to measure quality should recognize the interdependence of all aspects of care, and should not promote measures as isolated, unrelated entities. Quality measures must reflect our knowledge of related causes and interactions among causes, including the aggregate burdens of illness and impairment in individual residents/patients. Outcomes measures and indicators must consider diverse factors that cause and influence outcomes. Guidelines, protocols, and other efforts to improve specific aspects of care, such as pain management or pressure ulcer prevention, must promote the management of all conditions and risks in the proper context, reflecting the reality of the links between causes and consequences and the relevance of homeostasis.

Efforts to improve and standardize assessments across all settings should reflect the relevance of, and the need for, clinical (including medical) as well as functional, behavioral, and psychosocial details about all residents/patients. Reimbursement initiatives should be based on the relevance of treatments and other interventions to the patient's entire picture, not just isolated interventions out of context. Regulatory and political oversight should recognize the universal relevance of physiologically sound care, and should have comparable expectations for care in all settings performing comparable tasks. Campaigns and initiatives to improve

quality of care should promote, not downplay, the physical aspects of care, such as the importance of cause identification and the limitations of trying to treat specific conditions without the context of the whole patient picture. Education and training of nursing home—licensed staff and medical practitioners—must include key universal concepts and skills such as the care delivery process, the links between causes and consequences of illness and impairment, how to identify the significance and causes of symptoms, biologically sound ways to decide on relevant interventions to prevent and manage those causes and consequences, and the critical value of adequate patient history (including symptom details).

Thus, it is possible to assess the effectiveness and quality of long-term care (Table 7) and the diverse activities that are trying to improve and “reform” that care. Those aforementioned key principles (Table 1) are relevant to evaluating both the care itself and these reform efforts. They predate and are independent of human societies and social and political institutions, including Medicare and insurance companies, doctors, legislatures (including Congress), hospitals, nursing homes and assisted living facilities, and federal and state survey agencies.

It is possible to give safe, effective, efficient, and person-centered care anywhere. There are many examples of good-quality long-term care and related medical practice, and many examples of suboptimal care and related practice. It is essential to emphasize these basics as well as other criteria such as patient outcomes and resident, family, and staff satisfaction. Valuable “reform” efforts focus on fundamentally sound systems, processes, and practices. They do not assume that the right things are necessarily already being done.

In addition, long-term care can be “reformed” only to the extent that all social institutions and aspects of public policy reflect and respect the underlying biology. They must promote—or, at least, not inhibit—valid approaches and they must inhibit—not promote—invalid ones. If not, then they too must be reformed. It is impossible to reform one social institution (health care) while others are simultaneously on the wrong track.

For example, geriatrics is a well-established discipline based on approaches that reflect all of these key principles. It emphasizes the right context of interventions, based on a balanced appraisal of physical, functional, and psychosocial dimensions of all human beings. It promotes treatment in the proper context and the principle that it is important to not do harm while trying to do good; for example, avoiding interventions that cause patients to fall or lose their appetite while trying to lower their blood pressure or treat their pain.

Table 7. *Assessing the Effectiveness and Quality of Long-Term Care*

- Is it consistent with basic biological principles including homeostasis?
- Does it reflect the interactions of physical, functional, and psychosocial dimensions?
- Does it make health-related interventions that try to attain or preserve homeostasis in order to facilitate optimal personal and psychosocial function?
- Does it assess and manage residents and patients by following the care delivery process?

Thus, useful efforts to improve long-term care promote geriatrics principles and practices and related medical and psychosocial approaches. Less useful efforts focus on promoting interventions without adequate context, on fragments of the care delivery process (such as care planning or treatment), or actually contradict key principles; for example, they teach people to address symptoms such as pain and anorexia as though they were separate and distinct entities.

Building on These Themes

Subsequent articles in the series will apply these concepts to examine these other aspects of long-term care reform

Table 8. *Examples of Issues for which Key Principles are Relevant*

- Practitioners and professional disciplines**
 - What constitutes “expertise” and who can rightfully claim such expertise in providing and guiding long-term care?
 - How can we assess and compare the skills and competence of various practitioners?
 - How do we know whether health care practitioners or licensed professionals know what they are doing or whether they are doing what they should be doing?
 - To what extent are long-term care practitioners and licensed professionals currently providing safe, effective, and person-centered care?
- Nursing homes**
 - How do we know whether and when any nursing home is performing adequately and providing high-quality care?
 - Which aspects of long-term care are consistent or inconsistent with key biological principles?
 - What are reasonable and unreasonable expectations for the care that nursing homes provide?
 - How have alleged efforts to reform and oversee nursing homes either moderated or exacerbated public understanding of, and expectations for nursing home care?
 - Among those who guide and influence nursing home care and operations, who is promoting the right approaches to care and services, and how do we know?
 - What is the quality of clinical decision making and problem solving, and how good is adherence to the care delivery process? Who and what is helping improve or impede progress in these areas?
- Reimbursement**
 - To what extent are current reimbursement approaches biologically sound or unsound?
 - How should care be reimbursed so as to promote—not inhibit—safe, effective, biologically relevant and person-centered care?
- Reform**
 - How pertinent and effective are various efforts to improve long-term care?
 - Which efforts to try to improve long-term care are problematic and may actually be impeding desired results?
 - How could oversight of long-term care, including regulations and surveys, be improved so that they will more fully promote effective practices?
 - How do social institutions (education, government, finance, and so forth) need to change so that they will provide better support for improving care?
 - What reforms are needed in other settings that provide health and personal care, and why are these reforms critical to improving long-term care?

(Table 8). We will consider to what extent “reform” efforts are consistent with these basic principles and why some of those efforts may not be.

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The Basis for Improving and Reforming Long-Term Care, Part 2: Clinical Problem Solving and Evidence-Based Care

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There are intense efforts to improve the quality of long-term care. However, it is unclear whether these efforts are based on understanding root causes of the deficits in quality.

This article focuses on processes of clinical problem solving and decision making as a means to enable safe, effective, efficient, and person-centered care that reflects key principles discussed in the initial article in this series. The care delivery process is the means for applying these principles to deliver care.

The techniques used in clinical decision-making and problem-solving activities are not unique to health care. Whether or not it is recognized, clinical problem-solving and decision-making activities are occurring continually in all long-term care facilities. But only some staff and practitioners do them well.

There is much talk about applying "evidence-based care" in all settings, including the nursing home. However, the term is widely misunderstood and only

sometimes applied properly. True evidence-based care requires combining scientific evidence with sufficiently detailed evidence about the individual patient.

This article applies the discussion to identify criteria for "expertise" in long-term care. We may identify characteristics of "experts" in long-term care, regardless of discipline, as well as factors that distinguish levels of expertise. Experts have the skill and judgment to apply knowledge effectively to individual patient situations. Based on these criteria, only some of the claims to expertise in caring for, advising about, or overseeing long-term care residents and patients are warranted. (*J Am Med Dir Assoc* 2009; 10: 520–529)

Keywords: Nursing home reform; quality of care; clinical decision making; clinical expertise; evidence-based care

There is intense effort to measure and improve performance and outcomes in long-term care.^{1,2} Both individually and jointly through initiatives and campaigns, many associations, organizations, and governmental agencies have provided and supported protocols, guidelines, and models for delivering care and treating and managing the conditions and risk factors of the long-term care population (both short-stay patients and long-term residents). Enhanced surveyor guidance, quality campaigns, pay-for-performance initiatives, expanded enforcement activities, and many other diverse initiatives have targeted nursing homes in an effort to promote or enforce such efforts.

But what exactly are they trying to improve or correct? And, how well have any of them identified and addressed the root causes and other key issues?³

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This series of articles considers current efforts to improve long-term care, relative to key underlying principles. The goal of this second article in the series is to identify the basis for effective clinical processes, practices, and decision making in long-term care. How do those who take care of the residents/patients in long-term care know what they are doing? How do they make decisions? What differentiates the quality of decision making and problem solving? Answering these questions can help identify reasons for effective and problematic care and helps in assessing the pertinence of efforts to improve the care. We can potentially correct inappropriate and ineffective care if we can identify its basis and underlying causes.

CLINICAL DECISION MAKING AND PROBLEM SOLVING

Many individuals of diverse disciplines and backgrounds combine in the nursing home to try to deliver care that will meet the needs of complex individuals. Therefore, improving care overall requires optimizing performance of those who provide the care. If we can identify the attributes of effective clinical problem solving and decision making, then we have

a basis for trying to judge and improve individual performances and resultant facility practices and outcomes.

As discussed in the initial article in this series, the techniques used in effective clinical decision making are not mysterious or unique to health care. Instead, they are comparable to approaches used in all human endeavors to gather and examine evidence and make effective decisions.

In all endeavors, effective decision making depends on knowledge, skill, and strategies. For example, to identify why a car misfires or stalls repeatedly, it helps to know the diverse causes; eg, problems with the electrical or fuel systems, including a plugged fuel filter, faulty wiring, and a defective knock sensor. Details also help diagnose the problem; for example, how often and under what conditions the problem occurs, how long it lasts, and what (if anything) makes it better or worse.

Through the years, there have been efforts to identify how clinicians, including physicians, attempt to solve clinical problems and make diagnoses, what constitutes more or less successful clinical decision making, and the reasons for diagnostic fallacies as well as strategies to avoid them.^{4,5} A review of 30 years of research on clinical diagnostic reasoning has identified several approaches to clinical decision making.⁶ Problem solving expertise varies greatly among clinicians and is highly dependent on what they know and how they apply their knowledge. Effective clinicians invariably share certain attributes, although they may use several approaches to clinical decision making, including diagnosis and treatment selection.

For example, experienced physicians are likely to recognize symptom patterns, recall similar cases accurately, and automatically retrieve pertinent information from their knowledge base (eg, if difficult swallowing occurs while eating or drinking, in conjunction with a history of heartburn, then the patient may have reflux esophagitis). However, effective clinicians do not just rely on recall or assumptions. They have a rationale for ordering diagnostic tests and they know how to interpret the meaning and relevance of those results. They know how to gather and interpret evidence to test their working hypothesis; for example, when some of the evidence is inconsistent with the working diagnosis. Thus, they are less likely to succumb to “diagnostic tunnel vision”; ie, continuing to accept a working diagnosis despite absence of supporting evidence or the presence of contradictory evidence.

In short, more effective clinicians—like superior auto mechanics or detectives—know more, know how to understand and decipher information about specific situations, and know how to apply their knowledge effectively. They can provide a rationale for their conclusions and recommendations, based on probabilities and evidence, rather than mere speculation. Therefore, they are right in most cases.

In contrast, less effective clinicians have more limited pattern recognition, make more errors in recall and matching, and have limited ability to formulate hypotheses and apply deductive reasoning. They tend to want to rush to the solution (ie, implement treatment) before necessarily understanding what they are treating or before they formulate a relevant framework to identify possible causes.

“EVIDENCE-BASED” CARE

In health care, including the long-term care community, there is much talk about “evidence-based” care. It is not clear whether its true meaning and implications are widely understood.

“Evidence-based care” is not just about clinical care or medical diagnosis and does not just apply to licensed health care practitioners (eg, physicians, advance practice nurses). Proper technique is not discipline specific; ie, the correct care delivery process is the same for a dietician as it is for a social worker, nurse, or physician. The same principles and strategies apply to any care situation; for example, when considering environmental or psychosocial causes of problematic behavior, functional causes of impaired nutritional status, or medical causes of falling. Shortchanging the process is invariably problematic, as it leads to actions based on mere speculation.

Morley has discussed the relevance of phronesis, the application of science to everyday life.⁷ Long-term care in particular requires an ethical approach in order to apply science and evidence effectively. It is essential to apply facts about treating illnesses in the proper context for an individual patient; eg, the story of symptoms, the link between causes and consequences, and the relevance of proposed interventions to overall patient goals. Conversely, it is inadequate—if not dangerous—to treat out of context, because treatment may be irrelevant or it may cause additional problems or impede attainment of desired goals for the person.⁸ Therefore, effective clinical problem solving and decision making are essential to desirable care.

As discussed in the first article in this series,⁹ certain key principles apply to the care of all human beings in all settings. For example, the long-term care population often has multiple simultaneous physical, functional, or psychosocial causes of their illnesses and symptoms. Evidence-based care applies proper techniques, a systematic approach to care (the care delivery process), and valid clinical information (such as is found in protocols, guidelines, and good-quality research studies) to clinical decision making and problem solving.

The care delivery process is the means for applying generic clinical knowledge (ie, general information about the diagnosis and treatment of pain, falling, and other medical, psychiatric, functional, and psychosocial problems and risks) to specific patient situations (based on specific evidence about the patient). A fully effective care delivery process requires differentiating causes of symptoms based on gathering and interpreting clinical findings (eg, detailed history, patient examination), lab tests, and other evidence; and applying that information and related conclusions, in an ethical context.

ACCURACY IN CAUSE IDENTIFICATION

In medicine, the term “diagnosis” refers to activities associated with trying to identify causes of medical and psychiatric symptoms and conditions. However, the principles underlying effective medical diagnosis are philosophical and strategic, not scientific or medical. Thus, they can be applied to

any situation requiring formulating and testing hypotheses, and drawing conclusions about causation.

Most causes of problems in the long-term care population have a few basic presentations (eg, as an acute change of condition, abrupt alteration in mental status or level of consciousness, decline in function). Therefore, the effective care of these syndromes (collections of signs and symptoms) such as falling, weight loss, incontinence, and so on requires a careful search for causes, based on patient-specific evidence.¹⁰

The clinical decision-making process must always occur, although its extent and duration may vary. For example, some causes of symptoms such as confusion, emotional distress, social withdrawal, pain, weight loss, falling, and so on can be readily identified and addressed. However, because of the often nonspecific symptoms and the many possible relationships between causes and consequences, such clinical problems often require additional data gathering, thought, and reasoning, not just superficial impressions and haphazard speculation.

A clinician may generate hypotheses early in the diagnostic process and then use them to guide subsequent collection of data. Although it is appropriate to have opinions and formulate hypotheses, it is essential to gather and use evidence to try to validate those opinions and hypotheses. Many diagnostic problems in long-term care residents/patients are too complex to permit immediate clarification of issues and identification of solutions. It is essential to know how to test and refine initial opinions and reformulate conclusions as data are obtained and the clinical picture evolves.

Diagnostic efforts should consider both prior experience and the strength of current evidence in a specific patient. Although pattern recognition may be one legitimate approach to diagnosis, it also has significant limitations, especially when the same symptom could reflect many different causes, alone or in combination. If the initial hypothesis is wrong, and/or the scope of hypotheses is too limited, then we may not collect enough of the right data to confirm or refute a hypothesis.

For example, although constipation may be a common cause of abdominal pain and distension, there are other important treatable and preventable causes that often must be considered. Routinely presuming constipation to be the likely cause of abdominal pain or of increasing confusion may result in failure to consider and identify other important but less common causes such as ileus due to colitis or adverse consequences of medications. This may result in unnecessary or irrelevant tests, omission of pertinent testing, and selection of inappropriate or dangerous treatments (for example, giving enemas to someone with an acute bowel perforation), and may allow the true cause to continue unabated, with resulting complications.

Skilled clinicians trained in methods of evidence-based medicine are more likely than untrained clinicians to understand how to prudently consider the past to help define the present.¹¹ This is particularly relevant to diagnosing the causes of new symptoms in individuals with preexisting conditions. New or recurrent symptoms could reflect known patterns or they could represent new causes, alone or in com-

ination with previously identified causes. But, it is essential to gather enough evidence to confirm, not just to assume that the past is a prologue to the present.

For example, someone with a history of recurrent exacerbations of rheumatoid arthritis may subsequently have painful or swollen joints. However, at various times, the same symptoms could represent tendinitis, bursitis, gout, infectious arthritis, or a fracture.

Context is a critical part of competent cause identification (including diagnosis) in long-term care. For example, it is important to know not just that someone has a skin rash, but also the location and details of the rash, as well as the patient's recent and past history; for example, does the patient have a history of an autoimmune disorder (possible vasculitis), does the patient have cancer (possible herpes zoster), is the patient incontinent of urine (possible chemical dermatitis), is the patient receiving certain medications (a possible drug allergic reaction), and so on.

Effective clinical decision making also relates to knowing the probability that certain conditions are present in certain situations. For example, there are many common causes of altered mental function in individuals with or without dementia. Some, however (eg, infections and fluid/electrolyte imbalance) should be considered initially in situations where an older individual has a change in behavior, mental function, or level of consciousness. But, the probability of a given cause may change as new information is acquired. For example, the absence of other clinical symptoms of infection and a lab test result showing hypernatremia and azotemia would reduce the likelihood of infection and elevate the likelihood of dehydration as a cause of those symptoms.

Therefore, it is not nearly enough just to know facts about an illness or condition, such as its prevalence (eg, pain or depression are common in long-term care patients) or its typical presenting symptoms. Effective care requires knowing how to seek and interpret evidence about an individual's condition that influences thinking about likely causes of symptoms. Ineffective care is likely to result from shortcomings in seeking and interpreting information to confirm or refute hypotheses about those causes.

For instance, in managing someone with a headache or back pain, a detailed assessment of the nature, severity, location, duration, and other factors about pain is needed to help identify possible causes and guide treatment selection. That is, instead of simply, "The patient complains of a headache," something more is needed; eg, "The patient complains of a headache that feels like a band or tightness on both sides of her head, lasting much of the day, worse when she bends over, more intense when she is upset, not worse when she coughs or sneezes, and which has been present intermittently for several months." In contrast, merely recognizing symptoms of pain and then gathering limited information such as its severity on a pain scale, is insufficient to guide diagnosis and treatment.

Ultimately, inadequate clinical problem solving often leads to undesirable outcomes and avoidable complications, including those that are a result of delays in identifying the actual causes of symptoms. For example, giving antibiotics

unnecessarily for an erroneous diagnosis of a urinary tract infection (UTI) to a patient who is receiving warfarin for anticoagulation may result in significant bleeding due to an elevated prothrombin time, related to the interaction between the warfarin and the antibiotic. Other potential complications of excessive antibiotic treatment may include anorexia with subsequent weight loss and diarrhea with resulting fluid imbalances. Meanwhile, the individual could suffer life-threatening complications from delirium as a result of other undiagnosed conditions.

A health care practitioner's (eg, physician or advance practice nurse) involvement is often needed to definitively diagnose causes and select proper treatments. However, practitioners rarely gather all of the data needed for effective clinical problem solving and decision making. They only sometimes interact directly with patients, and they rely heavily on staff to collect and report detailed patient information. Useful information includes details of symptom history and observations, and accurate transmittal of patient statements. Often, practitioners need to supplement the information they are given, either by asking detailed questions of staff or by personally gathering and evaluating additional clinical details and relevant diagnostic test results and evaluations.

FALLACIES AND ERRORS

In any aspect of life, problem solving occurs with varying degrees of success. Reasons for less successful efforts may include failure to generate a correct hypothesis; not knowing or understanding causes, misreading or misinterpreting the evidence, or failing to seek or apply relevant facts, such as the extensive information available about the proper indications for medications and their potential adverse consequences.¹²

Table 1 lists some common fallacies and errors in clinical problem solving,⁵ with examples of their occurrence in long-term care.

Both more and less capable clinicians may use clinical information and formulate and test hypotheses. However, more capable clinicians have more knowledge, gather more accurate information about the patient, formulate better hypotheses, and are more likely to avoid fallacies and errors.

For example, both more and less skilled clinicians may consider a UTI as one possible cause of a patient's recurrent falls or altered mental function. However, the skilled clinician interprets clinical evidence carefully and mostly correctly, including patient symptoms and diagnostic tests (eg, results of urinalyses and urine cultures); differentiates bacteriuria from a urinary tract infection (eg, a positive urine culture alone is not sufficient evidence to prove that a UTI is present), and identifies other equally or more plausible causes of these symptoms as part of a broader differential diagnosis (eg, adverse consequences related to medications, hypo- or hyperthyroidism, and delirium).

Ineffective clinical decision makers may use some of the same techniques (eg, pattern recognition) as do effective decision makers, but they do not generally use them properly. For instance, instead of formulating and testing hypotheses,

they prematurely draw and act on firm conclusions without seeking additional evidence.

For example, in individuals with agitated behavior or altered mental function, some staff and clinicians may routinely guess that they are having pain, others that they are depressed, and still others that they are having a UTI. In fact, they are only applying their limited experience or perspective to the differential diagnosis. Sometimes, they will guess correctly. But, they may miss medication-related adverse consequences, hypothyroidism, and fluid and electrolyte imbalance as causes of altered mental function, or less common causes of other symptoms such as anorexia, falling, incontinence, or pruritus.

Other fallacies in clinical decision making include errors in estimating or in revising probability (Table 2).

Errors Related To Estimating Probability

People tend to overestimate the frequency of vivid or easily recalled events and to underestimate the frequency of events that are either very ordinary or difficult to recall. Diseases or injuries that receive considerable media attention are often thought of as occurring more commonly than they actually do. Thus, rare conditions may be overemphasized because they are more memorable than routine problems or common conditions.

Thus, for example, the enormous publicity over several decades about psychopharmacological medications has led to a disproportionate preoccupation with relatively rare complications of these medications such as tardive dyskinesia and stroke, and an often substantial disregard for far more common and equally or more problematic complications (eg, falls, anorexia, altered mental function, behavioral symptoms, lethargy, increasing confusion, headache, dry mouth, weakness) of medications in many other categories. Thus, it may be assumed erroneously that symptoms in someone receiving antipsychotic medications are most likely a result of the medication, while a serious complication may be overlooked because it is related to a medication that is not commonly acknowledged to be problematic.

Representativeness refers to estimating the probability of a condition by judging how similar a case is to a diagnostic category or prototype. This can lead to mistakenly attributing symptoms to the wrong cause, just because the symptoms are similar to a commonly occurring condition.

For example, depression is common in the long-term and postacute care population. None of the symptoms of depression are specific for the diagnosis, and those symptoms may represent other conditions instead of, or in addition to, depression. Furthermore, depression and other mood disturbances often have significant underlying causes and contributing factors. And, there are many varieties of depression, only some of which require or benefit from prolonged medication interventions.

And yet, the political pressure to identify and treat depression may have led to excessive diagnosis of the condition, to inadequate recognition of the risks and complications of treatments (eg, anorexia, falling, cardiac complications, and serotonin syndrome), and even to failure to follow

Table 1. *Fallacies in Clinical Problem Solving in Long-term Care*

Fallacy	Examples
- Collecting data without formulating pertinent hypotheses	<ul style="list-style-type: none"> - Obtaining swallowing studies routinely on anyone who coughs while eating, and ordering interventions based on test results, without considering differential diagnosis - Ordering prealbumin and albumin on everyone, or routinely in those with anorexia or weight loss, and making interventions routinely without regard to symptom details or differential diagnosis
- Collecting data thoroughly but ignoring, misunderstanding, or misinterpreting some findings	<ul style="list-style-type: none"> - Performing detailed assessment of painful abdomen, but failing to recognize significance of distension and pain as possibly reflecting bowel perforation or ileus due to medication adverse consequences - Despite repeating lab tests (CBCs, BMPs), failing to adequately define the issue, identify the significance of results, or seek underlying causes (eg, causes of progressive anemia or azotemia)
- Not collecting enough data while still interpreting accurately the existing data	<ul style="list-style-type: none"> - Assessing new-onset incontinence in a patient who is anticoagulated, but failing to perform a simple neurological exam that could reveal a spinal cord bleed as the cause - Identifying acute renal failure as a cause of altered mental status, but failing to evaluate for pneumonia as the root cause - Correctly identifying jaundice while failing to seek information to identify illness or medication as underlying cause of liver failure
- Not knowing the significance of data or including it in the hypothesis	<ul style="list-style-type: none"> - Being unable to identify lung findings that differentiate pneumonia from heart failure or pleural effusion - Recognizing joint pain but being unable to assess patient thoroughly for underlying causes - Failure or inability to perform a basic neurological exam to help clarify causes and complications of progressive weakness - Incorrectly interpreting urinalyses or results of swallowing studies
- Failing to have a diagnostic strategy	<ul style="list-style-type: none"> - Failing to recognize medication adverse consequences related to anorexia or recurrent falling - Initiating interventions for incontinence, falling, or weight loss without considering causes - Failing to consider specific medical, environmental, or psychosocial causes of problematic behavior
- Oversimplifying a diagnostic problem by interpreting findings as consistent with a single hypothesis	<ul style="list-style-type: none"> - Invariably interpreting restlessness and facial grimacing as reflecting pain without additional evaluation for alternative explanations - Routinely associating decreased appetite with depression, without seeking additional evidence
- Overemphasizing positive findings	<ul style="list-style-type: none"> - Misdiagnosing depression based on isolated symptoms of crying or decreased appetite - Restricting a patient's food textures because of imperfect swallowing during a modified barium swallow, despite lack of clinically significant symptoms - Failing to consider delirium in differential diagnosis of altered mental function by attributing changes to environmental causes or progression of dementia
- Discounting negative findings	<ul style="list-style-type: none"> - Diagnosing a "UTI" based on a urine culture, despite lack of confirmation by symptoms or urinalysis and the presence of evidence suggesting another cause - Giving iron to treat anemia despite normal serum iron and ferritin levels

CBC, complete blood count; BMP, basic metabolic panel; UTI, urinary tract infection.

Table 2. *Errors Related to Estimating or Revising Probability*

Probability-Related Errors	Examples
Errors in estimating probability	<ul style="list-style-type: none">- Excessive preoccupation with relatively rare complications of antipsychotic medications, while ignoring much more common risks and complications of medications in other categories- Excessive diagnosis and overtreatment of depression, based on minimal and marginal criteria, or reluctance to taper or stop antidepressant medications in appropriate situations- Misinterpretation of nonspecific abdominal symptoms as being due to constipation (a familiar condition), resulting in inadequate differential diagnostic efforts to try to identify other causes
Errors in revising probability	<ul style="list-style-type: none">- Practitioner is unduly influenced by a nurse's initial statement that the patient has a urinary tract infection or that the family has decided the patient needs more opioid pain medication- Practitioner makes incorrect diagnosis or fails to pursue differential diagnosis related to abdominal pain or weight loss because clinical events are not reported or documented in the order in which they happened, or the practitioner cannot or does not obtain enough details of patient history

appropriate guidelines about whether and when to try to taper or stop antidepressants.

Errors Related To Revising Probability

Theoretically, clinicians given identical information should reach the same diagnostic opinion, regardless of the order in which information is presented. However, final opinions are also affected by the order of presentation of information. Information presented later in a case may be given more weight than information presented earlier.¹³

Effective clinical decision making revises diagnostic probabilities based on key factors including the starting point (ie, the initial hypothesis) and the sequence of clinical data presentation (because the sequence of events is key to making diagnoses). Thus, mistakes may occur because of inadequate revision, often because of the wrong starting point and inadequate consideration of clinical data in a relevant sequence. A clinician may quickly become committed to a particular hypothesis, making it more difficult to reconsider the situation. This can happen, for instance, when nurses give physicians limited information focusing on speculative conclusions (eg, "I think the resident is having a UTI") before—or without—providing the whole picture.

CLINICAL DECISION MAKING AND CLINICAL "JUDGMENT"

It should be apparent from the preceding that clinical (not just medical) decision making is a definable skill that requires adherence to specific principles and processes. Despite a better understanding of the basis for effective clinical decision making, and despite numerous efforts (eg, protocols, guidelines, and computer-based diagnostic aids)

to guide and improve diagnosis, judgment is still needed to apply general principles to specific cases.

Clinical judgment is involved in drawing conclusions at various steps of the care delivery process (eg, whether symptoms represent a specific underlying cause, whether to pursue an additional workup, whether potential interventions are relevant to overall patient goals, or when and whether to initiate or modify interventions). For example, judgment is involved in assessing whether someone's behavior warrants an environmental or a medical intervention, whether modifying fluid consistency or restricting food intake because of a swallowing abnormality will be beneficial and will not increase the risks of weight loss or conflict with a person's right to not be tube fed, whether elevated blood urea nitrogen and creatinine require more or less diuresis, and whether non-specific pulmonary symptoms and x-ray findings represent pneumonia.

For various reasons, some judgment errors are inevitable. In addition to universal factors such as limitations in human cognitive capacities and the human tendency to adopt shortcuts in reasoning,¹⁴ long-term care patients are complex, they often cannot give an adequate history, their symptoms are often vague and nonspecific, and diagnostic assistance (eg, laboratory testing) is often limited. However, in all settings (eg, in the hospital or on a postacute care unit) many potentially avoidable mistakes are made even when a reliable history and relevant diagnostic tests are available, largely owing to failures of the clinical problem-solving and decision-making processes.

Less than optimal outcomes that occur despite following the care delivery process faithfully are not comparable to those that result from failing to follow that process correctly. Process adherence—as much as or more than results—is key

Table 3. *General Criteria for High-Level Clinical Expertise*

- Individual has an adequate knowledge base to evaluate clinical data, understand their significance, and formulate accurate problem statements
- Individual can formulate a diagnostic (or, alternatively, cause identification for nonmedical issues) strategy and use information to identify causes in specific situations
- Individual can identify and interpret relevant data to test or refute hypotheses
- Individual can identify and select appropriate interventions in context, based on understanding pertinence, risks, and benefits of treatments in various situations
- Individual can monitor effectiveness of interventions in context of whole patient and adjust them accordingly

Table 4. Practitioner and Clinician Skill Levels in Relation to Care Process

Care Process Step/Objectives*	Key Care Process Task†	Level 1 Skills (High)	Level 2 Skills (Moderate)	Level 3 Skills (Low)
Recognition / Assessment - Gather essential information about the individual	- Identify and collect information that is needed to identify an individual's situation that enables proper definition of their conditions, strengths, needs, risks, problems, and prognosis - Obtain a personal and medical history - Perform a physical assessment	- Can take an in-depth history and perform a comprehensive physical exam with extensive detail for each organ system - Extensive ability to recognize symptoms, signs, risks, and other issues and findings that need more detailed evaluation - In-depth capability to identify, describe, and document details of signs and symptoms, and distinguish normal and abnormal findings	- Can take moderately detailed history and perform physical exam with limited detail for each organ system, or more detail for limited number of organ systems - More limited ability to recognize symptoms, signs, risks, and other issues and findings that need more detailed evaluation - More limited capability to identify, describe, and document details of signs and symptoms, and distinguish normal and abnormal findings	- Minimal ability to obtain a history, perform a physical assessment, and/or evaluate, describe, and report symptoms, signs, risks, and other issues - Minimal ability to distinguish normal and abnormal findings, or to describe abnormalities
Problem definition - Define the individual's problems, risks, and issues	- Identify any current consequences and complications of the individual's situation, underlying conditions and illnesses, etc. - Clearly state the individual's issues and physical, functional, and psychosocial strengths, problems, needs, deficits, and concerns - Define significant risk factors	- Able to formulate accurate, detailed problem statements - Able to articulate the individual's physical, functional, and psychosocial consequences and complications in detail - In-depth ability to recognize and define risk factors	- More limited ability to formulate problem statements - Able to identify basic or more apparent consequences and complications - Able to recognize and define basic risk factors	- Minimal ability to formulate problem statements and identify risk factors, problems, and complications in any detail
Diagnosis/Cause-and-effect analysis - Identify physical, functional, and psychosocial causes of risks, problems, and other issues, and relate to one another and to their consequences	- Identify causes of, and factors contributing to, the individual's current dysfunctions, disabilities, impairments, and risks - Identify pertinent evaluations and diagnostic tests - Identify how existing symptoms, signs, diagnoses, test results, dysfunctions, impairments, disabilities, and other findings relate to one another - Identify how addressing those causes is likely to affect consequences	- In-depth ability to make correct diagnoses from among multiple possibilities - Ability to recognize multiple coexisting causes, and to relate causes to symptoms and consequences - In-depth ability to identify appropriate diagnostic evaluation options, including when it is appropriate to limit testing - In-depth ability to identify whether and to what extent causes are correctable	- Able to formulate basic diagnoses from among limited possibilities - More limited ability to identify multiple coexisting causes, and to relate causes to symptoms and consequences - More limited ability to identify appropriate diagnostic evaluation options, including when it is appropriate to limit testing - More limited ability to identify whether and to what extent causes are correctable	- Minimal ability to identify and address physical, functional, and psychosocial causes of symptoms, risks, and problems - Minimal ability to identify or understand multiple coexisting causes, or to link causes and symptoms or risks - Minimal ability to identify when testing is not indicated or not likely to be helpful

(Continued)

Table 4. Continued

Care Process Step/Objectives*	Key Care Process Tasks [†]	Level 1 Skills (High)	Level 2 Skills (Moderate)	Level 3 Skills (Low)
Identifying goals and objectives of care - Clarify purpose of providing care and of specific interventions, and the criteria that will be used to determine whether the objectives are being met	<ul style="list-style-type: none"> - Clarify prognosis - Define overall goals for the individual - Identify criteria for meeting goals 	<ul style="list-style-type: none"> - Able to define realistic individualized goals of treatment and care that are consistent with wishes, values, condition, prognosis, risk factors, and other pertinent information - Able to recognize and define diverse factors affecting prognosis - Able to review goals and prognosis in depth with patient/family 	<ul style="list-style-type: none"> - More limited ability to define realistic individualized goals of treatment and care that are consistent with wishes, values, condition, prognosis, risk factors, and other pertinent information - Able to recognize and define factors influencing prognosis to a limited extent - Able to review goals and prognosis with patient/family 	<ul style="list-style-type: none"> - Minimal ability to independently identify, define, and discuss realistic individualized goals of treatment
Selecting interventions/ planning care - Identify and implement interventions and treatments to address the individual's physical, functional, and psychosocial needs, concerns, problems, and risks	<ul style="list-style-type: none"> - Identify specific symptomatic and cause-specific interventions (physical, functional, and psychosocial) - Identify how current and proposed treatments and services are expected to address causes, consequences, and risk factors, and help attain overall goals for the individual - Define anticipated benefits and risks of various interventions - Clarify how specific treatments and services will be evaluated for their effectiveness and possible adverse consequences 	<ul style="list-style-type: none"> - Able to identify a broad range of specific symptomatic and cause-specific interventions, for numerous conditions and risks - Able to manage complex and multiple, simultaneous active comorbid conditions and contributing factors - Able to effectively prescribe and manage a complex medication and treatment regimen - In-depth ability to identify how treatments and services can be expected to address causes, consequences, and risk factors, and help attain individual's goals - In-depth ability to define anticipated benefits and risks of diverse treatments - In-depth ability to recognize the effectiveness and possible adverse consequences of a broad range of treatments and services, including a complex treatment regimen 	<ul style="list-style-type: none"> - Able to identify a limited number of specific symptomatic and cause-specific interventions, for basic conditions and risks - Able to manage a limited number of active conditions of limited complexity - Able to effectively prescribe and manage a basic medication and treatment regimen - Limited ability to identify how treatments and services can be expected to address causes, consequences, and risk factors, and help attain an individual's goals - Able to define anticipated benefits and risks of treatments, to a limited extent - Able to a limited degree to recognize the effectiveness and possible adverse consequences of a limited number of treatments and services 	<ul style="list-style-type: none"> - Minimal ability to independently formulate a basic treatment and service regimen - Able to identify a limited scope (mostly generic and by rote) of approaches and interventions - Limited ability to independently assess the effectiveness of, and risks and complications related to, treatments and services

Monitoring of progress

- Review individual's progress toward goals
 - Identify the individual's response to interventions and treatments
 - Identify factors that are affecting progress toward achieving goals
 - Define or refine the prognosis or modify interventions
 - Review effectiveness and adverse consequences related to treatments
 - Adjust interventions as needed
 - Identify when care objectives have been achieved sufficiently to allow for discharge, transfer, or change in level of care
 - In-depth ability to assess and define the individual's general response to treatment and to recognize the effectiveness of and adverse consequences of specific interventions
 - In-depth ability to identify and define or refine prognosis
 - In-depth ability to identify and address factors that are affecting progress toward achieving goals
 - In-depth ability to identify when interventions can or should be modified or stopped
- More limited ability to define the individual's general response to treatment and to recognize the effectiveness of and adverse consequences of specific interventions
 - More limited ability to identify and define or refine prognosis
 - More limited ability to identify and address factors that are affecting progress toward achieving goals
 - More limited ability to identify when interventions can or should be modified, changed, or stopped
- Limited ability to independently assess the effectiveness of, and risks and complications related to, treatments and services

* Refers to key steps in the care delivery process related to clinical problem solving and decision making.

† Refers to key tasks at each step in the care delivery process.

to understanding and evaluating whether care is safe, effective, and person centered.

Effective clinicians willingly and clearly provide the basis (ie, the underlying evidence and reasoning) for their clinical judgments, including their diagnostic decisions and treatment recommendations. Ineffective clinicians either cannot or will not provide such explanations. Or, if they do provide such information, it often reflects fallacies of diagnosis and clinical reasoning. Inadequate or inappropriate outcomes related to such fallacies should not be mistaken as having occurred despite good clinical judgment.

Defenses against concerns about inadequate or inappropriate care often rely on asserting that a decision was based on “clinical judgment” and that it is unfair to try to second guess such judgment. Such defenses may be valid when the care delivery process has been followed and decisions have adequate and plausible explanations. But “clinical judgment” is not generally a valid explanation when we cannot identify a plausible rationale for decisions and actions; eg, when there is little or no detail as to how or why likely causes of symptoms were excluded or certain implausible causes were included or treated.

EXPERTISE

Many people who work in, consult in, oversee, manage, study, or speak about long-term care and related issues and conditions claim to be “experts.” Many others are hailed by the long-term care industry and by outsiders (the media, professional associations, legislators, and so forth) as “experts” in the field.

Who is an expert in long-term care, or in some aspects of that care? And, do criteria for expertise depend on which discipline is involved or the condition or risk for which they claim expertise?

As in all aspects of life, it is possible to know many facts about a topic (eg, pain treatment, causes of impaired behavior, palliative care). Most often, general knowledge and advice (eg, based on having studied or written about pain management strategies or causes of falling or weight loss) require additional context and evidence gathering to apply to a specific situation or case.

Expertise in long-term care 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, and they can provide a plausible rationale for their decisions and actions (Table 3).

As discussed previously, criteria for expertise are not discipline dependent. An alleged expert in pain management must meet comparable criteria to those for an expert on wound care or pain management, just on a different aspect of care. The same processes apply in trying to identify medical causes of pain as for trying to diagnose psychosocial causes of problematic behavior or disturbed mood, or environmental causes of falling or weight loss. The causes of a symptom in any individual (eg, renal failure as a cause of rapid weight gain or depression as a cause of nonspecific pain symptoms) or risk (eg, medication adverse consequences as a risk for

anorexia or pain), and the appropriateness of various treatment options, do not depend on who is doing the assessment.

By relating clinical decision making to the care delivery process, we can define various levels of clinical expertise (Table 4). This allows for comparing and contrasting the clinical capabilities of individual practitioners (eg, physicians, advance practice nurses), as well as clinicians of other professional disciplines.

Significant problems can arise if those who are assessing a situation or drawing conclusions about causation and treatment either exceed the scope of their knowledge and skill, or if those with relevant knowledge and skill are not adequately involved in clinical problem solving and care provision. Regardless of the discipline or profession, experts know their limits and when to call for help. Those lacking expertise often do not know what they do not know, and therefore commonly exceed the limits of their abilities and knowledge. They may unknowingly do considerable harm, while others (eg, facility and department management) authorize or allow them to continue to act improperly.

NURSING HOMES AND CLINICAL PROBLEM SOLVING AND DECISION MAKING

A long-term care facility does not need a lot of “experts” to give competent care. It is more important that it has a system that collectively follows essential principles and processes, distinguishes and applies valid clinical evidence, and strives to minimize care based on fallacies and misconceptions.

Basically competent individuals (who do not need to be experts in their field) can give competent care by applying the same techniques and information that experts use (eg, by following expert protocols and guidelines). That is, they collectively gather information, formulate hypotheses, distinguish underlying causes, and identify interventions in the context of the whole patient (including coexisting conditions, goals, and objectives); identify relative risks and benefits of interventions; and effectively monitor and adjust those interventions.

The next article in this series will consider whether and to what extent nursing homes adhere to these principles and practices, to what extent the efforts to “reform” long-term care are helping or hindering their improvement, and how all of this affects the quality of their care.

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The Basis for Improving and Reforming Long-Term Care. Part 3: Essential Elements for Quality Care

Steven A. Levenson, MD, CMD

There is a pervasive effort to reform nursing homes and improve the care they provide. Many people are trying to educate and inform nursing homes and their staff, practitioners, and management about what to do and not do, and how to do it. But only some of that advice is sound.

After more than 3 decades of such efforts, and despite evidence of improvement in many facets of care, there are still many issues. Despite improvements, the overall public, political, and health professional perception of nursing homes is often still negative.

To date, no tactic or approach has succeeded nationwide in consistently facilitating good performance or correcting poor performance. Only some of the current efforts to try to improve nursing home quality and to measure it are on target. Many of the measures used to assess the quality of perfor-

mance have limited value in guiding overall quality improvement.

Before we can reform nursing homes, we must understand what needs to be reformed. This series of articles has focused on what is needed for safe, effective, efficient, and person-centered care. Ultimately, all efforts to improve nursing home care quality must be matched against the critical elements needed to provide desirable care.

Based on the discussions in the previous 2 articles, this third article in this 4-part series considers 5 key elements of care processes and practices that can help attain multiple desirable quality objectives. (**J Am Med Dir Assoc 2009; 10: 597–606**)

Keywords: Nursing homes; reform; quality of care; evidence-based care; quality improvement

According to the Institute of Medicine (IOM), high-quality care is safe, effective, efficient, available, timely, and equitable.¹ Therefore, a nursing home's care could be considered to be of high quality if it consistently meets these criteria.

In assessing the current status of long-term care, we cannot lump all nursing homes together. They vary substantially in their competence, their clinical performance, and the overall quality of their care and services.² For various reasons, competence and performance may or may not correlate well with regulatory compliance or a facility's performance under some widely used quality measures.³ Furthermore, aggregate outcomes (eg, measures developed for the Centers for Medicare and Medicaid Services [CMS] related to nursing home quality measurement) do not readily permit an accurate determination of the quality of care given to individuals.^{4,5}

In short, capable facilities provide care that is safe, effective, efficient, and person-centered. They are competent in most or all aspects of care that they provide. They generally obtain good results, often prevent potential complications, and commonly detect and correct the consequences of inadequate care that was rendered elsewhere.

Some nursing homes provide competent care in some aspects, but not in others. And, still other, problematic facilities provide marginal or poor care in most or all care aspects.

Problematic facilities, and facilities that have some problematic aspects of care, may fail to identify or correct their problems. They are often surprised and upset when surveyors or others identify those problems, and they may try to blame those others for not confirming the facility's misconceptions about their care quality.

Even in facilities with a generally good record overall, some aspects of care may be handled ineffectively. Many common practices in long-term care are still inconsistent with evidence; for example, approaches to delirium and problematic behavior,⁶ pain,⁷ hydration issues,^{8,9} swallowing,^{10,11} bacteriuria,¹² weight loss and anorexia,¹³ medication use,^{14,15} thyroid disease,¹⁶ and other diverse medical issues.¹⁷

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There are many efforts to review care and assess results in nursing home residents/patients, ranging from the Omnibus Budget Reconciliation Act (OBRA) survey to quality measures and indicators.¹⁸ Quality measures and reviews assess some combination of structure, process, and results (outcomes). Much of the effort to improve nursing homes focuses on assessing outcomes and then trying to improve the results by promoting various practices and processes.

Ultimately, all efforts to improve nursing home care quality must be matched against the critical elements needed to provide desirable care. We cannot just assume that these improvement and reform efforts are on target, or that their failure to have an enduring impact on quality is simply the fault of the target audience (eg, nursing home staff, management, and practitioners). These improvement initiatives may be only partially relevant, they may give incorrect advice, or they may fail to cover some essential issues.

How do we know when a nursing home's care meets these criteria for high quality? The same factors that affect individual patient outcomes are also relevant to using outcomes to try to measure quality. In the short- and long-stay populations characteristic of nursing homes, outcomes are heavily influenced by the total burden of illness, overall physical stability, and the links between causes and consequences.¹⁹

In considering both processes and results, there are four ways in which something may be done²⁰: the right thing may be done correctly or incorrectly, or the wrong thing may be done correctly or incorrectly. Since many diverse factors (eg, preexisting illnesses and impairments) can affect results, it is possible to do the right thing correctly but not always obtain the best outcomes. It is also possible to do the wrong thing, or the right thing in the wrong way, and obtain desired results eventually (eg, despite causing avoidable complications such as delirium, weight loss, or falling resulting in hospitalization, while trying to treat pain or depression).

Therefore, to evaluate quality of care, we must know how a facility attains its outcomes, not just those results.²¹ For example, the use of quality measures and indicators must be sensitive to the links among many quality goals (related to links among causes and consequences in residents and patients, as discussed in this series) and the possibility of interim complications or collateral damage as a result of efforts to attain certain quality goals.

With so many variables and challenges, what is the best way to achieve consistently high-quality care? From one viewpoint, attaining each of these quality attributes requires distinct approaches for each aspect of care and facility operations. This article will discuss how a few basic common approaches, based primarily on correct clinical problem solving and decision making, can attain multiple desirable quality objectives.

FIVE KEY ELEMENTS

Consistently safe, effective, efficient, and person-centered care results when facilities and practitioners do the basics correctly and consistently. Conversely, problematic nursing homes and practitioners fail largely because they do not do

the basics properly. Table 1 summarizes these differences, as discussed herein.

In nursing homes, the “right thing in the right way” refers to care that:

- (1) is based on sound clinical principles and reliable evidence;
- (2) is delivered via a proper care process that reflects effective clinical problem solving and decision making;
- (3) accommodates, but does not focus primarily on regulations;
- (4) is provided by properly qualified individuals who perform their functions effectively and know their roles and their limits; and
- (5) is guided and supported by effective management.

Thus, nursing homes can be improved by ensuring that they do the basics properly and consistently. Desirable efforts to improve and reform long-term care must be consistent with these principles.

CONSISTENT APPLICATION OF EVIDENCE-BASED CARE

Capable nursing homes and practitioners consistently provide care that meets desired quality attributes and is consistent with key philosophical, biological, and medical principles. The first 2 articles in this series discussed these concepts, including the meaning of “evidence-based” care. The 2 key components of evidence-based care include (1) scientific evidence about the evaluation and management of illness and impairment and (2) detailed evidence about the patient (eg, symptoms, results of physical assessment, past history).^{22,23}

Sound evidence-based care requires testing hypotheses by collecting and examining evidence about the patient (eg, a detailed chronology of symptoms and condition changes, a sufficiently detailed physical examination); and avoiding diagnostic (cause identification) fallacies. For example, symptoms have causes, and causes and consequences occur in various relationships. Effective, safe, efficient, and person-centered care requires identifying those exact relationships in each resident/patient, not just care-planning symptoms and problems in isolation.²⁴ Generalities about diagnosing and treating illnesses and impairments must be tailored to each individual situation.

Clinical Problem Solving and Decision Making

For complex matters such as postacute and long-term care, empirical approaches to problem solving and cause identification are superior to others, including guesswork and rote protocols. Both clinicians and nonclinicians can apply these methods, even though they may not be equally skilled at performing specific steps such as cause identification.

Competent clinical problem solving and decision making in long-term care requires critical skills related to observation, defining problems, identifying causes, and making decisions.²² Capable facilities and practitioners use these proven clinical problem-solving and decision-making approaches to implement evidence-based care.²⁵ They can provide valid evidence to support their conclusions and interventions,

Table 1. Comparing Characteristics of Capable and Problematic Facilities Relative to Delivering Quality Care

Capable Facilities	Problematic Facilities
<ul style="list-style-type: none">- Are competent in most or all aspects of care that they provide- Provide true evidence-based care and use systematic approaches to clinical problem solving and decision making- Use empirical methods to seek, interpret, and act upon evidence- Can readily identify links between causes, consequences, and interventions- Strive to ensure that adequate information is collected to facilitate proper management of all conditions and situations- Try to maximize diagnostic accuracy and minimize diagnostic fallacies- Can identify a pertinent rationale for diagnoses and interventions, whether medical or nonmedical <ul style="list-style-type: none">- Individualize care by considering a patient's physical, functional, and psychosocial dimensions- Routinely consider how medical care impacts function and quality of life <ul style="list-style-type: none">- Take an appropriately comprehensive view of all patients and care situations- Adhere to relevant geriatrics principles and practices <ul style="list-style-type: none">- Provide safe, effective, efficient, and person-centered care- Generally obtain anticipated results- Often prevent potential complications, and commonly detect and correct the consequences of inadequate care that was rendered elsewhere- Use diagnostic tests and consultations judiciously, to supplement careful assessment by core staff and practitioners- Understand the critical care delivery process basis for "clinical judgment" <ul style="list-style-type: none">- Accommodate but are not excessively preoccupied with regulatory compliance as the basis for competent care <ul style="list-style-type: none">- Try to guide staff and practitioner performance with appropriate clinical protocols and procedures- Limit staff from making clinical recommendations and decisions beyond the scope of their license, training, and skills- Management promotes a culture of true evidence-based care and effective clinical problem solving and decision making- Management spearheads the care delivery system and a fully functioning care delivery process- View service utilization decisions as the end point of an effective care delivery process, and in relation to comprehensive view of the patient	<ul style="list-style-type: none">- Provide marginal or poor care in most or all care aspects- Provide care that is not truly evidence based and does not follow key clinical problem-solving and decision-making approaches- Use haphazard approaches, including guesswork and treatment by rote- Cannot or do not consistently connect causes, consequences, and interventions correctly- Often, draw conclusions and render care based on inadequate information gathering or failure to consider available, relevant information- Commonly fail to avoid diagnostic fallacies and errors <ul style="list-style-type: none">- Tend to lack or misunderstand the basis for diagnoses and nonmedical causes of patient symptoms and problems- Often do not know or cannot explain why specific treatments are right for a given patient- Tend to justify treatments by authority (ie, someone told them it was the right thing to do)- Often fail to individualize care; only consider some relevant issues- Tend to treat by rote and to give medical care out of context- Are excessively preoccupied with "medical" and "social" models of care- Mistakenly view care based on primary diagnosis, payer source, or alleged reason for admission- Care is often incompatible with relevant geriatrics principles and practices- Care is often unsafe, ineffective, inefficient, and not truly person-centered- Results are variable or problematic- Often cause preventable complications- Often fail to seek, identify, and correct consequences of inadequate care rendered in the facility or elsewhere- Often use diagnostic tests and consultations as an inadequate substitute for basic assessment of symptoms and problems- Tend to use claims of "clinical judgment" to rationalize inadequate clinical problem solving and decision making- Are excessively preoccupied with regulatory compliance as the basis for delivering care- View survey-related materials as the primary or sole basis for adequate care- Have inadequate and/or inaccurate clinical protocols and procedures- Exercise little or no meaningful control over who is allowed to make clinical recommendations and decisions <ul style="list-style-type: none">- Management does not promote facility commitment to evidence-based care and clinical problem solving and decision making- Management is largely or totally removed from oversight of or involvement in care delivery process- Tend to view service utilization decisions separately from full care delivery process (eg, have separate "utilization review" meetings), and from narrow perspective of primary reason for admission, diagnosis, or payer source

including how they identified links between causes, consequences, and interventions. For example, they can show how they decided that one person with a fall risk needed

a medication adjustment while another needed more assistance with toileting, or exactly how and why they determined the cause of weight loss or increasing lethargy and confusion.

A properly trained, objective observer can readily validate the basis for their actions.

When there are multiple causes of a symptom or a common cause (eg, a cerebrovascular accident) of multiple symptoms, capable facilities can show how interventions are targeted to underlying causes or explain why it was not possible or appropriate to do so. They recognize that just rendering treatment by rote (eg, automatically treating symptoms, ordering tests) by itself does not constitute effective care.

Capable facilities and practitioners adapt testing and treatment recommendations from protocols and guidelines, to individual circumstances.²⁶ For example, while considering general recommendations in various guidelines about pain management, they do not just give opioids to everyone with severe pain, but they also identify the details of pain because, depending on circumstances, there may be a readily treatable cause and other interventions may be more appropriate.

Capable facilities and practitioners give medical treatment in the proper context, always considering its purpose for the patient (phronesis), not just its pertinence to disease or organ system function.²⁷ They consider each person's physical, functional, and psychosocial dimensions, including how medical care impacts function and quality of life. They seek input from the residents/patients (or a substitute decision maker), and they adapt care to changing goals and objectives for each person. Interventions are consistent with the evidence about effectiveness and risks. And, they can explain the clinical and ethical basis for decisions to intervene or to withhold or withdraw care.

Capable facilities and practitioners adhere to geriatrics principles and practices that reflect evidence-based care delivered via a sound care-delivery process.²⁸ Of all medical disciplines, geriatrics focuses prominently on this balanced approach and on avoiding harm while trying to do good. "Geriatrics is more process than content, more how than what. The approach we learn calls for flexibility, comprehensiveness, and sensitivity."²⁹

False "Medical" and "Social" Model Dichotomy

Most nursing home patients and residents have some significant acute and/or chronic medical conditions underlying their impaired function. A focus on identifying and treating these conditions is often called the "medical model." This use of term is often pejorative, as it appears to downplay or disdain anything clinical and medical and often equates it with excessive and problematic medical care.³⁰

Regardless of the setting or level of care, true "person-centered" care requires attention to all 3 dimensions (physical, functional, and psychosocial). Whereas the "social model" is often portrayed as more "humane" and "person-centered" than the "medical model," this is a false dichotomy.

Appropriate medical interventions can have many positive effects on function and quality of life, while inappropriate interventions are often inhumane and have a negative effect on these things. Medical treatment that is more intrusive than helpful, or that it is not germane to improving people's function or quality of life, typically reflects a failure of effective

clinical problem solving and decision making. True reform of long-term care must correct the bad practices that underlie inappropriate care, not disdain good medicine because bad practices are common.³¹

Problematic Facilities

In contrast to capable facilities and practitioners, problematic ones often do not follow systematic care processes or have a clinically pertinent rationale for their decisions and actions. They often test and treat by rote, and thus fail to individualize their care. However, it does not require any particular clinical skill to do things by rote; eg, give the same test or treatment routinely for everyone, based on lists or protocols.

In problematic facilities, the staff and practitioners tend to rely heavily on authority and personal relationships to determine appropriate care. Their rationale for doing something is often that someone or something (eg, a consultant, the director of nursing, the facility's risk manager or attorney, a surveyor) told them it was the right thing to do. But they often cannot describe the reasoning behind their conclusions and actions. They typically do not try to validate adequately or challenge whether they were told the right things, the qualifications of those telling them what to do, or why a recommendation or choice is relevant to a specific patient or a situation.

Capable facilities use consultations judiciously and scrutinize consultative recommendations for their clinical rationale.³² The staff and practitioners freely challenge the pertinence of suggested tests and treatments that lack a plausible rationale.

In contrast, problematic facilities tend to divide up patients by organ systems and problems, and they allow those of various disciplines to have jurisdiction over that aspect of care. For example, in many facilities every behavior problem automatically gets a psychiatric consult, any swallowing problem a speech therapy referral, and every weight loss is turned over to a dietician. Often, the person assigned to these problems has only limited ability to perform a differential diagnosis of underlying causes. And yet, staff and practitioners may be advised or pressured to follow, and not to challenge, such recommendations, regardless of their accuracy or relevance.

In fact, many current practices in long-term care are not compatible with applicable evidence, some of which has existed for several decades.¹⁷ For example, years of intensive efforts to limit restraint use have been based on the premise that it is important to balance concerns about risks with the recognition of the greater benefits of liberalized approaches.³³ And yet, ironically, many nursing homes are obsessed with trying to prevent aspiration as an end in itself, rather than in the context of the whole patient picture.^{34,35} Thus, unwarranted use in both hospitals and nursing homes of modified texture diets and feeding tubes due to excessive preoccupation with even minor swallowing abnormalities has deprived untold numbers of nursing home residents of the simple human pleasure to eat and drink as they wish, despite a manageable risk. Inexplicably, there are few publicly stated concerns about the fact that most nursing homes have adopted related policies that disregard evidence and

phronesis. In addition, there is often a vigorous outcry against even reasonable attempts to point out these excesses and misconceptions.³⁶

Do Challenges Justify Shortchanging Process?

Over time, nursing homes have had many challenges in getting enough knowledgeable, skilled practitioners and staff to perform care-related functions and tasks consistently and correctly.³⁷ Thus, some might argue that circumstances have made it necessary for nursing homes to rely on consultants, guesswork, and rote approaches in order to provide care. Furthermore, compared with the past, care overall has improved.³⁸ So, perhaps approaches other than the empirical method, including guesswork, are better than nothing, as they sometimes work.

The problem is, these other approaches have gone about as far as they can go in improving care. By the law of averages, doing things by rote will work sometimes. For example, a guess that any change in behavior or mental function is caused by a urinary tract infection, or concluding that “aggressive” individuals with dementia are just being “assertive”³⁰ will sometimes be correct, and often incorrect.

If nursing homes did surgery, it would never be acceptable to have partially competent surgery done by individuals with limited knowledge and skills, who made guesses based on reading an article, attending meetings, or listening to their supervisor. And, it would be unacceptable to justify it by noting a shortage of properly trained surgeons.

There should be comparable respect for competent medical practice. Given the realities discussed earlier in this series (Parts 1 and 2),^{22,24} including the complexities involved with multiple simultaneous causes and consequences, guesswork and rote approaches are often both wrong and hazardous. They commonly result in collateral damage and complications (eg, colitis caused by unnecessary antibiotics and avoidable hospitalization caused by missed diagnoses) that are not detected by the usual quality measurement approaches.

Health care reform generally, and nursing home reform in particular, requires as much respect for competent clinical problem solving and decision making activities as there is for competent surgical technique. Therefore, nursing home reform must improve the caliber of performance across the board, by licensed health care practitioners and by others who are not practitioners. Desirable reform efforts must support a proper, not superficial, evidence-based approach to clinical problem solving and decision making. Quality evaluation efforts must cover not just results but how those results were attained, and whether there was any collateral damage while trying to attain them.³⁹

APPROPRIATE CARE DELIVERY PROCESS

Need for Effective Care Delivery Process

As discussed previously in this series,²² the care delivery process is the means of applying effective clinical problem-solving and decision-making methods and evidence-based care. Adherence to the full care delivery process is essential

to provide high-quality care in every setting, regardless of the disciplines or specialties that are involved. All of the steps of the care delivery process are relevant—not just those identified or emphasized in nursing home regulations and related guidance and materials.

For several reasons, adherence to the care delivery process is especially vital for both long-term and short-stay nursing home residents/patients. Although many individuals are involved in providing care, only some of them have the required expertise for effective clinical decision making.²² Health care practitioners usually are present only intermittently, patients often cannot give a detailed symptom history, and relatively few diagnostic tests are readily available. The care issues are often complex. Many different medical conditions tend to present with a few common or nonspecific symptoms and findings. Treatment is only sometimes relevant to function and quality of life, and often causes symptoms that are hard to distinguish from those attributable to disease. The relevance of treatments must be reconsidered frequently. Ethical issues are prominent. Patient goals and wishes must be considered.

Effective care requires knowing the basis for decisions and treatment selection, not just the selected treatments or the results. Interventions need a rationale based in the care delivery process and outcomes must be correlated with underlying processes and other outcomes. Excessive attention to interventions and outcomes—either while delivering care or trying to assess care quality—reflects a misunderstanding of the evidence.

Care Delivery Process Components

As discussed in the second article in this series,²² a fully functioning care delivery process has key components (eg, gathering information, defining problems, identifying causes). Clinical problem solving requires being able to evaluate an individual and describe and define the issues correctly and completely, distinguish clinically significant from incidental findings, and determine appropriate interventions. For example, abdominal pain allegedly a result of constipation could actually be a result of medication side effects.⁴⁰ Just treating the symptoms with laxatives or analgesics could easily exacerbate the problem.

Thus, a detailed chronological history of symptoms and condition changes (eg, onset, duration, and the course over time) is essential to caring for all short-stay patients and long-term residents. Additionally, the patient history has been identified as providing the most useful information (compared with the physical examination or lab tests) to help make a diagnosis.^{41,42} Under the challenging circumstances found in the nursing home, the history generally must be supplemented by some physical assessment to provide enough additional information to permit effective clinical decision making.

For example, the OBRA interpretive guidelines on nutrition (F325) emphasize weight loss percentage as a trigger for surveyor review and, by extension, facility interventions.⁴³ However, identifying the pattern of weight loss and the presence and causes of anorexia are much more meaningful than the percentage of weight loss alone. Depending on the pattern, the same percentage of weight loss can have

very different underlying causes and clinical implications. Therefore, it is critical to know all relevant details about weight loss and anorexia. Unfortunately, such information may be overlooked in the haste to intervene to try to ensure regulatory compliance.

Variable Adherence to the Care Delivery Process

Ironically, the care delivery process is often shortchanged in a setting where it is especially crucial. Although every nursing facility has some form of an interdisciplinary care process (ICP), only some of what passes for the ICP actually follows the care delivery process faithfully.

Capable facilities and practitioners promote and implement the full care delivery process, consistently and correctly. They have competent clinical problem-solving and decision-making activities, and they strive to minimize diagnostic fallacies and to correct inappropriate clinical decision making.⁴⁴ They use diagnostic tests and consultants appropriately to supplement—not replace—detailed assessment and effective diagnosis or cause identification by primary care practitioners and staff.⁴⁵ They do not just treat symptoms indiscriminately, regardless of context or causes. They recognize that the pertinence of interventions is more important than the quantity or which disciplines are involved in the care.

Capable facilities do not just treat patients based on their primary diagnosis or reason for admission. They gather enough details about all situations (eg, behavioral issues, falls, pain, anemia, anorexia and weight loss) to allow appropriate individuals to distinguish the significance and causes of abnormalities, symptoms, and risks, so that appropriate interventions are more likely to be effective and not harmful. They know that superficial symptom reports (eg, someone “seems depressed” or is “agitated,” “combative,” “losing weight,” or “having pain”) alone do not provide a clinically meaningful basis for diagnostic or treatment decisions.

Capable facilities expect an actual physical assessment (eg, by touching and moving an area of the body to gauge the degree of pain) by a nurse to supplement any symptom history. They use tests (eg, serum albumin, chest x-Rays, or urine cultures) judiciously, not as a substitute for clinical problem solving including differential diagnostic efforts. They routinely consider complications of current treatments (primarily, medications) as potential causes of any changes of condition or symptoms. They have meaningful dialogue with practitioners about patient issues, to enable appropriate clinical problem solving and decision making.

Capable facilities try to identify interventions that balance evidence-based care with the rights of individuals to request or decline specific treatment. But they do not succumb to the pressure to accede to patient and family wishes, regardless of clinical relevance or risk.

For example, capable facilities will ask residents details about their pain, including treatments that may have been helpful in the past. But, they do not just routinely accept what they are told at face value and then obtain medication or treatment orders. Instead, they attempt to validate that current pain is similar to past pain, to do a physical assessment to verify what they are told about the pain, and to consider

the pertinence of any specific treatment requests from the patient or family.

In contrast, problematic facilities may advise their staff just to do what the patients, families, or practitioners tell them, or they may not be told when they should challenge unfounded or inappropriate recommendations and orders. For example, they will tell staff to get the practitioner to order whatever a patient requests for pain, even if there has been no additional assessment to validate that the request is appropriate.

Problematic facilities and practitioners commonly omit critical parts of the care delivery process. For example, information exchange among staff and between staff and practitioners regarding symptoms such as altered mental status and fever commonly lacks enough detail—including a chronology of symptoms and condition changes—to enable any meaningful clinical decision making by a practitioner. Conversely, practitioners may make clinical decisions in nursing homes without requesting enough details. They may fail to seek or recognize important causes; eg, adverse consequences related to current medications or diarrhea attributable to something other than *Clostridium difficile*.⁴⁶

Although they profess to individualize care, problematic facilities often use the same rote approaches for everyone, regardless of their relevance. They fail to effectively tailor general knowledge to specific situations. Whereas capable facilities use consultants judiciously, problematic ones use them as an inadequate substitute for performing the basic care delivery process steps. However, careful scrutiny of consultant recommendations is often essential because many consultants do not understand or incorporate the necessary comprehensive view of the patient (eg, that symptoms can have multiple or remote causes), or they fail to perform an adequate differential diagnosis.⁴⁷

Inadequate Justifications for Shortchanging the Care Delivery Process

Nursing homes may offer reasons for not following the care delivery process consistently. For example, some facilities claim that they only have to do the assessment required under the OBRA regulations. Many nursing homes claim that they are handicapped because so many of their nurses lack “clinical judgment.” They may claim that nurses who are not Registered Nurses (eg, licensed practical or vocational nurses) are not allowed by law to perform an assessment. However, because even a layman can give a doctor a detailed history of an illness and perform a rudimentary physical assessment, these arguments are implausible.

Many nursing homes defer to risk management and other consultants who advise them against having detailed clinical policies and procedures.⁴⁸ However, their rationalization for this is generally suspect. For example, they may argue that no one approach works for all patients because all individuals are unique. Or, they may advise that facilities that do not have clinical policies cannot be held accountable for failure to follow them. However, it is feasible to implement clinical practice guidelines and other protocols successfully in nursing homes.⁴⁹

Capable facilities promote proper exercise of “clinical judgment.” As noted earlier in this series,²² valid clinical judgment is exercised by drawing conclusions while performing appropriate clinical problem solving and decision making via the care delivery process. Capable facilities do not confuse unsubstantiated guesswork resulting from shortchanging the care delivery process with valid clinical judgment. In contrast, problematic facilities and practitioners tend to use the notion of “exercising clinical judgment” to rationalize conclusions and interventions that lack a clinically pertinent basis, or are accompanied by failure to investigate root causes of symptoms.

However, for better or worse, all aspects of the care delivery process—not just assessment or treatment selection—involve some clinical judgment. For example, nurses are exercising judgment, however inadequate, whenever they decide to accept whatever a resident or patient tells them without performing a further assessment, to only provide certain information about a patient to other staff or to a practitioner, or to request a physician to order a specific treatment, test, or consultation. Problematic facilities, and even many capable facilities with some problematic care, often allow staff and consultants to write “phantom” verbal orders (ie, alleged verbal orders that are not based on a written protocol or a discussion with the practitioner) for tests and treatments (eg, lab work and specific nonmedication interventions).

For example, nursing staff may be encouraged to automatically order psychiatric consultations or urine cultures for behavior issues, or dietary consults for any kind of appetite or weight problem. If this is done without any meaningful medical and nursing assessment, the patient is likely to suffer because important causes of symptoms may be missed or inappropriate interventions instituted.

For all of the aforementioned reasons, efforts to reform nursing homes must promote consistent adherence to the entire care delivery process (incorporating sound clinical problem-solving and decision-making activities) as the preferred route to high-quality care. Any “reform” initiatives that do not do this, or that promote shortchanging the care delivery process or effective clinical problem solving and decision making, are impeding—not supporting—essential reform.

A BALANCED APPROACH TO REGULATORY COMPLIANCE

Many state and federal laws and regulations exist to try to raise the quality of care in nursing homes. Such efforts often include tools for facilities (eg, the Minimum Data Set [MDS] and related interpretive tools including Resident Assessment Protocols) and for surveyors (eg, interpretive guidelines and investigative protocols).⁵⁰ Many “reformers” have tried to use the survey process and regulations to influence performance and drive interpretations of care quality.

All nursing homes must comply with at least some state and/or federal regulatory requirements to keep their licenses and their reimbursement. For various reasons, including the importance of regulatory compliance to nursing homes, many of them have tried to use survey-related materials as their primary route to providing care. However, this is

misguided. Only some facilities and surveyors (including survey agencies) appear to understand the purpose and limitations of the survey process, and act accordingly.

Regulations and surveyor guidance were meant to provide a broad foundation of expectations and to guide interpretation of care reviews. All of these sources contain only the rudiments of a care delivery process and a few elementary tools. They lack enough meaningful guidance about vital care process steps such as how to define a problem correctly, identify links between causes and consequences, or select the right interventions.

No laws, regulations, or related tools contain adequately detailed guidance for effective clinical problem solving and decision making. Ironically, excessive attention to the regulatory and survey emphasis on assessment and care planning may have contributed to downplaying some of the most important care delivery process components; eg, careful problem definition, cause identification, treatment selection in context, and effective monitoring with rational adjustment of interventions.

For example, the MDS was meant to be a basic tool to consistently document key information, mostly about the consequences—not the causes—of impairment and disability. It is mostly descriptive and only modestly detailed. It is very inadequate regarding medical illness, and it does not help link causes and impairments in specific patients.⁵¹ In other words, it is a weak tool for clinical problem solving and decision making. Despite this, many facilities use it to plan care directly with little or no additional adherence to the care delivery process or additional efforts at clinical problem solving.⁵²

Capable facilities recognize that the route to regulatory compliance always lies in effective clinical problem solving and decision making. They ensure that the entire care delivery process is done correctly, and do not just focus obsessively on major regulatory expectations such as assessment and care planning.

Problematic facilities use regulations and related content as their primary or sole approach to making care decisions and providing care. They overemphasize compliance-related assessment and care planning, and thus tend to shortchange other key steps such as problem definition and cause identification, which the OBRA-related materials do not cover in enough depth.

Some facilities are preoccupied with surveys and surveyors’ opinions about the facility’s conclusions and interventions. They may ask individual surveyors or state agencies what they should have done, or done differently, related to a survey deficiency or to avoid one. Yet surveyors—like anyone else—would have to follow the care delivery process, assess a patient in depth, and go through the clinical problem-solving and decision-making process before they could advise adequately on proper diagnosis and treatment. However, they are not authorized by law or regulation to do that.

Instead, the OBRA survey process requires facilities to show surveyors the basis for what they have done and how they have reached various conclusions. Surveyors are supposed to determine whether facilities complied with process expectations relative to resident/patient outcomes.

Ironically, some surveyors and facilities focus excessively on whether the “right” interventions were made and how quickly they were implemented. Because facilities may not have or understand the basis for their decisions and actions, they may be unable to provide it. Conversely some surveyors may not understand valid explanations or challenge invalid ones.

Thus, true nursing home reform requires a much better understanding universally of the attributes and limitations of surveys, regulatory processes, and regulation-related quality measurements, in overseeing and evaluating quality of care. None of these include or promote all of the critical elements of clinical problem solving and decision making that are needed to provide or evaluate high-quality care.

CARE PROVIDED BY PROPERLY QUALIFIED INDIVIDUALS

An effective care delivery process requires various individuals to perform diverse functions, including observation, data collection, documentation, reporting, analyzing information, making treatment decisions, and delivering treatments. These functions require relevant knowledge and skills.

For example, assessment and monitoring require the ability to observe, document, and report information. Physicians and nurse practitioners function as information analysts and treatment decision makers, but may not deliver much treatment.

For various reasons, there is a shortage of adequately trained and skilled individuals, including Level 1 (highly capable) and Level 2 (moderately capable) clinicians²² to perform these required tasks consistently and correctly. This deficit is likely to remain for some time.⁵³

One way to improve long-term care is to find and train additional qualified practitioners.^{54,55} Another route to improving care is to strengthen the performance of everyone who is involved in direct care, including existing staff and practitioners. The same relative handful of symptoms and underlying causes (eg, dementia, medication-related adverse consequences, and pneumonia) recur repeatedly. The underlying principles and approaches are enduring and universal.

As noted, the art of cause identification is based on principles and processes that even nonclinicians can apply. Staff may not know all of the relevant possible causes of symptoms, but they should know how to gather information to help others identify the cause(s) from among various possibilities. They can understand how to avoid diagnostic fallacies; for example, by not jumping to premature conclusions based on limited knowledge of a patient or limited ability to interpret information. As discussed in the next section, facility management can establish systems and processes to promote an effective care delivery process.

Capable facilities have a culture that focuses on the care delivery process and evidence-based care. They try to ensure that diagnostic conclusions and treatment decisions are made by qualified individuals with relevant skills in clinical problem solving and decision making. For example, they either improve the skills of individuals who are primarily trained to function as data collectors and treatment deliverers or they keep such individuals from requesting treatment orders

based on drawing inadequate conclusions about causes of symptoms. They try to compensate for problematic individual performance by reviewing care decisions and challenging questionable conclusions and interventions. In problematic facilities, and when problems occur in capable facilities, the staff and practitioners may be expected or allowed to perform functions that are beyond the scope of their knowledge, training, and skills.

EFFECTIVE MANAGEMENT OVERSIGHT

As noted, nursing homes are challenged to have a functioning system that consistently provides high-quality care to ill and impaired individuals, amidst very high public expectations. The degree of successful oversight and coordination of a facility’s care processes and practices heavily influences the attainment of safe, effective, efficient, and person-centered care.

In many nursing homes, the administrator remains largely aloof from direct care, and instead lets the director of nursing spearhead that care. However, whereas the nursing department provides most direct care, the administrator must ultimately ensure that the whole care delivery system works properly.

Although they do not provide direct care, facility management nonetheless has a crucial role in overseeing its provision. They must understand what they are overseeing. Even if they are not health professionals, they should be able to comprehend the concepts and issues covered in this series of articles; eg, because all symptoms and problems (eg, skin breakdown, dizziness, and behavioral issues) have causes, the staff and practitioners should be expected to seek and address underlying causes of symptoms in a coordinated fashion. They should promote integration and coordination of care from diverse sources because each person’s physical, functional, and psychosocial dimensions are all intertwined.

Facility management plays a critical role in ensuring effective participation of direct care staff and practitioners. Evidence from the neurosciences shows that there is wide variation in how individuals solve problems and make decisions. Because the human brain may be wired more to promote social relationships and self-preservation, people are often inclined to make decisions, and to try to justify them, based more on emotional impact and personal experience than on deliberating objective evidence.⁵⁶

Therefore, management in long-term care facilities must take these human factors into account. By virtue of having oversight over all departments and disciplines, a facility’s administrator is in the best position to coordinate these diverse perspectives. A facility cannot assume that anyone with a license knows what they are doing, or that all those involved in direct care can somehow coordinate their beliefs and approaches without some guidance. Unguided clinical decision-making and care processes can easily become based more on personal opinions, relationships, and on political considerations (eg, who knows and agrees with whom) than on effective clinical decision-making principles.

Effective management supports and oversees the facility's entire care delivery system. Management must ensure that a proper care delivery process occurs consistently, and that all departments and disciplines know their roles and perform their functions effectively. They commit the facility and its staff and practitioners to effective care processes and evidence-based care as the main route to all desirable outcomes, including financial results, regulatory compliance, and resident and staff satisfaction. They promote respect for the value of good detective work, problem solving, data gathering, and cause identification, as being key to providing compassionate, respectful, safe, and individualized care. They spearhead a broad facility commitment to coordinated clinical decision making and evidence-based care, and a resistance to tradition-, habit-, and myth-based care.^{17,57} And, they encourage staff and practitioners to question and challenge situations that appear to contradict desirable clinical decision-making approaches.

Effective management steers the facility away from excessive preoccupation with "medical" and "social" models of care. It suppresses approaches to care based on labeling; eg, "the patient is just here for rehabilitation" (or "wound care" or "IV therapy"). Instead, it promotes a comprehensive view, as discussed in this series of articles, including treatment in the proper context.

Effective management promotes sound clinical problem solving and decision making as the foundation for service utilization. Recognizing that utilization decisions are always the end point of patient assessment and clinical decision making, it does not allow any one discipline (eg, therapists or nurses) to dominate the care process or clinical decision making by virtue of having excessive influence over discharge decisions.

Effective management implements systems and processes (eg, quality assurance and performance improvement activities) to oversee and influence the performance and practices of the diverse individuals who work and practice there. In contrast, management in problematic facilities tends to let care processes and practices run on politics and relationships, more than on critical scrutiny. Administrators may not know the right way to do things or be able to assess whether their staff are acting appropriately. Instead, they may wait for others (eg, state surveyors) to evaluate the care and identify remediable problems for them.

Therefore, meaningful nursing home reform requires support for developing management who can effectively oversee the care delivery process and who promote it as the preferred way to desired outcomes based on effective clinical problem solving and decision making.

SUMMARY

High-quality nursing home care results from competent performance of key functions and tasks, based on applying clinical problem-solving and decision-making principles via the care delivery process. In contrast, problematic care results from failures of related knowledge, skill, processes, and oversight. Capable facilities tend to do the right things in the right way, whereas problematic ones tend to do the wrong things or to do the right things incorrectly.

Therefore, meaningful nursing home reform must support—as well as not inhibit—the 5 key elements of competent care systems, as discussed in this article. The final article in this series will examine current initiatives that are trying to improve nursing home care quality, and the extent to which they promote or inhibit these essential approaches.

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The Basis For Improving and Reforming Long-Term Care. Part 4: Identifying Meaningful Improvement Approaches (Segment 1)

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While many aspects of nursing home care have improved over time, numerous issues persist. Presently, a potpourri of approaches and a push to “fix” the problem have overshadowed efforts to correctly define the issues and identify their diverse causes.

Together, the two segments of this fourth and final article (divided between this month’s issue and the next one) in the series identify strategies that should tie reform efforts together. This Segment 1 of Article 4 discusses the need to judge initiatives and proposals by how well they support and/or promote critical elements such as the care delivery process and clinical problem solving and decision making activities. It also

covers the need to critically scrutinize and modify the conventional wisdom and to suppress “political correctness” that continues to inhibit vital critical inquiry and dialogue that are needed to define issues correctly and make further progress.

Ultimately, relatively uncomplicated and inexpensive strategies have the potential to bring dramatic progress. But there needs to be more willingness to rethink the issues and reconsider current approaches. (*J Am Med Dir Assoc* 2010; 11: 84–91)

Keywords: *Nursing home reform; quality of care; public policy; oversight and regulation of care*

“The beginning of wisdom is found in doubting; by doubting we come to the question, and by seeking we may come upon the truth.”
— Pierre Abeldard

The 3 previous articles in this series have identified key conceptual foundations both for providing high-quality care and for overseeing and trying to improve care quality.^{1–3} This fourth and final article in the series (divided into 2 segments in the current and next month’s issues) applies those discussions to assess current and prospective efforts to improve and reform nursing home care and quality.

THE CURRENT STATE OF IMPROVEMENT EFFORTS

Ongoing Criticism of Nursing Home Performance

Diverse sources continue to allege that nursing homes still need significant improvement, and that many important issues and conditions remain inadequately recognized and managed^{4–7} or, conversely, overtreated.^{8–11} In response, the

nursing home industry contends that, in the past decade, many aspects of nursing home care have improved significantly.¹² Despite numerous challenges, many nursing homes give competent care to long-term residents and postacute patients.

So, what is the truth? If the care is as good as some claim, then why are all these reform efforts needed? And, if it continues to be as bad as others claim, then why would more of the same old approaches be any more beneficial? Which approaches are likely to produce dramatic improvements in the care? How much do current improvement and reform efforts actually support and promote vital changes?

Important Historical Context

Just as a patient’s history helps us understand his or her current condition, examining the history of attempts to reform nursing homes is needed to understand and guide current initiatives.¹³ Previously, much of the criticism of nursing homes and their care has been warranted.

Attempts to reform long-term care have succeeded to some extent.¹⁴ However, in many ways, good intentions have gone astray, including inconsistent and incomplete implementation of pertinent ideas, inaccurate and inappropriate advice, questionable agendas of various interest groups,

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Table 1. Recommended Approaches to Long-Term Care Improvement and Reform

- Reconsider current improvement and reform efforts
- Challenge the conventional wisdom
- Vigorously subdue “political correctness”
- Rethink the research agenda*
- Focus attention on basic care principles and process*
- Suppress reductionism and jurisdiction over care*
- Reconsider notions of competency and expertise*
- Change approaches to assessing and trying to improve quality*
- Develop biologically sound reimbursement*

* To be covered in segment 2 of article 4, March 2010 issue.

considerable resistance or sabotage, and abundant and problematic political opportunism.¹⁵ Often, it is a daunting task for nursing home staff, practitioners, and management to identify which of the numerous alleged solutions are viable and worth pursuing.

Because resources are limited, waste is problematic, and results count, tinkering will not suffice. Thus, this article (both segments) suggests strategies to try to advance efforts to improve and reform nursing homes (Table 1).

RECONSIDER CURRENT IMPROVEMENT AND REFORM EFFORTS

Current efforts to improve and reform nursing home care fall into a few categories (Table 2) and employ diverse strategies (Table 3).¹⁶ Many assessment tools, workforce initiatives, quality-improvement strategies, work groups, campaigns, consumer initiatives (eg, “culture change”), and other activities are operating or are proposed.

Problems and Solutions

Current nursing home reform initiatives are a potpourri of approaches (eg, regulation, enforcement, reimbursement, education and training, workforce, quality measurement, public advocacy) that still lacks a comprehensive problem statement and cohesive strategies. It is inadequate to just aggregate multiple “solutions” and reform agendas (eg, [Agenda A] + [Idea B] + [Campaign C] + [Proposal D] + [Notion E]).

The ability to identify that something is amiss should not be confused with understanding the source of the problem or having appropriate solutions. Relentlessly repeated generalities (eg, need more workers and a more “homelike” environment) rarely provide enduring solutions.

Improvement and reform strategies are analogous to care planning for a patient with complex relationships among causes and consequences. Many topics under consideration for reforms (eg, direct care and professional workforce issues) reflect both symptoms (eg, poor care outcomes, excessive staff

Table 2. Sources of Efforts to Improve and Reform Long-Term Care¹⁶

- Governmental
- Industry groups, associations, and coalitions
- Public and consumer initiatives
- Physician initiatives
- Insurance initiatives
- Nonindustry organizations and associations

Table 3. Categories of Approaches to Try to Improve and Reform Nursing Homes¹⁶

- Strengthen the regulatory process
- Improve information systems for quality monitoring
- Strengthen the caregiving workforce
- Provide consumers with more information
- Strengthen consumer advocacy
- Increase Medicare and Medicaid reimbursement
- Develop and implement practice guidelines, and change the culture of nursing facilities

turnover, low staff and resident satisfaction) and causes (eg, inadequate staff skills, ineffective practitioner participation, inadequate management oversight) of problems. As with patients, the consequences may have multiple causes and various causes may have multiple consequences.

The push to “fix” the problem has often overpowered efforts to correctly define the issues and identify their root causes. As with a patient care plan containing diverse opinions, more interventions are not necessarily better. Some of the proposed approaches are pertinent and meaningful, whereas others may exacerbate the situation or are just a workaround for unresolved, long-standing problems.

In many ways, the overall reform effort resembles trying to redirect a rocket that has veered off course at launch, but without understanding why it happened and the rationale for attempts to correct its course. Careful cause analysis and a cohesive strategy are needed, as guesswork and good intentions alone are likely to exacerbate the problem.

Table 4 compares desirable to problematic improvement and reform efforts.

CHALLENGE THE CONVENTIONAL WISDOM

“Conventional wisdom” is defined as “a belief or set of beliefs that is widely accepted, especially one which may be questionable on close examination.”¹⁷

Nursing home improvement and reform activities continue to be susceptible to the conventional wisdom. But only some of the conventional wisdom (CW) that is driving reform and improvement efforts is accurate and pertinent.

CW impedes genuine improvement and reform in nursing homes when it fails to identify issues correctly, diverts attention and resources from essential problem solving, or leads to inadequate or inappropriate interventions. There is both political and clinical CW (Table 5). Diverse sources of the CW include the provider community, the public, the regulatory and survey environment, and the political process.

Political CW refers to often repeated platitudes about nursing homes, their staff, and the quality of care they provide, as well as to alleged solutions. Clinical CW refers to habitual and widespread approaches to aspects of care that are inconsistent with evidence or fail closer scrutiny. Regrettably, clinical CW is often so widespread that it becomes a false “standard of care.”

The following examples illustrate some of the perils of the political and clinical CW in long-term care.

Table 4. Comparison of Desirable to Problematic Reform Efforts

Desirable Reform Efforts	Problematic Reform Efforts
- Cohesive and compatible	- Fragmented, piecemeal, uncoordinated, inconsistent, incompatible
- Arise from thoughtful discourse that carefully defines issues, causes, and options for intervention	- Focus on solutions based on inadequate attempts to understand the problems and their underlying causes
- Respect precedent and seek and appreciate that many solutions already exist	- Tend to want to reinvent the wheel, owing to failure to review and understand current knowledge and relevant precedents - Incorrectly believe that newer information is more relevant, rather than focusing on its relevance regardless of when it was studied or published
- Promote, support, and are consistent with basic biology and physiology	- Are inconsistent with, or do not support, those factors - Contradict or impede desired processes and practices
- Promote all key elements that are needed for high-quality care - Support and promote common pathways, including technical competence, as the route to multiple desired outcomes, including person-centered care - Promote complete care delivery process	- Promote multiple approaches without recognizing common approaches to multiple desired results - Overlook, downplay, or contradict key clinical and technical elements that are needed for quality care - Inhibit, overlook, or fail to promote the complete care delivery process
- Promote competent care in all aspects, not just those covered by regulations and certain quality measures - Emphasize use of empirical methods to seek, interpret, and act upon evidence, including systematic approaches to cause identification, clinical problem solving, and decision making	- Focus excessively on specific areas of competence without adequately appreciating greater context - Downplay or overlook importance of facility commitment to evidence-based care and appropriate clinical problem-solving and decision-making approaches - Good intentions may count more than competent performance and practice
- Assess both results and relevant underlying processes in proper balance - Provide proper context and valid approaches to measure and identify care quality	- Focus excessively on structure, process, or outcomes without balanced perspective - Pay excessive attention to specific topics or conditions and not enough to important overarching approaches
- Promote care that balances consideration of physical, functional, and psychosocial dimensions - Promote adherence to geriatrics and general medical principles and practices - Avoid "medical" and "social" model fallacies - Promote importance of identifying relevance of medical care to function and quality of life	- Promote unbalanced or superficial approach to individualized care; only consider some relevant issues - Overlook or contradict relevant geriatrics and general medical principles and practices - Excessively preoccupied with false distinctions of "medical" and "social" models of care - Promote, or fail to inhibit, treatment by rote, medical care out of context, and treatment based primarily on authority
- Recognize and promote balanced approach to regulatory compliance in relation to care quality	- Overemphasize regulatory compliance as the basis for delivering care and assessing care quality - Promote survey-related materials (MDS, etc) as the primary or sole basis for care
- Support and promote key management role in overseeing the integrity of the care delivery system and a fully functioning care delivery process	- Fail to recognize or promote vital management role in overseeing and coordinating the facility's care processes and the performance of staff and practitioners

Political CW: The Resident Assessment Instrument's Role in Promoting High-Quality Care

The Resident Assessment Instrument (RAI), including the Minimum Data Set (MDS), was meant to improve on previously haphazard and inadequate assessment approaches and tools. If used as originally intended (a *minimum* data set with basic functional, behavioral, and psychosocial information), the MDS can be helpful in assessing residents/patients and managing their care.

Regrettably, the RAI (including the MDS) has taken on a life of its own. In many nursing homes, it serves as the primary or sole informational basis for care, despite its limitations. The MDS has spawned a new job description (the MDS coordinator, who is only sometimes a true assessment coordinator) and related organizations, as well as countless consultants and advisors who profess to help nursing homes use it to improve—among other things—their care, regulatory compliance, and revenue. Its extensive use has led to

Table 5. *Examples of Conventional Wisdom about Long-Term Care*

Conventional Wisdom	Alternate Perspective
<ul style="list-style-type: none"> - Nursing home “reformers” are above reproach, because they have good intentions 	<ul style="list-style-type: none"> - Alleged “reformers” deserve just as much critical scrutiny as do the facilities, staff, and practitioners providing the care
<ul style="list-style-type: none"> - Reformers are needed because nursing homes have failed to respond adequately to reasonable approaches 	<ul style="list-style-type: none"> - Reformers often react to the symptoms and may not understand the underlying issues or the bigger picture beyond their own agendas, or correctly identify root causes and pertinent solutions
<ul style="list-style-type: none"> - The political and legislative process needs to be active to create more laws and regulations to fix the nursing home problem 	<ul style="list-style-type: none"> - Legislative bodies may not understand the issues in depth or their root causes - Laws and regulations may be an overreaction to the symptoms and rarely address root causes - Legislators may be unduly influenced by relationships and unwarranted or excessive trust in those with specific agendas - There are abundant laws and regulations regarding long-term care, only some of which are helpful - Politicians and legislatures have a mixed record regarding accountability and evenhanded enforcement
<ul style="list-style-type: none"> - Nursing homes need to measure performance related to quality measures 	<ul style="list-style-type: none"> - Measuring quality is a means to an end, not an end in itself - Facilities must be able to interpret and act on the information they obtain - Facilities and their staff and practitioners need to understand how to independently gather, analyze, and act on data
<ul style="list-style-type: none"> - Nursing homes need more staff 	<ul style="list-style-type: none"> - Although a certain minimum level of staffing may be important, it has been problematic to identify a universally applicable level¹⁸⁻²² - Excessive focus on staffing levels tends to overlook or downplay equally critical issues; eg, how facilities use and deploy staff, efficiency of the workplace and the care delivery system, effectiveness of oversight and accountability efforts, and staff qualifications, knowledge, skill, and training - Failure to hire enough capable, functioning staff and to manage existing staff adequately often produces a dysfunctional environment that drives away more capable front-line workers and professionals - The relentless, longstanding drumbeat against nursing homes likely has discouraged many capable individuals from working there
<ul style="list-style-type: none"> - Inadequate enforcement is behind many quality problems in nursing homes - Nursing homes need to be punished more strongly for violations 	<ul style="list-style-type: none"> - Enforcement has been uneven and often ineffective for various reasons, in part because of inadequate identification of root causes and failure or inability to require definitive correction - Politics and advocacy have often interfered with effective enforcement and limited the possibilities for more sensible and definitive corrective actions - Current approaches to enforcement and sanctions do not correlate well with basic principles of targeting consequences effectively to improve performance - Current quality measurement approaches are too limited to identify problematic facilities including underlying causes of their inadequate processes and practices
<ul style="list-style-type: none"> - We need more research in many areas to fix nursing homes 	<ul style="list-style-type: none"> - Research today adds relatively little to existing knowledge about how to provide good care and achieve desirable outcomes - Implementation and application of existing knowledge is problematic and inconsistent
<ul style="list-style-type: none"> - Interdisciplinary teams are effective and essential to high-quality care - The more care given, and the more individuals who are involved in the care, the better - Various disciplines and consultants are essential to the care, to compensate for not enough trained nurses and doctors 	<ul style="list-style-type: none"> - Teams are a means to an end, not an end in themselves - More care does not necessarily mean better care, is often marginally relevant, and may actually result in wasted resources and exposure to avoidable complications - Too many disciplines involved in an individual’s care can be as problematic as too few - Effectiveness of teams depends on whether individuals know what they are doing and have a valid rationale for their recommendations and interventions - Not enough attention is being paid to the financial stakes of disciplines that may give irrelevant services or inappropriate care
<ul style="list-style-type: none"> - Most facilities give good care; there are only a few poor performers 	<ul style="list-style-type: none"> - Some facilities consistently do the right thing in the right way in most or all aspects of care and service - Even in nursing homes with generally good overall performance, many current practices are inconsistent with evidence and do not adhere to principles of clinical problem solving and decision making²³ - A facility’s performance often varies, depending on what aspects of care are being assessed - Quality measures based on regulatory instruments such as the Minimum Data Set are very limited in what they actually assess

many efforts to validate various assessments and conclusions that are based on it.^{24–27}

However, the RAI is admittedly a compromise, based on perceived political realities and on issues that were considered important at the time the OBRA '87 law was passed (eg, overuse of restraints and antipsychotic medications). It emphasizes certain conditions and issues while largely omitting others.¹⁵

As discussed in this series, the MDS (and, for that matter, any fixed data set) is a limited guide to effective clinical decision making, despite considerable tinkering (for example, the MDS 3 and various payment modifications under the Prospective Payment System of reimbursement). It does not take into account information from a detailed, chronological patient history and it provides a limited basis for care planning individuals with active and complex medical conditions (such as those receiving postacute care) or who have multiple relationships between causes and consequences. For example, an analysis of the Resident Assessment Protocols (RAPs), which were developed to guide cause identification and treatment selection, found that none of the RAPs meets the criteria for valid clinical guidelines.²⁸

Meaningful improvement and reform require a more realistic and balanced view of the RAI. Intended for specific purposes, excessive reliance on it and other assessment instruments to guide care and the evaluation of care quality has become problematic. Those with a vested interest in varieties of the RAI (such as the InterRAI,²⁹ other researchers, and those who use it to formulate opinions and conclusions about quality of care) may be reluctant to part with it or to change it substantially. However, it is not going to become any more viable, and its continued inappropriate use will not help improve long-term care much further or provide a basis for biologically sound reimbursement.³⁰ Regrettably, responses to such concerns are not necessarily substantive and may simply try to disparage the critics.³¹

Political CW: The Alleged Virtues of Interdisciplinary Teams

A key tenet of geriatrics and postacute and chronic care is to use individuals of multiple disciplines to provide care. This approach—referred to variably as interdisciplinary care, interdisciplinary care teams, and interdisciplinary collaboration—has proven beneficial.³²

As discussed in this series, teams are a means to an end, not an end in themselves. The benefit of teams depends heavily on the training, knowledge, qualifications, and performance of team members.

Improper realization of the interdisciplinary team approach may distort its purpose and impede care quality improvement. For example, the ability to deliver services and treatments (eg, perform procedures) does not necessarily imply the ability to independently perform other important steps in the care delivery process; eg, identify causes of anorexia and weight loss or diagnose and choose appropriate interventions for behavioral disorders.

Furthermore, the team approach can be redundant or inefficient. Having more participants does not necessarily improve the care. For example, many nursing homes have separate “teams” for issues such as weight loss, skin care, falling, and pain. However, all conditions and symptoms need comparable clinical problem-solving and decision-making processes. Multiple problems often have common causes. Therefore, it is possible—and compatible with human physiology—to have a single comprehensive collaborative review for individual patients, to consider all their conditions, symptoms, and risk factors simultaneously.

Similarly, more interventions do not necessarily produce better results. A single intervention targeted at a root cause (eg, hypothyroidism or medication-related adverse consequences) is often preferable to multiple symptomatic or impertinent approaches. Ironically, there is ample evidence that those receiving more care may simply get more unnecessary treatment or be exposed to more complications.^{33–36} Therefore, it is inadvisable to appraise facility quality or performance based on how much a facility does or how many disciplines are involved in the care of a given patient.

Genuine reform requires a careful reexamination of how nursing homes actually implement the interdisciplinary team approach.³ Such scrutiny is likely to show that key team members are often missing, may be allowed to make decisions that exceed their knowledge and training, and often cannot explain appropriately the rationale for identifying specific causes or selecting specific treatments.² These and other deficits contribute to redundant, irrelevant, or problematic care.

Clinical CW: The Alleged Virtues of Antibiotics

Although many long-term care residents/patients have infections, colonization (the presence of bacteria in the absence of clinical signs and symptoms of illness) is also very common.³⁷ Antibiotics are commonly prescribed in nursing homes for diverse patient symptoms and test results (eg, fever, change in function or behavior, elevated white blood cell count).

For several decades, concerns have existed about the use of antibiotics in nursing homes. Antibiotics are expensive, often cause significant side effects or complications (eg, anorexia, diarrhea, colitis), and can precipitate life-threatening medication interactions (eg, antibiotics and warfarin). Increasing resistance to antimicrobials threatens public health and safety.³⁸

There are specific criteria for using antibiotics so that they are more likely to be beneficial and not harmful.³⁹ Although empirical antibiotic treatment is often indicated, it is generally inadvisable to use antibiotics to treat asymptomatic colonization.^{40,41}

Regrettably, misdiagnosis of urinary tract infections and inappropriate antibiotic treatment based on mistakenly linking symptoms to colonization (including asymptomatic bacteriuria) is all too common.⁴² Although urosepsis and related delirium may require antibiotic therapy, the routine use of antibiotics for individuals with behavior symptoms such as physical or verbal aggression is unwarranted.⁴³

Thus, widespread issues related to antibiotic use persist despite enduring evidence that indiscriminate antibiotic use is problematic and that there are ways to reduce problematic utilization.⁴⁴ This is a prominent example of the need for reform efforts to identify and contest common misguided practices that have unfortunately become erroneous de facto care standards.

Clinical CW: The Alleged Evils of Antipsychotic Medications

A major driving force behind nursing home reform efforts in the 1980s was valid concerns about the inappropriate use of antipsychotic medications and related serious adverse consequences.⁴⁵

Concern about inappropriate use of all medications is warranted.⁴⁶ Regrettably, however, excessive preoccupation with antipsychotic medications has diverted attention from even more basic considerations, such as whether nursing home staff, practitioners, and consultants know how to assess and manage behavioral issues correctly.

Aggressive treatment of acute psychosis can be beneficial.⁴⁷ Of interest, at least one study found greater use of antipsychotic medications in special dementia care units (SCUs) than in non-SCU settings.⁴⁸

The CW about antipsychotic medications tends to obscure major issues related to the assessment and management of mood and behavior disturbances. Nursing home staff and physicians often bypass meaningful details about behavior (eg, onset, duration, frequency, intensity). Many nursing homes push for psychiatric consultations for changed or problematic behavior. As a result of an inadequate search for medical causes of behavioral symptoms such as combativeness, restlessness, and physical aggression, underlying correctable causes (eg, fluid and electrolyte imbalance, hypothyroidism, medication-related complications) may be missed.⁴⁹ Drug treatment of behavioral and mood disturbances is often based on random guesswork, without a valid (ie, consistent with the literature and with facts about the patient) evidence-based clinical rationale.

Inadequate understanding and assessment of behavior, pressure to suppress behavior symptoms and elevate mood, and injudicious use of psychiatric consultations all have simply resulted in a new generation of equally or more problematic medication-related issues (eg, falls, anorexia, and paradoxically increased confusion or lethargy) compared with traditional ones (eg, tardive dyskinesia). Thus, genuine reform requires much more attention to the issues underlying inappropriate medication use, including the care delivery process and related clinical problem-solving and decision-making activities.

Clinical CW: Pressure Ulcer Prevention and Treatment

Pressure ulcers are yet another issue in long-term care that has aroused strong emotions and fervent efforts at improvement and reform. Although the prevention and management of pressure-related wounds has improved overall in nursing homes,⁵⁰ it remains problematic in other settings, and still

in some nursing homes. Yet, the topic continues to be influenced by mythology and misinformation.

For example, the CW heavily promotes the importance of nutrition to prevent and heal pressure ulcers. Many nursing homes routinely have extensive dietician interventions (including routine nutritional supplements) for all wounds, and the public seems to believe that nutritional supplementation can help cure or prevent pressure ulcers. The CW also promotes the idea that all patients with pressure ulcers have increased energy expenditure.

However, the evidence often does not support the CW. Whereas impaired nutrition is a risk factor for skin breakdown, there is a rather limited place for nutrition in preventing and healing pressure ulcers.⁵¹ Although patients with low calorie and protein intake are more likely to develop pressure ulcers, increasing such intake has limited value to prevent or to help heal pressure ulcers.⁵² A major study identified that some aspects of nutritional support may promote healing, but only in those with Stage 3 and 4 pressure ulcers.⁵³

In addition, a review article of more than 100 available randomized controlled trials on pressure ulcer care concluded that there is little valid evidence to support most of the special and adjunctive therapies that are widely used to treat pressure ulcers, including routine nutritional supplementation. Not surprisingly, the review found that some of the strongest evidence favored treating patients' medical comorbidities and other medical issues not related to the skin.⁵⁴

Despite such evidence, pressure ulcer care continues to be haunted by myths and dogma.⁵⁵ Physicians and nurses often just defer to wound specialists and pressure ulcer treatment teams. There is increasing use of electrical stimulation, diathermy, wound vacuums, and other marginal interventions that—at best—should be reserved only for selected cases.

Poor personal, medical, and skin care of at-risk individuals in diverse settings—especially hospitals—remains all too common throughout the country, despite major collaborative efforts and proposed financial penalties. The fact that these initiatives have to be undertaken at all says much about the widespread and longstanding inconsistencies of basic care in diverse settings. Genuine reform requires addressing basic care failures in all settings, including the failure to take care of the whole patient in a coordinated fashion.

Clinical CW: The Alleged Role of Rehabilitation

Rehabilitation is a central tenet of geriatrics and other aspects of health care. But, as discussed earlier in this series, medical stability and illness have a major impact on function. Patients allegedly sent to nursing homes “for rehabilitation” commonly have multiple active medical comorbidities and risk factors.⁵⁶ However, physical, occupational, and speech therapies mostly address impairments, not their underlying causes. Therefore, effective patient-centered rehabilitation must simultaneously identify and address the causes of impairment and disability, as well as a patient's other risk factors and syndromes such as falling and delirium.⁵⁷

However, in long-term care, the idea of rehabilitation has commonly come to be equated with the provision of therapy services (physical, occupational, and speech). Rehabilitation

has often become more discipline-centered than patient-centered. Hospitals, managed care payers, and nursing homes often label admissions as being “sent for rehab”; therapists may dominate utilization review meetings (primarily because of peculiarities of the payment system); medical causes of impaired function may not be sought or addressed effectively; and discharges may be determined primarily based on the status of therapies. Although therapists know more than other staff and practitioners about therapy modalities, they are not generally trained to identify underlying medical causes of delays in meeting, or failure to meet, functional goals.

Changing the Conventional Wisdom

Many common practices in—and beliefs about—long-term care are unfounded or misleading. Genuine nursing home reform and improvement requires rethinking and undoing much of the conventional wisdom that governs long-term care practice and public attitudes toward nursing homes. The CW often prevails because it serves diverse agendas; eg, permitting unwarranted clinical decision-making authority or political and financial advantage in promoting various approaches.

VIGOROUSLY SUBDUED POLITICAL CORRECTNESS

Politics is the means by which societies and social institutions try to accommodate and reconcile diverse needs, desires, and perspectives. However, politics can be both constructive and problematic.

“Political correctness” (PC) is a term used to identify situations where certain beliefs, words, attitudes, or actions are preferentially promoted or expected, while others are avoided, sanctioned, or not openly discussed. It operates at all levels, eg, within social institutions, facilities, and organizations. As with many things in life, political correctness often becomes merely a rationalization for maintaining the status quo and gaining personal advantage.

PC is a tactic that is commonly used to restrict open discussion, distort ideas and evidence, inhibit accountability, or fail to identify and resolve problems. In nursing homes, for example, PC may occur when administrators, owners, or management fail to allow open discussion about the root causes of facility care problems or fail to identify or restrict those who are practicing beyond the scope of their knowledge and training.

Because nursing homes overall have had such a bad reputation (and have not been given credit for all that they have done), critics and reformers may get attention and credibility regardless of the accuracy of their criticisms, the clarity of their problem definition and cause identification, their relevant experience in actually running a facility or in delivering care, or the pertinence of their recommendations. This includes politicians who use the public forum to appear to be on the side of reform and others (eg, hospitals) that benefit from having a convenient scapegoat to divert attention from their own shortcomings. However, while political interventions, laws, and regulations intended to improve nursing home care can be helpful,

they may be problematic and often have little or no meaningful impact on root causes.

Ultimately, genuine improvement and reform require a much more open and balanced public dialogue about long-term care’s virtues and weaknesses as well as the appropriateness of proposed “solutions” to reform it. In nursing homes and in the public arena, it is reasonable and necessary to challenge alleged “experts” to demonstrate that they can actually care for complex patients, run a nursing home, and identify and address causes of issues in actual facilities. In nursing homes, it is critical to oversee staff and practitioners and often necessary to stop some of them from doing dangerous and inappropriate things to patients, without fearing repercussions or political interference with accountability.

Next month, the second segment of this final article in the series will consider additional meaningful improvement approaches, including the following: rethinking the research agenda, reinforcing basic care principles and processes, suppressing reductionism and jurisdiction over care, reconsidering notions of competency and expertise, changing approaches to assessing and trying to improve quality, and developing biologically sound reimbursement.

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The Basis for Improving and Reforming Long-Term Care. Part 4: Identifying Meaningful Improvement Approaches (Segment 2)

Steven A. Levenson, MD, CMD

While many aspects of nursing home care have improved over time, numerous issues persist. Presently, a potpourri of approaches and a push to “fix” the problem have overshadowed efforts to correctly define the problems and identify their diverse causes.

This fourth and final article in the series (divided between last month’s issue and this one) recommends strategies to make sense of improvement and reform efforts. This month’s concluding segment covers additional proposed approaches. Despite the challenges of the current environment, all of the proposed strategies could potentially be applied with little or no delay.

Despite having brought vast increases in knowledge, the research effort may be losing its traction as a formidable force for meaningful change. It is necessary to rethink the questions being asked and the scope of answers being sought. A shift to overcoming implementation challenges is needed.

In addition, it is essential to address issues of jurisdiction (the apparent “ownership” of assessment and decision making over patient problems or body parts) and reductionism (the excessive management of these issues and problems without proper context) that result in fragmented and problematic care. Issues

of knowledge and skill also need to be addressed, with greater emphasis on key generic and technical competencies of staff and practitioners, in addition to factual knowledge.

There is a need to rethink the approach to measuring performance and trying to improve quality of care and services. There are significant limits to trying to use quality measures to improve outcomes and performance. Ultimately, vast improvement is needed in applying care principles and practices, independent of regulatory sources. Reimbursement needs to be revamped so that it helps promote care that is consistent with human biology and other key concepts.

Finally, improving long-term care will require a coordinated societal effort. All social institutions and health care settings need to address their own shortcomings and contribute constructively in order to improve and reform nursing homes and health care generally. It is not helpful to scapegoat nursing homes for what are far more universal problems of care, practice, and performance. (**J Am Med Dir Assoc 2010; 11: 161–170**)

Keywords: Nursing home reform; quality of care; public policy; oversight and regulation of care

“[Humans] at some time are masters of their fates. The fault . . . is not in our stars, but in ourselves . . .” William Shakespeare / Julius Caesar, Act I

The 3 previous articles in this series have identified key conceptual foundations both for providing high quality care and for overseeing and trying to improve care quality.^{1–3}

Along with the first segment,⁴ this second segment of Part 4 applies those discussions to assess current and prospective efforts to improve and reform nursing home care and quality (Table 1).

RETHINK THE RESEARCH AGENDA

Knowledge and Its Effective Implementation

Decades of research in geriatrics and chronic care have contributed much useful information. As discussed in this series² and elsewhere, there is a huge gap between knowing

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Table 1. Recommended Approaches to Long-Term Care Improvement and Reform

Recommended Approaches	Key Elements
- Reconsider current improvement and reform efforts *	- Evaluate whether and to what extent various reform efforts are compatible with key philosophical and scientific principles, ¹ including evidence-based care and the full care delivery process ^{2,3}
- Challenge the conventional wisdom *	- Focus reform efforts more on defining the issues correctly and identifying root causes and cohesive strategies, as a foundation for tailoring reform strategies ⁴ - Seek and use available evidence to assess the conventional wisdom, regardless of its source ^{2,3} - Identify and contest common practices that have become habitual and widespread, or that have become undesirable <i>de facto</i> “standards” of care despite being inconsistent with evidence ^{2,3}
- Vigorously subdue “political correctness” *	- Broaden the dialogue about the strengths and weaknesses of long-term care and the scope of proposals to improve and reform it ^{1,4} - Reinforce accountability of all disciplines for proper performance and practice, at all levels - Contest incorrect and misleading advice and instructions about care practices and performance improvement, regardless of the source - Focus on identifying and incorporating valid existing evidence into practices of all disciplines ² - Contest efforts to rationalize inappropriate practice and performance ^{3,4} - Promote vital critical scrutiny of all alleged reformers and their recommendations ^{1,4}
- Rethink the research agenda	- Shift balance towards implementing existing knowledge, including careful analysis of failures in implementation - Recognize precedents, including existing knowledge, that provide enduring and universal information and evidence - Consider the value of more pragmatic approaches to influencing and improving performance - Broaden the scope of research hypotheses and questions - Redirect funding towards those who rethink the traditional issues and away from redundant and narrow approaches that reiterate the conventional wisdom - Reexamine the conflicts of interest that perpetuate the conventional wisdom and impede free inquiry and dialogue
- Focus attention on basic care principles and processes	- Return to the roots of primary care medicine and nursing - Vigorously promote (and do not inhibit) the care delivery process and effective clinical problem solving and decision making ^{2,3} - Move away from prescriptions and procedures as an inadequate substitute for dialogue and the care delivery process - Evaluate the impact of nursing home improvement and reform initiatives and activities on proper care processes and practices - Modify or stop alleged improvement and reform efforts that overlook, downplay, or circumvent the full care process
- Suppress reductionism and jurisdiction over care	- Hold advisers, consultants, and reformers more responsible for giving inadequate and inappropriate advice that results in ineffective and problematic care - In all settings, focus on applying evidence and managing discrete issues in the proper context of the entire patient (phronesis) ² - Ensure that care is consistent with basic physiological principles, regardless of who is giving it ¹ - Inhibit various disciplines and specialties from claiming primary or exclusive rights to diagnose and treat specific patient problems and body parts, regardless of their understanding and qualifications ^{1,3} - Faithfully implement the correct interdisciplinary team approach to care, requiring that all participants play the proper roles and practice within the scope of their competencies and knowledge ^{2,3}
- Reconsider notions of competency and expertise	- Reconsider the notion of expertise and the criteria for determining who is an expert ² - Distinguish genuine clinical and management expertise from less desirable variants such as “topic” experts and “regulatory compliance” experts ² - Rethink current proposed strategies and core competencies for training current and future work force - Focus public education on improving key generic competencies that are critical to health care; eg, ability to report observations and seek causes of problems - Shift health care professional education to include concepts such as managing syndromes and handling patients with multiple coexisting causes ^{1,2} - Shift the approaches to training and educating current nursing home staff to include much more real-time, case-based training and oversight

(Continued)

Table 1. Continued

Recommended Approaches	Key Elements
- Change approaches to assessing, and trying to improve, quality	<ul style="list-style-type: none">- Find a better balance between assessing outcomes and underlying processes and practices- Emphasize training individuals and facilities to identify and address quality issues without excessive reliance on outside sources and quality measures- Recognize the limits of measurement in improving performance, including limits in identifying and correcting root causes of issues- Find a proper balance between measuring things and improving underlying processes and practices- Recognize the limits of using aggregate outcomes to judge care quality for individuals- Recognize the limits of using fixed data sets (such as the MDS) as a basis for measuring quality and assessing performance
- Develop biologically sound reimbursement	<ul style="list-style-type: none">- Recognize the key role that reimbursement plays in influencing care processes, practices, and quality- Modify reimbursement so that it respects biology and promotes, rather than inhibits, the care delivery process and proper clinical problem solving and decision making- Limit expectations for pay-for-performance to help correct quality, performance, or cost issues

* Discussed in February 2009 issue.⁴

something and being able to apply that knowledge in specific situations.

Clearly, just establishing an evidence basis for care does not necessarily improve that care.⁵ It is noteworthy that the United States has spent billions of dollars on medical research (including that related to care of the chronically ill and elderly) and then pays billions of additional dollars for care that fails to apply the evidence from research.⁶

Research is a means to an end, not an end in itself. The newest or latest research is not necessarily more valid or more useful than earlier studies. Current geriatric and gerontologic research is often redundant and esoteric.⁷ Many published studies end by commenting on the need for more research on a topic, without necessarily considering whether there might simply be a need to improve the application of existing knowledge.

We already know how to provide, oversee, and maintain high quality postacute and long-term nursing home care. Many nursing homes already give such care and there are many competent staff and practitioners. It is possible to identify why some facilities, staff, and practitioners succeed while others do not.

Thus, desirable nursing home improvement and reform activities identify and respect existing knowledge. They do not simply promote doing more research without considering whether existing knowledge has been applied effectively. They emphasize enduring and universal clinical and management⁸ principles such as problem solving and linking causes to one another as well as to consequences.

For example, issues related to medications, including serious adverse consequences, have been identified for decades.^{9,10} And yet, while researchers keep studying the topic,¹¹⁻¹³ the problem of adverse medication consequences remains widespread and perhaps worse than ever.

Instead of continuing to study what is overtreated and undertreated in nursing home patients, the real issue is whether there is optimal medication intervention for individual patients based on effective clinical problem solving and deci-

sion making, via the care delivery process.¹⁴⁻¹⁷ Regrettably, facilities, practitioners, researchers, and surveyors may ignore existing information (eg, surveyor guidance within federal OBRA regulations¹⁸) that already bridges research and clinical practice.

Thus, it may be time to think differently about the utility of research and its attempted translation into effective practice and high quality performance. As with the care of patients, the real issues relate to the ability to identify and apply existing knowledge to specific circumstances, by combining knowledge with detailed understanding of the clinical situation to be addressed.

There may be value in more pragmatic approaches outside of the research arena to assessing and improving quality, including multifactorial designs, tracking effects over time, and utilizing detailed process knowledge.¹⁹ However, the successful implementation of these approaches varies.^{20,21}

Questions and Answers

In all aspects of life, the answers we get depend on the questions we ask. For example, if a lamp keeps flickering despite replacing several light bulbs, it would be appropriate to consider whether the lamp wiring is defective before replacing more light bulbs.

Similarly, if researchers overlook certain hypotheses, then the results will likely reflect only limited predetermined alternatives. For example, many researchers continue to identify depression as underdiagnosed or undertreated, even though there are many legitimate concerns about the diagnosis of depression and the use of antidepressants.²² Thus, predispositions may inhibit broader consideration of whether depression has become incorrectly or excessively diagnosed²³ (eg, confused with apathy,^{24,25} lethargy, or medication side effects), medication interventions have become overused,^{26,27} or adverse consequences related to antidepressants have been downplayed or ignored.²⁸ Similarly, problems related to end-of-life care are often related to failed processes (eg, determining decision making capacity and correctly defining

and communicating medical issues) and inadequate oversight and accountability related to those processes,²⁹ not just to inadequate knowledge of palliative care or the need for more research about end-of-life issues.

The Need for Context

Research-related interventions may be developed and tested under optimal conditions, which often differ from real-world conditions, and they are often highly standardized, intensive, implemented by trained research staff, and in a single setting.^{30,31} Although disease-specific guidelines based on research findings can be used effectively,³² they can be problematic unless they are applied in the proper context of a patient's situation, instead of to isolated medical symptoms or conditions.^{33–35} Furthermore, too much information and advice can confuse facilities and practitioners, contributing to failures to apply information or use it properly.³⁶

Thus, genuine improvement and reform of nursing homes requires rethinking current research attitudes and approaches. Funding sources need to expand the scope of issues they are willing to fund, and should reconsider continuing to fund endless reiteration of the same topics and hypotheses, including those that embrace the conventional wisdom.

The research community should expand its hypotheses to include meaningful but largely overlooked issues identified in this series and elsewhere (Table 2), improve its search for root causes, ask far more than the usual and customary questions, focus on basic challenges of implementation, and seek more basic real-world solutions. It also has a duty to fully reveal the predispositions and conflicts of interest that may taint those who try to discredit critics and to inhibit fair dialogue and inquiry.

FOCUS ATTENTION ON BASIC CARE PRINCIPLES AND PROCESSES

Good care results from painstaking detective work by people who know where and how to look and how to process and interpret their findings correctly. No health care setting has a greater need than does the nursing home for basic competencies such as the ability to observe, describe, and document a patient's symptoms.

As discussed in this series,^{1–3} genuine reform and improvement requires a return to the roots of primary care medicine and nursing, based on faithful adherence to the care delivery process by clinicians and nonclinicians alike. It has been observed that doctors and patients need to move away from prescriptions and procedures as surrogates for real health care and real dialogue.³⁷

Regrettably, care process is often weak in the very settings where it is so critical. Diagnostic inadequacies are being recognized as a basic patient safety issue.³⁸ In postacute and long-term care patients, a few dozen common medical conditions occur repeatedly in various combinations. Thus, while nursing homes may not need to do highly complex diagnostic evaluations, they must improve on often speculative and rudimentary approaches to basic cause identification of diverse symptoms.

Nursing home management should recognize the many important implications of an effective care delivery process and the dangers of weak and haphazard approaches. Nursing home staff and practitioners need to minimize diagnostic fallacies and inhibit premature responses to the chief complaint (eg, immediate lab testing or dietary interventions for weight loss, immediate medication for insomnia, immediate urine culture and psychiatric consultation for problematic behavior).

Nursing homes face various challenges (eg, difficulty in getting a symptom history directly from patients, limited scope of available diagnostic services) in trying to provide safe and effective care. Thus, they need strong care systems to compensate for these challenges. Ironically, as discussed in this series, there are many barriers to the effective deployment of these critical skills and there is still a lot of bad and misleading advice about how to identify and manage common symptoms and conditions.

Increasingly, even federal guidance to surveyors as part of the OBRA '87 regulations has incorporated the idea that the basis for interventions (the "why") matters as much as the actual interventions (the "what"). However, nursing home surveyors and others who try to oversee and evaluate care, may still pay too little attention to the "why" and too much to the "what" and to the results.

Therefore, every reform and improvement initiative needs careful scrutiny for its impact on correct clinical thinking and the care delivery process. At the very least, reform and improvement activities must not inhibit or contradict these key principles; eg by giving advice that shortchanges the care delivery process. More accountability and consequences are needed for consultants and reformers, including alleged experts, who give inadequate and incorrect instruction and advice that results in problematic care.

SUPPRESS REDUCTIONISM AND JURISDICTION OVER CARE

Genuine reform requires reversing the trend to excessive reductionism and jurisdiction over aspects of long-term care.³⁹ Reductionism refers to the misconception that aggregating the separate management of symptoms, risks, and medical conditions is somehow the same as managing the whole patient in the proper context.⁴⁰

Jurisdiction refers to the notion that various disciplines, consultants, specialties, or settings have rights of supremacy to diagnose and treat certain symptoms, risk factors, conditions, or parts of the body (eg, pain, swallowing difficulties, weight loss, impaired function, end-of-life situations), regardless of the context or their qualifications. As discussed in this series, every conclusion and patient intervention needs a proper context, with a qualified practitioner to oversee the context of care.⁴¹ Excessive jurisdiction (eg, to the degree that is common in many nursing homes) is biologically unsound and undermines proper clinical problem solving and decision making.

None of the many people who help get a commercial airplane flight off the ground (eg, mechanics, flight attendants) are more qualified than the pilot to fly the plane, even though each one probably knows more than the pilot does about their

Table 2. *Examples of Meaningful Research Questions and Potential Hypotheses*

Potential Research Questions	Hypotheses Worth Considering Further
<ul style="list-style-type: none">- What is the impact of proper and improper care process and clinical problem solving and decision making on outcomes (including quality of life and quality of care)?	<ul style="list-style-type: none">- Proper task performance related to the care delivery process is essential to improving and sustaining high-quality care- Lapses in task performance related to the care delivery process, including faulty clinical problem solving and decision making, underlie many substantial care and quality issues in long-term care- Failures of cause identification (including diagnostic fallacies) are common and are a major source of improper care and avoidable negative outcomes
<ul style="list-style-type: none">- What are the levels of competency and expertise among nursing home staff and practitioners, relative to understanding and correctly applying the care delivery process?- How much can nursing homes compensate for, or improve upon, knowledge and skill deficits in their staff and licensed professionals and practitioners?	<ul style="list-style-type: none">- Only some staff and practitioners in nursing homes know how to correctly perform the basic functions and tasks (eg, observe, document, report) required of them related to the full care delivery process- There are limits to the ability of any nursing home to provide high quality care unless they start with more individuals who already have a certain level of basic knowledge and skills
<ul style="list-style-type: none">- Are certain vital issues with major impact on outcomes being overlooked or downplayed?	<ul style="list-style-type: none">- Nursing home staff and practitioners, as well as regulatory agencies, commonly overlook critical medication-related issues that have major impact on function and quality of life
<ul style="list-style-type: none">- Is existing, reliable clinical evidence and current knowledge about care process being used correctly and consistently?	<ul style="list-style-type: none">- Nursing homes are often advised or told to do things that contradict the evidence about providing complex care correctly- Current evidence is often not applied because staff and practitioners shortchange critical parts of the care delivery process
<ul style="list-style-type: none">- Do nursing homes have criteria for adequate and appropriate performance, and do they hold their staff and licensed professionals and practitioners accountable for their performance and practice?	<ul style="list-style-type: none">- Poor nursing home performance is often due to significant failures to hold staff, practitioners, and management accountable for their performance and practices, including appropriate care decision making by qualified individuals of diverse disciplines
<ul style="list-style-type: none">- Do treatment and care decisions have a valid clinical rationale, based on matching clinical evidence to patient-specific evidence?	<ul style="list-style-type: none">- The rationale for care decisions is often missing or invalid, or is incompatible with patient-specific evidence (eg, incorrect conclusions about causes or improper treatment selection)- Much of the care in nursing homes is based on guesswork and rote interventions that may be irrelevant or problematic
<ul style="list-style-type: none">- To what extent do inappropriate practices and inadequate care in other settings affect the outcomes of patients who are sent to nursing homes for ongoing postacute or long-term care?	<ul style="list-style-type: none">- Nursing homes inherit patients with a broad spectrum of clinical problems and major risks who often have received inadequate or inappropriate care prior to transfer- Inadequate or inappropriate care prior to transfer has a major impact on the ability of nursing homes to achieve specific results and avoid preventable complications
<ul style="list-style-type: none">- To what extent do organizational and operational issues impact care quality and outcomes	<ul style="list-style-type: none">- For better or worse, facility management and care systems profoundly influence the care delivery process and the provision of appropriate, safe, and effective care

part of the process. Similarly, neither the ability to deliver treatments nor in-depth knowledge about one aspect of care or one part of the body necessarily qualify someone to manage conditions or problems in the context of the whole patient.

Genuine improvement and reform require the proper interdisciplinary application of the care delivery process. Key elements for effective interdisciplinary teams have been identified, including a shared purpose and goal, clear roles and responsibilities, appropriate contributions from team

members, cooperative and coordinated activities, and trust among members.⁴²

Capable staff and practitioners willingly explain the clinical evidence basis for their conclusions and decisions, take responsibility for results (including potentially avoidable negative outcomes), and can analyze and recover from unexpected or avoidable complications. In stark contrast, others cannot or do not provide a clinically valid basis for their conclusions or recommendations, or acknowledge responsibility for contributing to avoidable negative outcomes (eg,

recommending inappropriate treatments that result in complications, based on incorrect conclusions about causation).

Current and future shortages of qualified staff and practitioners do not justify inappropriate practices that have damaging consequences. “Political correctness” must not prevent holding everyone accountable for their performance and practices, including setting appropriate limits on clinical decision making prerogatives.

RECONSIDER NOTIONS OF COMPETENCY AND EXPERTISE

Nursing homes need direct care staff and practitioners who can do the basic things discussed in this series; eg, follow directions, link causes and consequences correctly and consistently, and apply pertinent knowledge to real-life situations (Table 3).^{43–45} Skilled individuals are needed to guide, train, and oversee them.

Unfortunately, there is a shortage of both the direct care work force and professionals and practitioners (including geriatricians and others trained in geriatrics approaches). To try to remedy this, various organizations and task forces have proposed expanding and improving funding for training programs.

There are also efforts to identify and address core competencies for the professional and direct care work force.^{46,47} For example, it has been suggested that more physicians be certified specifically to provide care in nursing homes.⁴⁸

It could take many years, or even decades, to educate and train enough additional staff and practitioners adequately. However, while awaiting these longer-term solutions, much more could be done to improve the capabilities and performance of existing staff and practitioners, and the clinical environment in which they function.

There are diverse reasons for desirable and inadequate performance of nursing home staff and practitioners. For example, some problematic physicians are deficient in their knowledge, while others are deficient in basic clinical problem solving and decision making skills, and still others fail, for whatever reasons, to apply their knowledge effectively. Effective reform efforts must address these diverse underlying issues and their root causes.

Functions and Competencies

Genuine improvement and reform require rethinking key strategies about what constitutes competency and “expertise” for the future work force. Topical knowledge (eg, nursing home regulations, concepts of aging, principles of pain management) is important. However, each topic must be taught in the proper context; eg, how common processes apply across topics and how diverse symptoms may have multiple causes.

For example, knowing a lot about the topic of pain does not make someone an expert on managing pain in a patient with vague symptoms and various coexisting conditions.^{2,3} Knowledge of regulations and related requirements may facilitate survey compliance, but can only help to a limited extent to provide competent care or to teach key care-related competencies.

Instead, the key to enduring and widespread improvement is to clarify individual staff and practitioner functions and to emphasize competent performance of tasks related to the care

Table 3. Critical Generic Competencies Needed in the Long-Term Care Workforce

-
- Observe and report and document observations
 - Collect and organize information and examine evidence
 - Provide a chronological story of events in an orderly fashion
 - Reason inductively and deductively
 - Formulate hypotheses
 - Draw conclusions (including providing the rationale for those conclusions)
 - Solve problems
 - Seek and identify causation
 - Respond effectively to questions requiring detailed answers
 - Deal with multiple simultaneous causes and consequences of a clinical problem or situation
 - Follow instructions and procedures
 - Recognize the limits of personal knowledge and skills
-

delivery process (Figure 1). For example, observers and information gatherers should be able to do an equally capable job of gathering information whether the issue is falling, pain, weight loss, or problematic behavior. Higher skill levels (such as those expected of health care practitioners) involve more extensive capabilities in performing more complex tasks (eg, performing a detailed physical exam, doing medical procedures, identifying multiple causes of symptoms).⁴⁹

Additionally, health professional education for all disciplines should emphasize training in the approaches and philosophies that geriatrics represents—not just geriatrics as the care of frail older individuals. For example, greater emphasis is needed in medical education and training on managing syndromes (eg, falling, incontinence, anorexia) in those of any age and on providing care in context, instead of just diagnosing and treating diseases by organ systems.⁵⁰

Despite assertions to the contrary,⁴⁶ little additional research is needed to figure all this out. Instead, most competencies can be derived from understanding the roles, functions, and tasks for various individuals and disciplines in the care delivery process and related clinical problem solving and decision making; eg, making observations, seeking and linking causes, and preventing and resolving complications. For example, both individuals^{51–53} and organizations (eg, the American Medical Directors Association) have identified key roles, functions, and tasks for medical directors and physicians in enough detail to enable identification of required skills and competencies.

No matter how good their training and education activities, and no matter how enlightened their management, nursing homes can only do so much to compensate for the

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

Fig. 1. The Cascade of Competent Care

weaknesses of their direct care and professional workforces. Thus, genuine improvement and reform requires a combined approach; eg, hire more individuals who already have the necessary skills, improve current facility approaches to education and training, and improve general public education and training in basic human competencies.

To this end, much more could be done in public education and in health professional education and training to prepare the workforce in these basic generic skills; eg, teach people how to organize and present complex information and to make and document observations effectively. None of these skills are specific to health care, although their application in health care settings often requires greater depth and scope of knowledge and performance.

Thinking about on-the-job education and training must shift, as well. There is limited proven effectiveness in the typical nursing home practice of using inservices to convey information and improve performance. Case-based training and learning, including direct oversight of actual performance on the job, is essential both before and while working in a nursing home.

CHANGE APPROACHES TO ASSESSING, AND TRYING TO IMPROVE, QUALITY

As discussed in this series, improving and reforming long-term care requires rethinking current approaches to assessing and improving quality. Some of the current approaches are pertinent, while others have significant limits. Some current approaches may actually impede definitive improvement in critical areas.

High quality care has certain attributes (eg, safe, effective, and so forth) and is achieved primarily by consistently doing the right thing in the right way for individual patients. This series has considered the meaning of, and criteria for, the right thing and the right way.

Quality improvement principles and practices are universal and enduring. Quality improvement activities try to influence human performance by giving feedback (eg, calculating batting averages for baseball players or critiquing a musician's recital) over time relative to the individual as well as to others.

Nursing homes vary widely in adopting standard quality improvement approaches. All facilities receive at least some external data; eg, quality indicator reports based on MDS data. Some nursing homes also routinely collect and analyze their own data and try to improve diverse aspects of care and services, while others have few, if any, such processes.

For genuine improvement and reform to occur, facilities must be able to successfully perform their own quality improvement activities (eg, gather and interpret data, identify root causes, and act on the information) without having to depend primarily or solely on external feedback, including quality measures related to the Resident Assessment Instrument (RAI), just as they should be able to manage patients without depending excessively on the RAI.

Limits of Measurement

Numerous efforts are being made to try to improve quality by collecting data, based on quality indicators and measures,

and giving feedback to nursing homes and practitioners about their performance relative to themselves and to others. However, not everything being measured is meaningful, and only some meaningful things are being measured.

Quality measurement and quality indicators are means to an end, not ends in themselves. For example, efforts to use data collection tools (eg, the MDS) and quality measures to address specific conditions that are of concern, such as pain and depression, may lead to other undesirable consequences (eg, harm related to diagnostic fallacies) and overlooking other important issues that are not covered by meaningful quality measures (eg, evaluation and management of anemia, specific medication-related complications).²

Balancing Outcomes and Process Emphases

In the 1980s, reform efforts were driven in part by the concern that surveys had previously relied too much on paper compliance and on assessing the capacity of facilities to provide care, instead of the actual provision of care and its impact on the residents. A goal of the 1986 Institute of Medicine (IOM) recommendation on uniform assessment was to develop quality indicators based on data about residents that could be used to generate resident-centered measures of process and outcome quality.⁵⁴

Unfortunately, misunderstandings about "process" may have led to overemphasizing outcomes at the expense of critical care processes. Care process compliance cannot be considered to be "paper" compliance. Effective care delivery processes and clinical problem solving and decision making are a vital basis for outcomes.⁵⁵

Genuine reform requires a better balance between outcomes and processes as the basis for assessing care quality. OBRA regulations and surveyor guidance have divided review of care and services by topic (ie, so-called F-Tags). Currently, MDS-based quality measures are aggregated and reported by facility, and then each facility is compared to aggregates for their state and national composites.

However, as discussed in this series, human physiological processes are closely linked to one another and to overall function. Often, there are common causes of multiple outcomes and multiple causes of a single outcome. Thus, it is problematic to measure and report outcomes data without seeking common causes of diverse clinical and operational outcomes and diverse causes of individual outcomes.

A facility's success at achieving optimal outcomes cannot be judged just by comparing its results to those of other facilities. Patient characteristics and other factors often influence results, even when processes and practices are sound. Or, unsound practices may sometimes produce desirable results but increase risks for potentially avoidable complications. For example, it is relevant to know whether the attempt to achieve one outcome (eg, address pain, control blood pressure, improve appetite) causes adverse consequences (eg, falling, delirium, or bowel ileus).

Thus, diverse outcomes must be aggregated per patient, not just per facility. An individualized quality evaluation (including a review of links between causes, consequences, and interventions) is needed to ascertain whether a patient's outcomes

are optimal or unavoidable. For example, evaluating a facility's rates of unplanned weight loss, depression, and pain as separate entities will not provide useful clues as to whether a facility correctly managed individuals who had all of these issues simultaneously.

Reform requires a better balance between identifying aggregate outcomes and evaluating underlying processes and practices in individual cases. Some pertinent process-based quality measures for elderly individuals and for nursing home care have been developed.^{56,57}

It is important to identify the limitations as well as the attributes of alleged quality measures and indicators. Significant limitations of MDS-based quality measures have been identified but may be downplayed too much. For example, a facility's scores on diverse measures do not necessarily correlate and may fluctuate significantly over time, even if their underlying processes and practices remain consistent. The clinical validity of some quality measures (ie, whether they faithfully reflect performance in the aspect they are allegedly measuring) is open to question.⁵⁸⁻⁶³ Results on specific measures may vary over time, and may not indicate a facility's overall quality. Improving on a specific measure does not necessarily result in improvement in care overall.⁶⁴

Therefore, genuine reform requires acknowledgment that information derived from fixed data sets (eg, the MDS) may be somewhat useful but still provides only a rough and partial basis for evaluating quality. A broader and more balanced approach is required.

Efforts to Improve Performance

This article previously identified several categories of efforts to improve results by influencing performance and practice. For example, the OBRA survey process and related surveyor guidance have been modified. A national campaign was started to try to improve outcomes by using quality measures, Quality Improvement Organizations (QIOs), and local coalitions.⁶⁵

Ultimately, quality measurement can only improve performance somewhat. For example, while there are many baseball statistics (eg, on-base percentage, slugging percentage, fielding percentage) related to player performance, more statistics do not necessarily produce additional improvement. Ballplayers must be willing and able to improve. They often need skilled guidance from capable individuals about specific aspects of performance. Furthermore, addressing root causes (eg, improper batting technique) may improve multiple performance aspects.

Nursing home reform requires recognizing and addressing root causes of diverse outcomes and performance issues, not just finding more things to measure. For example, a root cause of diverse facility performance issues may be that staff and management do not know how to use empirical problem solving approaches or that supervisors and managers are unwilling or unable to hold the staff and practitioners accountable for their performance.

DEVELOP BIOLOGICALLY SOUND REIMBURSEMENT

Whatever else might influence improvement and reform, incentives ultimately are a major influence on human behavior.⁶⁶ Money is a major incentive for performance in many societies. Therefore, improvement and reform requires reimbursement that is compatible with, and does not inhibit, desirable care.

The topic of financing health care, including nursing home care, is too vast and complex to be considered fully herein. However, as discussed in this series, physiology does not obey payment rules. Instead, payment for care must be biologically sound. At present, it is only occasionally and partially sound.⁶⁷

Payment for care is often based on providers and treatments instead of on patient characteristics and needs. There is ample evidence that patient characteristics, especially medical stability, complications, and comorbidities, influence multiple outcomes and could provide the basis for a more rational payment approach that reduces waste of resources and duplication of services while supporting person-centered care.⁶⁸⁻⁷¹ Combinations of patient characteristics may help identify those needing more comprehensive and coordinated care.⁷²

Currently, care is often reimbursed despite its incompatibility with the concepts, practices, and processes discussed in this series. Payment sources (eg, Medicare, managed care) are still unduly influenced by primary diagnoses (eg, pressure ulcer, or stroke), facility licensure or category (eg, long-term acute care hospital, assisted living, inpatient rehabilitation), or treatments and services (eg, joint replacement, rehabilitation, wound care, or intravenous therapy). Public and private insurers not uncommonly pay for treatment without adequate problem definition and cause identification in one setting (eg, hospital, nursing home, or assisted living facility), and then pay more for additional treatment in another setting that is required because of earlier process failures.

Whatever its virtues, the MDS-based Prospective Payment System (PPS) for Skilled care has become a major source of erroneous thinking about how to care for patients with complex illnesses. Its payment categories are inconsistent with some of the key concepts discussed in this series. True improvement and reform require the opposite; ie, that reimbursement for care must simultaneously consider the impact of both causes *and* consequences.

And yet, for all the talk about waste and inefficiency in health care, health care "reform" to date has done little to identify and tackle key root causes such as basic failures of the care delivery process in diverse settings. Genuine reform and improvement must inhibit, not promote, reimbursement that distorts care approaches and care that reflects reimbursement distortions; eg, based on labeling patients as being transferred for "rehabilitation," "wound care," or "IV therapy."

"Pay for performance" has become a politically popular approach to what is often called "value based purchasing." Despite some merits,⁷³ there are still significant reservations about its viability and limitations in improving care overall.^{74,75} After all, its underlying premise is to pay a certain amount for care regardless of its efficacy, safety, or value, and then to pay more for allegedly doing it right. It is hard

to imagine how this approach can influence many of the root causes of undesirable outcomes, such as inadequate care delivery process and clinical decision making, that cut across diverse conditions and settings.

CONCLUSION

This series has covered the topic of improving and reforming nursing home care in the United States. However, unlike many other discussions, it has focused on essential biological, medical, and philosophical principles and considered whether current reform efforts reflect and promote, or inhibit, desirable approaches.

Genuine improvement and reform require that those who oversee, manage, and influence nursing homes review, if not rethink, their current roles and recommendations. Every segment of the health care system must promote and apply key principles such as the care delivery process and the proper linking of causes and consequences. Those who oversee and manage health care organizations and facilities (including nursing homes) must ensure that the concepts covered in this series are applied properly. Politicians, regulatory agencies, and others need to understand better what they are trying to oversee and improve. Ignorance is hazardous, not blissful.

Social institutions reflect and influence a society's culture, beliefs, and customary approaches to identifying and solving problems. The history of long-term care faithfully reflects the strengths, shortcomings, and paradoxes of American society and culture. It involves high moral principles, clashes of philosophies and values, large sums of money, inconsistent implementation of good ideas, divergent and conflicting incentives, uneven and problematic accountability, political excesses and opportunism, extremes of righteous indignation, haste to find superficial fixes to complex problems, and enduring conflict between the good and rational and the delusional and dangerous.

Respecting essential, enduring, and universal concepts and approaches typically brings more desirable results, while defying them brings perilous consequences for a society's health and well-being. Genuine improvement and reform requires paying much more attention to the basics, and not wasting time and resources by fabricating inadequate workaround solutions.

Reform also requires universal accountability. It is time to stop scapegoating nursing homes for unsatisfactory performance that is present throughout diverse settings ("scapegoat: someone who is punished for the errors of others"⁷⁶). The politics of scapegoating are never constructive and are primarily intended to divert attention from failed responsibility and to evade accountability. For example, hospitals and their practitioners must be made aware of the consequences of misdiagnosis, pressure ulcers; failure to prevent, identify, and address medication-related adverse consequences; and various other issues that impact patients before and after discharge to other settings, including long-term care facilities.

In conclusion, the lessons of reforming long-term care apply equally to all facets of the health care system. Reform and improvement are entirely possible, but only by respecting and applying the key concepts and approaches discussed in this series. Yes, the law of gravity applies everywhere (including the

United States), and we either respect it to our advantage or defy it at our own risk.

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