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Meenal B. Patwardhan, David B. Matchar, William E. Haley, Gregory P. Samsa

Providing care consistent with clinical practice guidelines for individuals with advanced chronic kidney disease (ACKD) is known to improve outcomes. Nephrologist and non-nephrologist perspectives regarding ACKD and preferences for tools to optimize patient management were identified through focus group interviews. Six focus groups for nephrologists and non-nephrologists from geographically distinct areas were conducted. Physicians discussed methods of identifying patients, the referral process, overall management of ACKD, the use of practice guidelines, and perceptions regarding guideline implementation tools. Focus group insights were used to develop tools for implementing a guideline to optimize ACKD patient management.

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Wayne E. Soo Hoo

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Non-Nephrologist and Nephrologist Perspectives on Implementing a Chronic Kidney Disease Guideline

Meenal B. Patwardhan, David B. Matchar, William E. Haley, Gregory P. Samsa

Chronic kidney disease (CKD) is a condition that involves gradual loss of kidney function over time. The condition is divided into stages of increasing severity, and the final stage is referred to as end-stage renal disease (ESRD), or advanced CKD (ACKD). ACKD, involving minimal kidney function, is a source of significant mortality and morbidity in the United States (McCrary et al., 2002; Pereira, 2002; Schoolwerth et al., 2006).

The prevalent population of individuals with ACKD is projected to increase from 325,000 in 2003 to 660,000 by 2010 (National Kidney Disease Education Program [NKDEP], 2006), and the annual mortality rate for ACKD patients is approximately 20% (Schoolwerth et al., 2006). Providing optimal care in the stage prior to ACKD, is known to improve outcomes by slowing progression of the disease and by reducing mortality and morbidity if the individual progresses to ACKD (Obrador et al., 1999; Pereira, 2002; Schoolwerth et al.).

In order to optimize care of ACKD, early identification of the condition is essential (National Kidney Foundation [NKF], 2002), but there is evidence that fewer than 20% of patients at risk for CKD are screened for the condition (NKDEP, 2006). Identification and management of ACKD patients occur in a range of settings: solely in a non-nephrologist (e.g., primary care provider, cardiologist, endocrinologist) practice, solely in a nephrologist practice, or comanaged between nephrology and non-nephrology practices (NKF). Regardless of the setting, though, management of individuals with CKD is known to be suboptimal. Further, the problem of suboptimal management remains, despite the fact that initiating appropriate treatment makes a difference. Several studies have demonstrated the impact of intervention on levels of hemoglobin, malnutrition, permanent vascular access, and overall survival of individuals with CKD (Brenner et al., 2001; Nissenson et al., 2001; Patwardhan, Samsa, Matchar, & Haley, 2007; Stack, 2003). Suboptimal management exists

Abstract: Providing care consistent with clinical practice guidelines for individuals with advanced chronic kidney disease (ACKD) is known to improve outcomes. Nephrologist and non-nephrologist perspectives regarding ACKD and preferences for tools to optimize patient management were identified through focus group interviews. Six focus groups for nephrologists and non-nephrologists from geographically distinct areas were conducted. Physicians discussed methods of identifying patients, the referral process, overall management of ACKD, the use of practice guidelines, and perceptions regarding guideline implementation tools. Focus group insights were used to develop tools for implementing a guideline to optimize ACKD patient management.

even though a guideline for improving quality of care during ACKD that addresses all clinically relevant management areas has been developed (Renal Physicians Association, 2002).

It is well documented that mere creation and dissemination of practice guidelines is not sufficient for practice improvement (McClellan, Knight, Karp, & Brown, 1997). To facilitate improvements in patient outcomes based on adherence to guidelines, a set of tools and strategies is needed.

One systematic approach to developing guideline implementation tools is facilitated process improvement (FPI) (Matchar, Patwardhan, Samsa, & Haley, 2006). FPI is based on continuous quality improvement principles and involves (1) understanding the process, (2) identifying process failures and root causes, (3) developing tools to attack root causes, and (4) establishing a tailoring strategy (so that physicians can select tools appropriate for their practice situation).

FPI is well suited for quality improvement in healthcare settings because it requires an external expert team (rather than busy clinicians) to develop guideline implementation tools. Following these principles, the researchers involved in the current exercise used FPI

Key Words

chronic kidney disease
focus groups
guideline implementation

to create a set of tools to overcome barriers to improvement in ACKD care. We used a focus-group interview technique that accomplished the first three FPI steps: (1) to understand physician perspectives regarding the process of managing individuals with ACKD, (2) to recognize why ACKD management is suboptimal, and (3) to develop tools that can effectively address the root causes of process failures in ACKD.

We used a convenience sample for our focus groups and used informal methods to interpret the focus-group results. These results provided us with valuable information regarding physician perspectives on CKD management and guideline implementation tools. We supplemented these focus-group results with a literature review and developed a set of tools intended to improve the management of individuals with CKD through the implementation of an ACKD guideline—*Appropriate Preparation of the Patient for Renal Replacement Therapy* (Renal Physicians Association, 2002). The set of tools, their intent, and some details on the tools are included in **Table 1**.

Methods

We divided physicians into two groups: nephrologists and non-nephrologists (family practitioners, internists, and endocrinologists). We also chose to combine two focus-group techniques for both physician groups: in-person and telephone focus groups. In order to recruit physicians, we used lists from two professional organizations: the American Medical Association (AMA) and the Renal Physicians Association (RPA).

We randomly selected 100 physicians (primary care providers, cardiologists, and endocrinologists) from the AMA list. We invited them to participate in focus groups through a letter followed by a telephone call. Of the physicians who responded to our invitation, we included the first 14 in our focus groups and reimbursed them for their time. These physicians formed the non-nephrologist group. Using identical methods, we randomly selected 100 nephrologists from the RPA list and invited them to participate in the focus groups through a letter followed by a telephone call. We included the first 14 nephrologist respondents in our focus groups and reimbursed them for their time.

Nephrologists and non-nephrologists practicing within the Triangle area of North Carolina

(an area of approximately 1,556 square miles) were invited to attend one of two in-person focus groups (one each for nephrologists and non-nephrologists); all other physicians participated in one of four telephone focus groups (two for nephrologists and two for non-nephrologists). All six focus groups convened from February to July 2004. We used the same interview guide with each group.

The Institutional Review Board of Duke University approved our study. After obtaining informed consent from all participants, a trained moderator led and audiotaped all 90-minute focus groups using standard moderation techniques (Giacomini & Cook, 2000). Prior to each session, we provided participants with an evidence-based ACKD guideline (Renal Physicians Association, 2002) and a list of commonly used guideline implementation tools (e.g., flow charts and patient education material). Participants provided demographic data regarding themselves and their practices.

At the beginning of each group, confidentiality of participants was discussed. The manner in which patients with ACKD were identified and managed was explored. Participants described problems associated with the involvement of two physician specialties in CKD care and the referral process in general. The moderator then led the discussion toward the use of clinical practice guidelines in general and in the management of CKD and physician perceptions regarding the ACKD guideline in particular.

Finally, the moderator initiated discussions of guideline implementation tools using the list provided and encouraged participants to brainstorm about tools beyond that list. All questions were open-ended.

The moderator reviewed and transcribed all the focus group audiotapes and provided a summary report. The audiotapes and summary report were reviewed by a nephrologist, an internist, a statistician, and a health services researcher. The reviewers analyzed the data and subsequently discussed the analysis among themselves. Because the objective of this exercise was to give input for the process of tool development, we did not use the expensive techniques of coding data with software. Our analytic approach involved an informal, iterative process of review and deliberation that led to meaningful themes pertaining to research questions

Table 1. Tools Included in *The Advanced Chronic Kidney Disease Management Toolkit*, Their Intent, and the Available Formats

Name of Tool and Intended User	Intent of Tool	Format of Tool
Meta-Tool Physician practice intending to use advanced chronic kidney disease (ACKD) toolkit	Serves as a directory of tools and provides insight for tool selection and strategies for tailoring to local circumstances	Two formats: “quick-start” vignettes for typical practices, and an “insight” meta-tool based on the characteristics of a practice environment
Assessment Tool: Patient Identification Physician practice identifying ACKD patients	Assesses existing practice performance	Step-wise instructions for assessing practice performance
Assessment Tool: Patient Management Physician practice managing ACKD patients	Assesses existing practice performance	Step-wise instructions for assessing practice performance
Physician Education Material[†] Nephrologists	Promotes education by identifying patients, using glomerular filtration rate (GFR), comanaging patients, and introducing tools	1. Microsoft PowerPoint presentation with notes pages. Standard set (and some additional slides) 2. Executive summary of <i>Renal Physicians Association [RPA] Clinical Guideline Number 3</i>
Awareness Letter* Nephrologist to colleagues	Raises awareness of chronic kidney disease (CKD), introduces concept of comanagement, and promotes education	Brief, one-page letter directed to the referring physician. Copy of the executive summary of <i>RPA Clinical Guideline Number 3</i> could be attached to the letter.
CKD Identification and Action Plan Card* Referring physicians, physician extenders, nephrologists	Promotes identification of patients, appropriate timing of consult or referral to nephrologist, and use of guidelines	Laminated card with CKD identification and action plan: classification of CKD stages and action associated with each stage, keys to identification of high-risk patients, indications of kidney damage, risk factors for progression, potential complications, and concise guidelines
CKD Identification and Action Plan Poster Referring physicians, physician extenders, nephrologists	Promotes identification of patients, appropriate timing of consult or referral to nephrologist, and use of guidelines	Poster for physician office with CKD identification and action plan (without guidelines)
GFR [Glomerular Filtration Rate] Calculator* Referring physicians, physician extenders, nephrologists	Identifies CKD patients on the basis of GFR instead of serum creatinine	Four formats: slide rule, Web sites for PC use, downloads for Palm or hand-held PC devices, and letter for laboratory
CKD Chart Flags and Stickers Referring physicians, physician extenders, nephrologists	Flags medical records of patients with ACKD	Stickers to place on outside of patient medical record
Referring Physician Fax-Back Form* Nephrologist to referring physician, faxed back to nephrologist	Assures nephrologists obtain important clinical data; allows referring physician to clarify the purpose of referral	One-page fax form for communication between nephrologist and referring physician. Can be individualized by adding a practice fax header or inserting a clinic stamp
CKD Post-Consult Letter* Nephrologist to referring physician	Communicates comanagement plan to referring physician	Three formats: one-page form clarifying respective roles of nephrologist and referring physician, bulleted list to remind nephrologist while drafting his or her own letter, and Web site with “consult letter template”
Advanced CKD Patient Management Flow Sheet Physician managing ACKD patients	Serves as a reminder, a standing order, and as a data repository for use with evaluation tools for patient management	One-page flow sheet that goes in ACKD patient charts. Shaded areas correspond to data required for the Post-Implementation Evaluation Tool: Patient Management
Advanced CKD Algorithms* Physicians and providers managing ACKD patients	Provides implementation guidelines at point of care	Algorithms (one page each) for anemia, hypertension, bone disease, nutrition, and lipids

continued

Table 1. Tools Included in *The Advanced Chronic Kidney Disease Management Toolkit*, Their Intent, and the Available Formats (*continued*)

Name of Tool and Intended User	Intent of Tool	Format of Tool
Nephrology CPT Codes* Nephrologists and providers managing ACKD patients	Provides nephrology current procedural terminology reference codes and documentation guidelines	Laminated pocket card
Supplemental Tools (Includes eDrugsRenal* and PDA Downloads for Tools*) Referring physicians, physician extenders, nephrologists	Helps provide dosage adjustments for patients with CKD and useful Web sites for PDA programs	1. Reference for downloading eDrugsRenal (a free software program that recommends dosage adjustments) 2. General information regarding downloading PDA programs
Patient Diary (Personal Health Record) Patient	Serves as a patient education and self-management tool, and a patient reminder and patient-initiated physician reminder	Card with patient and provider name and a series of kidney diagrams shaded to reflect the patient's degree of kidney function and CKD stage. Inside the card is a flow sheet similar to the one in the patient chart. Also has the lay version of goals of care and recommendations from the RPA guideline
CKD Class Resources* Practice and patient	Provide resources for CKD classes and for patient education and self-management	Three-page resource sheet for practices interested in starting their own formal ACKD classes or in prescribing existing classes. Includes resources for patient education and self-management
Patient Education Resources* Patient and caregiver	Serve as a resource for patient education tools	Brief description of several patient education resources with contact information. Formatted as a patient handout
Venipuncture Reminder Card Patient	Remind patient and healthcare providers to protect arm veins in nondominant arm for future vascular access	Instruction card with removable wallet card
Vascular Access Passport Patient	Provide patient with information on catheter and vascular access placements	Multipage, passport-size booklet in a protective plastic sleeve
Post-Implementation Evaluation Tool: Patient Identification Practice identifying ACKD patients	Evaluate the impact of tools on patient identification and nephrology consult or referral	Step-wise instructions for performing the evaluation
Post-Implementation Evaluation Tool: Patient Management Practice managing ACKD patients	Evaluate impact of tools on patient management	Step-wise instructions for performing the evaluation using the ACKD management flow sheet (used as a management tool)

Note. The term *nephrologist* includes all physicians who manage ACKD patients. Tools that are underlined are those that require reconfiguration of clinic processes.

*These tools are suitable for downloading into a Palm or hand-held PC device (refer to Palm downloads at www.renalmd.org).

*This presentation may be made using a Palm or hand-held PC device with add-on software.

(Mays & Pope, 1995). **Figure 1** presents the discussion guide used for the focus groups, and **Table 2** presents some of the questions.

Results

Twenty non-nephrologists and 38 nephrologists responded to our invitation to participate in a focus group (overall response rate was 29%). We included the first 14 non-nephrologist respondents and the first 14 nephrologist respondents in our focus groups. **Table 3** describes features of the participating physicians and their practices. Identical themes emerged in the two in-person and four telephone focus groups,

although the depth of discussions was greater in the in-person focus groups:

- ACKD patients are not identified early.
- The referral process is disorganized.
- Ongoing patient management is unsatisfactory.
- Clinical practice guidelines are used to a varying extent.
- Some tools could help physicians implement practice guidelines.

The extent of agreement among physicians regarding any given idea is described here in qualitative terms: “all,” “most” (i.e., 7 or more physicians), “several,” and “some” (“several”

Figure 1. Discussion Guide for Focus Groups with Nephrologists and Non-Nephrologists**I. Introduction**

- A. Background
- B. My role
- C. Purpose of the focus group
- D. Tape recording of the sessions
- E. Ground rules
- F. Role of the participant
- G. Introduction of participants
 1. First name
 2. Length of time in practice

II. Practice Patterns

- A. What changes, if any, have been made in the past 12 to 18 months in your approach to the care of chronic kidney disease patients? For each change, ask
 1. Why was this change(s) implemented?
 2. How was this change(s) implemented?
- B. What changes, if any, have been made in the past 12 to 18 months in your approach to the care of patients with any other conditions in your practice?
- C. Do you currently use preestablished guidelines or protocols to treat any conditions in your practice?
 1. If yes
 - a. Which conditions are guidelines or protocols used for?
 - b. What are the most useful features, if any, of these guidelines or protocols?
 - c. What practice improvement tools, if any, are available for you to use in implementing these treatment guidelines or protocols?
 - (1) If any tools are available, how useful are they?
 - (2) If no tools are available, how useful would practice improvement tools be for the guidelines or protocols that are available to you?

III. Practice Dynamics—Advanced Chronic Kidney Disease (ACKD)

- A. Patient population
 1. How significant an issue to you is ACKD?
 - a. Why?
 2. How are ACKD patients identified in your practice?
 - a. If not mentioned:
 - (1) Systematic versus nonsystematic (e.g., routine screening of hypertension [HTN], diabetes patients)?
 - (2) Do you calculate glomerular filtration rate (GFR)?
 - What formula do you use?
 - What, if any, tool is used to calculate GFR?
 - (3) When, if at all, do you list an ACKD diagnosis in your record problem list?
- B. Relationship with a specialist (i.e., nephrologist)
 1. Referral patterns
 - a. How often are ACKD patients referred to you by a generalist?
 - b. Which generalists refer ACKD patients to you?
 - c. At what point is an ACKD patient referred?
(If not mentioned, when, relative to the GFR or uremic symptoms?)
 2. Role of the specialist
 - a. What role do you take in the care of ACKD patients that are referred to you?
 - (1) Formal episodic consultation
 - (2) Informal episodic consultation (how?)
 - (3) Under what circumstances, if any, do you provide total care for an ACKD patient?
 - (4) Comanagement situations
 - Who writes treatment orders?
 - As appropriate, who manages the diabetic component in an ACKD patient?
 - As appropriate, who manages the hypertension component in an ACKD patient?
 - b. Is your relationship with the generalist (as described above) the same for all ACKD patients?
 - (1) Under what circumstances, if any, is the relationship different?
 - Patient characteristics?
 - Situation dynamics?
 - c. Are there any particular ACKD patients with whom you take less of a consultative role (e.g., GFR \leq 30)?
 - d. How would you describe your level of comfort with the relationship you have with the generalist(s) who refer ACKD patients to you?
 - (1) Is it clear to you when (at what point in their condition) ACKD patients should be referred to you?
 - (2) Is it clear to you how often ACKD patients should be referred to you?
- C. Treating ACKD
 1. What protocol (implicit or explicit), if any, do you have for managing ACKD?
 - a. For what aspects of ACKD do you have a management protocol? (List on a flip chart or a board)
 - b. For each protocol, what is the source of that protocol?
 - c. (If not mentioned above), do you have a treatment protocol for
 - (1) Managing anemia
Source of protocol
 - (2) Managing metabolic bone disease
Source of protocol
 - (3) Managing nutrition
Source of protocol
 - (4) Blood pressure management
Source of protocol

continued

Figure 1. Discussion Guide for Focus Groups with Nephrologists and Non-Nephrologists (*continued*)

- (5) Lipid management
Source of protocol
- (6) Counseling and rehabilitation
Source of protocol
- (7) Preparation for renal replacement therapy
Source of protocol
2. What is the ideal situation for managing ACKD patients with regard to
 - a. Managing anemia
 - (1) Is this approach according to a protocol?
 - (2) In what ways, if any, has the protocol not been as successful as you would have hoped?
 - b. Managing metabolic bone disease
 - (1) Is this approach according to a protocol?
 - (2) In what ways, if any, has the protocol not been as successful as you would have hoped?
 - c. Managing nutrition
 - (1) Is this approach according to a protocol?
 - (2) In what ways, if any, has the protocol not been as successful as you would have hoped?
 - d. Blood pressure management
 - (1) Is this approach according to a protocol?
 - (2) In what ways, if any, has the protocol not been as successful as you would have hoped?
 - e. Lipid management
 - (1) Is this approach according to a protocol?
 - (2) In what ways, if any, has the protocol not been as successful as you would have hoped?
 - f. Counseling and rehabilitation
 - (1) Is this approach according to a protocol?
 - (2) In what ways, if any, has the protocol not been as successful as you would have hoped?
 - g. Preparation for renal replacement therapy
 - (1) Is this approach according to a protocol?
 - (2) In what ways, if any, has the protocol not been as successful as you would have hoped?
 - h. In your opinion, whom do patients look to for advice when treating these conditions (mentioned above)?
3. What aspects of caring for patients with ACKD do you find undesirable or are you uncomfortable with?
 - a. For any aspect, ask
 - (1) Why is that aspect undesirable, or why are you uncomfortable with it?
 - (a) What can be done to make it more desirable or make you more comfortable?
 - b. If not mentioned above, ask, How comfortable are you that
 - (1) All patients are correctly identified?
 - (a) Why is that?
 - (2) Patients are consistently tracked?
 - (a) Why is that?
 - (3) Patient care is optimized (relative to the recommendations)?
 - (a) Why is that?
 - (4) Roles and responsibilities of the primary care provider (PCP) and staff, specialist, and the patient are clear?
 - (a) Why is that?
- D. Practice improvement tools
 1. For each tool, ask
 - a. How useful would this tool be to you in managing your ACKD patients?
 - b. In what format would this tool be most preferred? (e.g., paper, electronic)?
 - c. As applicable, what would you like this tool to contain?
 - d. As appropriate, how often would you like to receive the tool?
 - e. What would you not want in regard to the tool?
 - (1) Practice Audit
 - (2) Renal Physicians Association Guideline
 - (3) Tool for calculating GFR
 - (4) Tools based on electronic medical records
 - (5) Web-based tools
 - (6) Flow sheets, tracking forms, or both for patients with ACKD
 - (7) Patient information materials (What type of materials?)
 - (8) Patient health records
 - (9) Specialized consult forms (e.g., reason for referral, PCP expectations for ongoing management, specific feedback requested [nephrologists recommended plan—if ongoing management, who does what?])
 - (10) Specialized ongoing patient care communication forms (e.g., containing labs, medications, procedures, appointments)
 - (11) ACKD evaluation clinic package (e.g., how to set up such a clinic in a PCP setting)
 - (12) Any others that would be useful?

and “some” indicate fewer than 7 physicians). **Table 4** lists the perceptions of non-nephrologists and nephrologists regarding identification and management of individuals with ACKD. Particularly strong consensus statements or conclusions are enclosed in quotation marks in the discussion below.

Late Identification of ACKD

Non-nephrologists identified individuals with ACKD through annual laboratory tests for serum creatinine or screening tests for diabetes. Some of the physicians mentioned that laboratories computed patients' glomerular filtration rate (GFR). Irrespective of the

method of detection, all non-nephrologists believed that they were successfully identifying all individuals with ACKD who presented in their practices.

Nephrologists maintained that they “always calculated” GFR for their patients; however, they believed that non-nephrologists “never calculate” GFR and therefore that CKD patients who are identified form “just the tip of the iceberg of CKD, [so] we are missing 50%–70% of patients with CKD.”

A Disorganized Referral Process

When the referral process was discussed, all physicians believed that it was disorganized. More specifically, issues arose surrounding (a) the timing of referral, (b) the nature of the referral, (c) the process of the referral (e.g., what information is sent with patients), and (d) the role of the nephrologist in streamlining this process.

Non-nephrologists maintained that they refer their patients to nephrologists for various reasons—if they themselves “do not understand the underlying disease,” “when the patient is close to dialysis,” or “when creatinine is above 4 mg/dL.” They were not certain about the appropriate time to refer a patient to a nephrologist.

The nature of the referral varied from the nephrologist’s giving a one-time consultation to taking over complete care of the patient. This depended on patient factors (e.g., patient preference, insurance status), referring physician factors (e.g., patient load, interest in CKD, availability of specialists, and relationship with specialists), and nephrologist factors (e.g., availability, patient load, relationship with referring physicians). Most referring physicians preferred to take care of all “nonrenal” issues until their patients required dialysis, and they “never saw the patient [after] they referred him or her (to a specialist).” They said that they were dissatisfied with the referral process. When physicians referred their patients, they believed that they were sending all the necessary information (e.g., history, laboratory test results).

Nephrologists received approximately two-thirds of patient referrals from primary care physicians (PCPs) and the remainder from cardiologists and endocrinologists. Referrals came at various stages of CKD. All nephrologists agreed that patients were being referred at earlier CKD stages than in the past but without adequate clinical information.

Table 2. Some Questions Posed to Focus-Group Participants (Nephrologists and Non-Nephrologists)

- How do you identify chronic kidney disease (CKD)?
- When and why do you think CKD patients are referred to a nephrologist?
- What is your opinion about the referral process?
- Do you routinely use clinical guidelines in your practice?
- If you do, which practice guidelines do you routinely use?
- Were you aware of a CKD guideline prior to this meeting?
- If you were to use the guideline *Appropriate Preparation of the Patient for Renal Replacement Therapy* (Renal Physicians Association, 2002), can you describe some guideline implementation tools that would assist you? (Please include suggestions regarding tools directed to the provider, practice, and patients.)

Table 3. Demographic and Practice Features of Physicians Participating in Focus Groups

	Nephrologists (n = 14)	Non-Nephrologists (n = 14)
Geographic region		
Northeast	5	2
South	4	6
Midwest	3	2
West	2	4
Location		
Urban	5	10
Suburban	9	1
Rural	none	3
Gender		
Male	10	8
Female	4	6
Academic affiliation	4	3
No academic affiliation	10	11
Part of a group practice	11	14
Number of nephrologists available for referring advanced chronic kidney disease (ACKD) patients	Question not applicable for nephrologist group	
Number of referring physicians	Range: 10–150 Median: 40	Question not applicable for non-nephrologist group
Distance to a nephrology office	Question not applicable for nephrologist group	0–10 miles
Proportion of individuals with ACKD in the practice	30%–50%	1%–10%
Time spent with individuals with ACKD		
First consult	30–90 minutes	15–30 minutes
Follow-up	10–50 minutes	15–30 minutes

Table 4. Perceptions Regarding Identification and Management of Patients with Advanced Chronic Kidney Disease (ACKD)

Perceptions	Number of Non-Nephrologists Sharing the Perception				Number of Nephrologists Sharing the Perception			
	14	≥7	<7	0	14	≥7	<7	0
CKD patients are identified through a calculation of glomerular filtration rate			X		X			
Dissatisfied with referral process		X				X		
Dissatisfied with “education” provided by nephrologists			X				X	
Dissatisfied with overall level of ACKD patient care	X				X			
Dissatisfied with reimbursement associated with ACKD patient care	X				X			
Have difficulty in controlling blood pressure in ACKD patients	X				X			
Have difficulty in managing anemia of ACKD patients		X				X		
Have difficulty in managing bone disease	X				X			
Have difficulty in managing dyslipidemia in ACKD patients		X					X	
Find it difficult to prepare a patient for renal replacement therapy			X		X			
Find it difficult to provide education to ACKD patients			X		X			

Nephrologists perceived that they were primary caregivers for most individuals with ACKD. All of them insisted that they always kept the referring physician aware of the patient’s case. In discussions of the referral process, nephrologists and non-nephrologists were equally dissatisfied.

The Role of the Nephrologist in “Educating” the Referring Physician

Some non-nephrologists believed that nephrologists were “good teachers.” Others felt that they did not receive the education they expected from nephrologists. Similarly, some nephrologists believed that they were educating their referring physicians and that they had fewer problems with the referral process, while others stated that they “could be doing a better job.” Some nephrologists refrained from providing education because of a fear of offending the referring physician.

Unsatisfactory Ongoing Patient Management

The focus groups discussed each of the seven

clinical areas addressed by the published ACKD guideline: anemia, hypertension, bone disease, dyslipidemia, nutrition, counseling and rehabilitation, and preparation for renal replacement therapy (RRT) (Renal Physicians Association, 2002). All physicians, regardless of their specialty, stated that the most difficult clinical areas to manage were hypertension and bone disease. Most non-nephrologists also thought that management of anemia and dyslipidemia were important issues. They noted that patients who presented with multiple clinical problems and time constraints prevented them from adequately addressing each clinical problem. Nephrologists believed that preparing patients for RRT was “easier said than done.”

All physician participants were dissatisfied with the extent to which their practices tracked individuals with ACKD. Nephrologists believed that the inadequate tracking was attributable to non-nephrologists’ failure to send patients for a regular follow-up, while non-nephrologists believed that their patients

did not adhere to advice regarding follow-up. Both groups, however, agreed that the overall quality of care provided for individuals with ACKD was poor and that it was possible to improve it with “more manpower and resources.”

Varying Use of Clinical Practice Guidelines

Both groups of physicians used guidelines for management of some clinical areas; the most frequently used were hypertension and lipids guidelines. Non-nephrologists were overwhelmed by the number, length, and complexity of guidelines and would prefer to see more concise versions.

Most non-nephrologists were not aware of any kidney disease guidelines before the focus groups were convened; however, nephrologists mentioned that they used the Kidney Disease Outcomes Quality Initiative (KDOQI) guidelines for their dialysis patients (NKF, 2002). Although non-nephrologists were enthusiastic about the value of an ACKD guideline, nephrologists were skeptical; they said that they were generally aware of all relevant clinical issues related to CKD.

Tools to Help Physicians Implement Practice Guidelines

The last part of the focus group concentrated on specific tools that physicians believed would be useful if they were to successfully incorporate recommendations of the ACKD guideline into their practices.

All participating nephrologists, but not non-nephrologists, believed that non-nephrologists needed a tool for calculating GFR.

The moderator introduced a fax-back form developed by the investigators. The intent of this form was to clarify the nature of the referral and to streamline the referral process. The tool received a mixed reaction—most non-nephrologists were not enthusiastic because of a general aversion to dealing with forms, while most nephrologists liked the idea “provided [that] the form was simple.”

A tracking sheet, or reminder, inserted in the patient chart was already being used by some physicians, and both nephrologists and non-nephrologists were receptive to a similar tool, provided that “[they did] not have to enter any data” and that there is “not more than one sheet in the chart.” On the other hand, most non-nephrologists (but not nephrologists) thought that a concise version of the ACKD guideline was an informative tool.

Most physicians strongly opposed a performance measurement tool. The principal concern was the nonreimbursable time and effort involved in the process. The only exceptions were two nephrologists who had sophisticated information systems in their practices and were already measuring their performance.

All physicians also agreed that although patient education material for CKD was available, it was not geared toward the average patient. Participants emphasized the need for “simple” material, especially related to dietary issues. Finally, all physicians agreed that patient health records were valuable in principle, but they doubted their patients’ ability to use them. Web-based tools for patient care were rejected because few patients were perceived to have the resources or the ability to access or use them.

Table 5 provides a list of implementation tools that physician groups perceived to be useful. The consensus regarding the nature of implementation tools was that they should be paper based, simple, and brief.

Discussion

Physician participants in our focus groups provided us with valuable insights regarding management of individuals with ACKD, problems with the referral process due to the involvement of more than one physician specialty, and difficulty in educating patients. Finally, they identified tools that they perceived would lead to improved CKD management.

Focus groups, in general, are used to generate new ideas and identify needs, expectations, and issues (Fern, 2001). Physician focus groups have emphasized the importance of physician input in guideline development and implementation, management of chronic conditions, and circumstances that are required to improve the quality of healthcare delivery (Giblin et al., 2004). These focus groups allowed us to understand physician perspectives on complex issues related to ACKD diagnosis and management and tools that might help them better manage these patients.

We chose to conduct separate focus groups for nephrologists and non-nephrologists in order to encourage candid discussions of problems related to more than one physician specialty involved in ACKD management. The combination of in-person and telephone focus groups let us exploit advantages of both techniques. We reached all regions of the United

Table 5. Non-Nephrologists' and Nephrologists' Perceptions Regarding the Utility of Advanced Chronic Kidney Disease Guideline Implementation Tools

Guideline Implementation Tool	Number of Non-Nephrologists Who Perceived Utility of the Tool (n = 14)				Number of Nephrologists Who Perceived Utility of the Tool (n = 14)			
	14	≥7	<7	0	14	≥7	<7	0
Concise guidelines	X						X	
Glomerular filtration rate calculator for non-nephrologists			X			X		
Education for non-nephrologists		X				X		
Specialized consult form			X			X		
Tracking sheet	X				X			
Performance measurement (audit tool)				X			X	
Simple patient education material	X					X		
Patient health record				X				X
Information technology-based tools				X			X	

States through telephone focus groups, and the relative anonymity they provided led to richer data. For example, participating physicians revealed several problems they faced in managing CKD patients, admissions we suspect that few physicians would make in person. The in-person focus groups allowed greater participant interaction, resulting in a deeper exploration of each topic.

Our focus groups highlighted the problem of underdetection of CKD patients, which other researchers have documented as well (Coresh, Astor, Greene, Eknoyan, & Levey, 2003; McClellan et al., 1997). Sources of this problem are the use of serum creatinine as a surrogate for GFR, and the limitations that this imposes (Levey et al., 1999). However, calculating GFR is not a standard procedure in primary care (Provenzano, 2003), as the participants confirmed. This finding underscores both the need for PCPs and other referring physicians to understand the importance of GFR calculation in the first place (the role of physician education) and the need for a quick GFR calculation method (a readily available GFR calculator).

Although evidence exists that early referral to a nephrologist improves outcomes in subsequently dialyzed patients (Stack, 2003) and slows progression of CKD (Nissenson et al., 2001; Pereira, 2002; Stack), it appears that clear direction regarding the appropriate time for referral is needed. In addition, our results reaffirm the

findings of research in other areas where more than one physician specialty is involved, especially in the management of chronic conditions, that referral processes are especially challenging (Ifudu & Friedman, 2003). If management of ACKD patients is to be optimized, these processes require special attention.

The objective of this exercise was to systematically develop a set of tools for implementing clinical practice guidelines to optimize ACKD patient management. The results of our focus groups provide us with valuable insights toward this end (Table 5). In general, we noted that physicians prefer to use implementation tools that have proven their utility in other areas of management (e.g., reminders or tracking sheets) (National Health Service Centre for Reviews and Dissemination, 1999). On the other hand, a new tool, the fax-back form, had a mixed reception. Considering the evidence regarding inaccurate documentation in paper records, our participants' unfavorable reaction to a performance measurement tool may be justifiable. Improving the medical record may be a prerequisite to widespread performance measurement, and the use of information technology should greatly simplify its process (Sugarman, 1997).

Our focus-group participants revealed some interesting physician perceptions about patient tools as well. Physicians' lack of optimism about patient-held health records is well documented

(Jeffs, Nossar, Bailey, Smith, & Chey, 1994), and our participants echoed that skepticism. Of note is the contrasting opinion presented by CKD patients during a set of separate focus groups. Our patient participants expressed a great deal of enthusiasm for maintaining their own health records. They acknowledged that their individual abilities to do so might vary and recognized that initiating a discussion of the records with their physicians would give them an opportunity to understand their condition better. However, they also expected that they would need their treating physicians to be actively involved in this process.

All physician participants agreed that patient education material must be directed toward patient needs. Evidence regarding the impact of patient education and involvement on healthcare outcomes (Michie, Miles, & Weinman, 2003) indicates that these patient and physician views are important to keep in mind.

In addition to providing us with information regarding the nature of truly useful guideline implementation tools, our results also offer rich data for nephrologists, non-nephrologists, tool developers, and individuals interested in quality improvement in CKD and other complex and chronic clinical conditions.

As physicians who identify ACKD patients, non-nephrologists play a critical role in optimizing quality of care for individuals with ACKD and can act on our results that recognize the need for early detection of CKD. They can also assist in streamlining the referral process, in turn making comanagement more systematic and effective. As key opinion leaders, nephrologists can use our results to promote education among colleagues, set up effective arrangements for comanagement, and provide tools (like GFR calculators) to referring physicians. Finally, all physicians sharing the responsibility of CKD patient management can lobby for the production of simple patient education material that meets the spectrum of demands of the existing patient population.

The relevance of our results expands beyond CKD management. Problems with referrals and communication across specialties are not unique to CKD. Similarly, physician perceptions regarding clinical practice guidelines and guideline implementation tools are common to all conditions. Therefore, insights from our

focus groups apply to all chronic conditions where generalist-specialist interaction is critical, patient involvement is exceptionally relevant, and evidence suggests that adherence to guidelines will result in better patient outcomes.

We acknowledge some limitations to our study. Although the exploratory nature of focus groups strengthens the ability to generate ideas, their results are, by necessity, interpretive. In order to reduce the potential bias that interpretation may introduce, and in keeping with qualitative research strategies, we allowed several reviewers with different backgrounds to interpret our results (Wish, Roberts, Besarab, & Owen, 1999). In addition, because the objective of this exercise was to provide inputs for the process of tool development, we did not use the expensive techniques of coding data with software. We also acknowledge the inherent volunteer bias that is introduced in our (and all focus-group) interviews. Finally, the sample size for our focus groups was small. However, these biases do not undermine our conclusions, insofar as the concepts that emerged from our discussions provide a road map for testing the transferability of results derived from qualitative studies (as opposed to generalizability in quantitative studies) (Giacomini & Cook, 2000).

These limitations notwithstanding, we believe that by using FPI and the information obtained through our focus groups, we have developed a set of ACKD guideline-implementation tools (Table 1) in a systematic fashion (Renal Physicians Association, 2004). The tools—a fax-back form (**Figure 2**), a patient diary (**Figure 3**), and an advanced CDK management flow sheet (**Figure 4**)—address management issues critical for optimizing the care of the growing population of individuals with CKD and other chronic conditions.

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Figure 2. Fax-Back Form

FAX TRANSMITTAL

Date: _____
 To: _____ From: _____
 Fax: _____ Fax: _____
 Phone: _____ Phone: _____

TO BE COMPLETED BY NEPHROLOGIST

Dear Doctor _____,

Thank you for referring your patient, _____, for a nephrology consult. Your patient has been given an appointment on ___/___/____. If this time frame is not what you consider best, please let me know.

The following results may be helpful to have in hand—if available, please fax to my office prior to the consult visit.

- CBC
- Serum creatinine (if available, prior results as well as current)
- Electrolytes, bicarbonate, BUN, calcium, phosphorus, glucose, albumin, lipid profile
- Urinalysis
- Renal ultrasound report (if available, other kidney imaging studies)

Thanks again. I look forward to seeing your patient.

 Date: _____
 To: _____ From: _____
 Fax: _____ Fax: _____
 Phone: _____ Phone: _____

TO BE COMPLETED BY REFERRING PHYSICIAN

(Attach lab results and medication list if applicable)

- Please find attached requested labs/information.

Purpose of consult:

- For opinion only
- To develop a CKD comanagement plan
- For comprehensive management of CKD

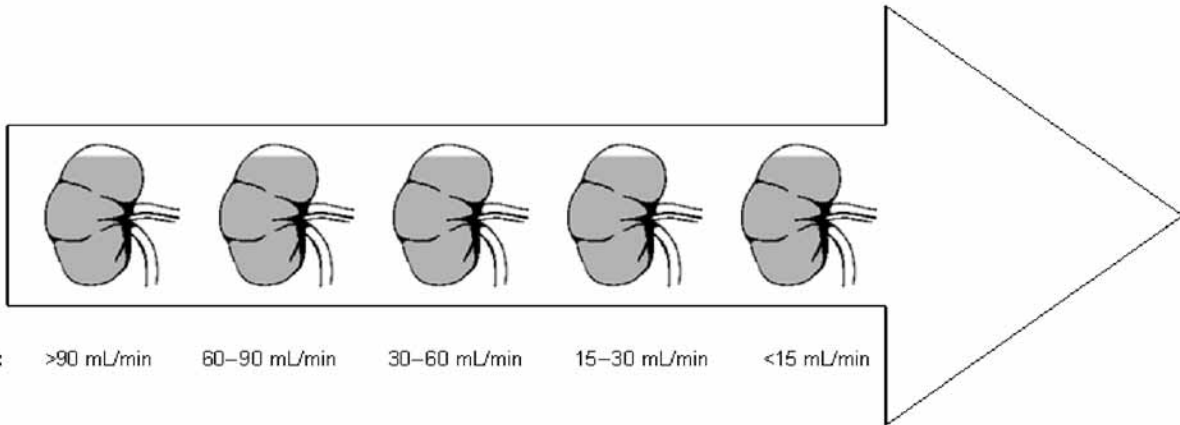
Comments:

Figure 3. Patient Diary

Patient name: _____

Physician name: _____

Telephone number: _____



*GFR = Glomerular Filtration Rate. It is a key measure of your kidney function.

The Renal Physicians Association has identified goals of care for patients with Stage 4 or 5 CKD**

Manage your anemia

- Have your doctor check for anemia (low hemoglobin [Hb]). If anemic, further tests can show why
- Ask if you need iron pills. If your Hb stays low, ask if you need erythropoietin (EPO)

Control your blood pressure (BP)

- Have your BP checked often. If it is high, you may need to change certain lifestyle habits (diet, exercise)
- If BP stays high after making changes in your lifestyle, ask if BP medication should be added
- Have the nurse check your blood pressure each time you get a dose of EPO

Prevent bone disease

- Discuss with your doctor how to keep your bones strong
- Calcium, phosphorus, and parathyroid hormone (PTH) levels will need to be measured with blood tests
- Based on these blood test results, a special diet or pills may be needed

Watch your diet and weight

- Keep track of your body weight and albumin levels (measured with a blood test)
- Maintaining good nutrition is very important; unintentional weight loss may be a sign of poor nutrition
- Seeing a dietitian for hints on maintaining a healthy weight and following the right diet can be very helpful

Note. Consists of three pages, one page presented.

**Renal Physicians Association Clinical Practice Guideline Number 3: *Appropriate Preparation of the Patient for Renal Replacement Therapy*

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Figure 4. Advanced Chronic Kidney Disease Management Flow Sheet

Patient Name: _____

Action Measure (Area of Guidance)	Target	Minimum Frequency	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
Creatinine/ Glomerular filtration rate (GFR)	Decrease rate of GFR decline	Depends on stage, rate of change, and clinical factors												
Hemoglobin (Anemia)	11–12 g/dL	Every 3 months												
Bicarbonate (Bone disease)	>22 mmol/L	Every 3 months												
Phosphorus (Bone disease)	<4.5 mg/dL	Every 3 months												
Low phosphorus diet prescribed														
Phosphate binder prescribed														
Calcium (Bone disease)	8.5–10.5 mg/dL	Every 3 months												
iPTH (Bone disease)	Not >100 pg/mL or 1.5x normal	Every 3 months if Ca or PO ₄ is abnormal												
25 (OH) Vitamin D (Bone disease)	>30 mg/mL	If iPTH is abnormal												
Blood pressure (Hypertension)	130/80 mm Hg	Every 3 months												
ACEI or ARB dose increased or new agent added														

Note. A portion of the flow sheet is presented. Shaded areas indicate quality indicators—see Evaluation Tool: Patient Management. Ca = calcium; PO = phosphorus; OH = hydroxy; iPTH = immunoreactive parathyroid hormone; ACEI = angiotensin-converting enzyme inhibitor; ARB = angiotensin receptor blocker.

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q&a: Tracy Sklar On Advancing Improvement in Acute Care

Wayne E. Soo Hoo, Interviewer



q What strategies have been successful in your leadership of the quality programs at Catholic Healthcare West (CHW)?

a One of CHW's core values is collaboration. I believe that adhering to this value has helped us achieve excellence in the quality of care delivered to our patients. We use four approaches to quality improvement. First, through the leadership of our governing board and senior leadership team, the organization establishes specific performance goals on quality, safety, and service with detailed definitions and clear evidence-based strategies that result in improvement. Second, we conduct systemwide projects on a variety of clinical topics where hospitals can learn from national experts and openly share data and best practices. For example, each of our 42 hospitals knows how the others perform on quality measures and therefore can engage with those performing at higher rates. Third, we have a number of clinical councils (comprised of clinical functional leaders including physicians) that focus on achieving improvements across the system. And fourth, CHW annually sponsors a Quality Summit to celebrate successes and share best practices. The Quality Summit is quite popular—in the past few years we've received more than 100 best-practice submissions.

q How did your career path take you from your clinical role to your current position in quality management?

a When I was working as a clinical dietitian, I participated in quality improvement training. At this time, total quality management and continuous quality improvement methods were just being introduced into healthcare. Work in quality was new to me, and I thought it was great because it combined

Tracy Sklar, MSc MBA, is the vice president for quality and service excellence in the care management department of Catholic Healthcare West (CHW). She has worked in the care management department for 6 years and at CHW for more than 18 years. Sklar is a highly effective process facilitator with strong analytical skills, and she has a well-documented record of leading successful clinical improvement projects that have resulted in both improved patient outcomes and cost savings. She has developed and led a number of internal hospital collaboratives for improvement. One such collaborative, which focused on improving care for patients in the intensive care unit, was presented at the annual meeting of the Institute for Healthcare Improvement (IHI); the 50% reduction achieved in ventilator-associated pneumonia was subsequently highlighted on IHI's Web site. The results from another internal collaborative for pneumonia care were published in the *Journal of Clinical Outcomes Management*. Sklar is also providing leadership to CHW's initiative to improve patient satisfaction. The goals for this program are to achieve the national 80th percentile in performance.

scientific methods with process improvement to improve the care for our patients. Because of my interest and enthusiasm, the hospital asked me to help take a leading role in developing and implementing a training program for quality improvement. From there my role at the hospital evolved into quality specialist, then director, and ultimately vice president for quality at CHW.

q To what extent have you been involved with the Institute for Healthcare Improvement (IHI), and how have you implemented IHI innovations within the CHW multihospital system?

Key Words

acute care
performance improvement

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a We have found IHI to be a valuable partner for quality improvement, and we are involved with the organization at both the system level and the individual hospital level. At the system level, CHW has partnered with the faculty of IHI to develop internal collaborative projects. Our most recent collaborative includes projects to improve care in our intensive care units and end-of-life care. In addition, a number of our hospitals have enrolled in an IHI-sponsored collaborative to improve care.

q **What innovations in quality management are you implementing in your organization?**

a A number of systemwide projects focused on improving the care and services delivered to our patients are under way. For example, we are implementing a quality management information technology system that will share a single database and allow for benchmarking across the system at the provider specialty level. We have projects to decrease variation and improve efficiency of care delivered, projects to achieve excellence in public reporting initiatives as part of the Hospital Quality Alliance Project, and projects to achieve the goals identified in IHI's 5 Million Lives Campaign. Our quality staff at each facility meets monthly to share best practices, discuss common issues, and identify strategies for improvement.

q **Describe strategies you have used to achieve organizational alignment and support for performance improvement.**

a A number of factors contribute to organizational alignment for CHW. Initially, the CHW board of directors establishes our strategic focus. Our current strategy, Horizon 2010, aligns our entire organization on growth, innovation, and leadership for improved access and excellent quality. From this strategic perspective, we work to meet and exceed clearly defined goals with initiatives to achieve improvements in quality, safety, and service with specific numeric performance objectives. Having the whole system "rowing in the same direction" helps us maintain a clear focus on quality improvement.

q **Sustaining improvement in performance improvement is difficult work. What has helped you be successful?**

a We're fortunate that the goals of quality, safety, and service are a high priority for Lloyd Dean, our chief executive officer and president. He is an unflinching champion of these goals and communicates his commitment and dedication in many forums. His personal commitment amplifies the expectations throughout the organization. In addition, under the clinical leadership of George Bo-Linn, MD, our chief medical officer, expectations for excellence throughout our entire system are at the highest level. This cascade throughout the organization motivates and engages leaders, employees, and physicians to achieve and sustain a high level of performance for our organization.

q **What do you believe is the most important skill in a healthcare quality professional's toolbox?**

a Intelligence, humor, flexibility, and a personal commitment to excellence all help healthcare quality professionals be successful in their work.

q **Adopting best practices and spreading innovation is a theme in your work at CHW. How do you select and prioritize improvement projects?**

a Four considerations help establish priorities for quality for CHW. First is our mission. Our founding congregations of women religious have established this ministry to improve the health of the communities we serve, with special attention to the underserved. Our hospitals focus on giving each patient excellent care, every time. Our palliative care improvement project, which includes a component that specifically addresses spiritual care at the end of life, is one example. Another example is our innovative Community Needs Index (recently published in *Health Progress*), which uses a scientific approach to identify health needs for every zip code in the United States. It is used

by hundreds of providers throughout the country and is influencing emerging bipartisan legislation.

A second consideration for prioritizing improvement projects is regulatory requirements. A number of priorities have been established by the regulatory agencies involved in healthcare, such as the Joint Commission and the Centers for Medicare & Medicaid Services. As in most hospital systems, our goals must and do align with these priorities.

A third consideration is the variations among hospitals. We assess performance across our hospitals in a number of areas. We look for opportunities for improvement where wide variation exists between hospitals and where we see opportunities to have a positive impact on a large number of patients.

The fourth consideration is transparent patient outcomes. The public reporting expectations for hospitals have increased exponentially. We believe that transparency in quality is very important for consumers and that they should have access to information that will help them make better-informed healthcare decisions. We are also engaged in a number of projects with outcomes that are reflected in publicly available forums.

Wayne E. Soo Hoo, PhD RN CPHQ, is the director of quality and patient safety at Mercy San Juan Medical Center in Carmichael, CA, a faculty member at the University of Phoenix—Sacramento, and a member of JHQ's editorial board.

Media Reviews

Jean A. Grube, Media Editor

Health Care Reform Now! A Prescription for Change

George Halvorson, John Wiley & Sons, 2007, \$27.95, 322 pages, ISBN 978-0-7879-9752-6

Audience: general public, healthcare quality professionals, healthcare workers, political decision makers

Key Words: healthcare delivery, integrated care, process improvement, public policy, redesign and reengineering

In this well-written and easy-to-read book, George Halvorson starts with the assumption that the current healthcare system in this country is “inconsistent, massively expensive, sometimes dangerous, operationally inefficient, and dysfunctionally and sometimes perversely incented.” Although this opinion is not unique, what follows in this book is. Halvorson provides a well-constructed argument for one possible direction for healthcare reform in the United States. As the CEO of the Kaiser Foundation Health Plan and Hospitals, Halvorson is in a position to evaluate health plans from around the world. He posits that the United States needs reform that provides an American approach to the problems in healthcare, drawing from the systems in other countries but not using any one system as the model for reform.

He begins by outlining four truths that must be addressed as the main problems contributing to the current crisis in the system. The first truth is that care costs are unevenly distributed; in fact, 5% of the population accounts for almost 60% of healthcare spending. This small percentage of the population with chronic, debilitating diseases must be better taken care of in order to cut the costs of care to that group. The second truth is that gaps exist between caregivers, gaps directly related to the use of paper records. If a patient has three doctors, it is likely that he or she also has at least three unrelated records. Until the healthcare system figures out how to link all independent caregivers, patients will suffer from such gaps. The third truth involves the use of economic incentives in the current

system. Unfortunately, the caregiver or hospital is not paid for patient improvement or care. A caregiver is rarely paid to keep a patient well. Consequently, there is no economic incentive to keep the patient well. Finally, the last truth is the very real lack of systems thinking in the current healthcare “system.” Halvorson maintains that the best-kept secret of healthcare is that there really is no national system, and most people in healthcare do not think in terms of “system” or data sharing.

The bulk of the book contains ideas and recommendations for dealing with the four truths. Halvorson’s down-to-earth and realistic suggestions provide a blueprint for actions—some of which could immediately be put into the system, but many that would require a great deal of work for implementation. However, in a time when everyone seems to accept that reform is necessary, this book seems to provide at least a starting point for discussion.

Reviewed by Eileen Johnson, MSN RN CPHQ, a clinical systems analyst for Cogent Healthcare, Brentwood, TN

Medicare’s Quality Improvement Organization Program

Institute of Medicine, National Academies Press, www.nap.edu, 2006, \$59.95, 518 pages, ISBN 0-309-10108-5

Audience: academicians, legislators, policy makers, researchers

Key Words: government regulations, Medicare, program evaluation, public policy

This report is part of the Institute of Medicine (IOM) series *Pathways to Quality Health Care*. This series evaluates the current healthcare systems and makes recommendations for reducing waste and improving outcomes. As requested by the U.S. Congress in 2003, IOM conducted a comprehensive evaluation of quality improvement organization (QIO) programs at both the state and national levels. An expert panel was asked to evaluate these programs and provide recommendations to

Congress. Those recommendations led to this report.

The report is an excellent resource for individuals who are not familiar with the role of Medicare's QIO program. This comprehensive report has two parts. The first part consists of background and eight recommendations on how to improve QIO's role. The second part provides detailed information on the review process and explains how the recommendations were developed.

The report is extremely thorough. The recommendations specifically address identified areas for improvement. For example, Recommendation 1 names specific federal agencies to strengthen and reform QIO's ability to provide technical assistance for performance measurement and quality improvement. In Recommendation 4, it is noted that Congress and the Centers for Medicare & Medicaid Services should develop other mechanisms for managing Medicare beneficiaries' complaints and appeals.

The report offers suggestions on how these recommendations focus on either reemphasizing the mandates of QIOs or expanding their role. In addressing Recommendation 1, the panel suggests that QIOs should take a more hands-on approach in working with all providers for conducting root cause analysis, as well as provide guidance and assistance for internal system design and process changes. For Recommendation 4, the panel suggests that QIOs regionalize or centralize the complaint management process instead of delegating it to the individual state entities to manage. This suggestion will better ensure timely responses and promote consistency in the handling of complaints.

This book would make excellent reading for those interested in an analysis of government programs. Those interested in healthcare policies and programs, especially those who are working in countries outside of the United States, could find the information useful in developing their own improvement programs.

Reviewed by Steven Chinn, DPM MS MBA CPHQ CPHRM, assistant administrator for quality and service, Kaiser Foundation Hospital, Redwood City, CA; fellow of the American College of Healthcare Executives; and consultant and education faculty member for Joint Commission Resources, Oakbrook, IL

The Nun and the Bureaucrat: How They Found an Unlikely Cure for America's Sick Hospitals

Louis M. Savary and Clare Crawford-Mason, CC-M Productions, Inc., 2006, \$24.95, 235 pages, ISBN 0-9779461-0-X

Audience: health professionals in hospitals or healthcare systems considering pursuit of the Baldrige National Quality Award

Key Words: Baldrige, change, cost containment, development, management, organizational behavior, performance improvement

This book discusses the experiences of two healthcare systems that successfully incorporated the systems improvement principles of the Baldrige Award criteria, taking their performance beyond what they had been able to achieve by using continuous quality improvement principles.

"The Nun" refers to Sister Mary Jean Ryan, CEO of SSM Healthcare (SSMHC), based in St. Louis, MO. Ryan led SSMHC's commitment to pursue the Baldrige National Quality Award, and in 2002, SSMHC became the first healthcare organization to receive the Baldrige Award. "The Bureaucrat" refers to Paul O'Neill, former CEO of the Pittsburgh Regional Health Initiative (PRHI). Prior to working at PRHI, O'Neill served as U.S. Treasury Secretary and CEO of Alcoa. At Alcoa, O'Neill used Toyota methods to deliver an 800% increase in market capitalization while making Alcoa one of the safest companies in the world to work for. At PRHI, he applied systems thinking. In the absence of a national solution, his organization regionally addressed the cost of healthcare by collaborating with hundreds of clinicians, 40 hospitals, four major health insurers, dozens of major and small-business healthcare purchasers, and southwestern Pennsylvania corporate and civic leaders, including Pennsylvania's attorney general. PRHI's collaborative effort, like SSMHC's, incorporated the systems thinking inherent in the Baldrige criteria.

Coauthor Louis Savary holds a PhD in mathematical statistics with applications in the behavioral sciences. Of particular relevance to this book is his development of training materials that apply systems thinking to organizational transformation following the approach

of W. Edwards Deming. Coauthor Clare Crawford-Mason is a journalist and television producer. Her 1980 NBC documentary, *If Japan Can...Why Can't We?* introduced Deming to the West and is credited with creating public awareness of quality and productivity issues in the global marketplace.

This well-organized book is filled with practical insights about changes in actual healthcare settings that lead to improved safety, quality of service, and reduction in costs. Paul Batalden,

MD, comments that “these authors have created an inviting introduction to healthcare as a system”—how refreshing and timely!

Reviewed by Jane A. Miller, MSN CPHQ FNAHQ, disease management coordinator, HealthPlus of Michigan, Lansing, MI

Jean A. Grube, PhD MBA MSN, is senior lecturer in the School of Business at the University of Wisconsin–Madison, an adjunct assistant professor at the Medical College of Wisconsin, and a healthcare management consultant.

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Media Reviews and Quality NETWORK. Do you know of a book, a CD-ROM, a video or DVD, or an online course that might interest other *JHQ* readers? Send products for review to Jean Grube, media editor (jgrube@bus.wisc.edu). Has a Web site really impressed you? Please share the site with other readers. Send your ideas to Daniel van Leeuwen, Quality NETWORK editor (dvanleeu@nycap.rr.com).

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q&a. These interviews with frontline healthcare quality professionals reveal insights on the innovations and issues currently shaping our profession. **q&a** offers a timely way to provide readers with firsthand accounts of their peers' challenges and solutions. The interviews are completed by e-mail and contain approximately five questions and responses from a healthcare quality professional. Have an idea for an interview? Send your suggestions to Deborah M. Flores, q&a coeditor (deborah.flores@hcahealthcare.com).

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Quality NETWORK

Daniel H. van Leeuwen, Quality NETWORK Editor

"Quality NETWORK" offers reviews of selected Web sites relevant to healthcare quality professionals. The editor welcomes comments and feedback on the column as well as suggestions for future reviews. To read previous reviews that have appeared in the journal, visit www.nahqplus.org, the exclusive Web site for NAHQ members.

American Health Care Association Advocating Quality in Long-Term Care

www.ahca.org/quality/qf_commission.htm

Key Words: long-term care, quality improvement

The American Health Care Association (AHCA) Advocating Quality in Long-Term Care, a Web site that I have bookmarked, is an excellent resource for long-term care (LTC) administrators and healthcare quality professionals. Even though one section is for AHCA members only, the majority of items can be readily accessed by anyone. The main sections include news and information, research and data, events, legislation, and quality improvement. Another section is for consumers who are researching LTC Web sites and looking for a facility.

Of particular interest to the healthcare quality professional is the section on quality improvement (QI). The QI section describes several initiatives and awards. Quality First is an initiative to improve quality in LTC through accountability and disclosure. This initiative, begun in 2002, is being carried out through the national Advancing Excellence in America's Nursing Homes campaign. This 2-year campaign aims to accelerate performance in six outcomes. An award created by AHCA and the National Center for Assisted Living (NCAL) (the AHCA/NCAL Quality Award Program), recognizes members for demonstrating commitment to continuous quality improvement principles. Also, AHCA, in partnership with the Tena Sponsorship Program from SCA Hygiene Products, supports Radiating Excellence, which focuses on the assessment of specific leadership roles and competencies essential to nurse leaders working in skilled nursing, assisted living,

and residential care facilities for the developmentally disabled.

Two helpful links on this Web site take the viewer to *Provider* magazine (with current articles) and NCAL. In addition, the research and data section is useful for comparison information in (1) resident and family satisfaction, (2) trends in nursing facility characteristics, and (3) trends in publicly reported quality measures. The health services research and evaluation support the need for standardized measures of quality and provide statistics on LTC. Other links include Medicare and Medicaid studies on LTC, staffing studies, liability issues, and data. A section on online survey certification and reporting data includes LTC facts, characteristics, trends on usage, and funding.

LTC presents issues quite different from those encountered in other healthcare settings, and this Web site is a resource that people working in an LTC setting will want to use frequently.

Reviewed by Susan V. White, PhD RN CPHQ CNAA FNAHQ, associate chief nurse for quality improvement at the James A. Haley Veterans' Hospital in Tampa, FL, and JHQ's interviews editor

Electronic Medical Records, Inc.

www.emrworld.net

Key Words: computer support, information systems, integrated health networks, systems, technology

The intent of the Electronic Medical Records Web site is to provide free electronic medical record (EMR) vendor analysis and comparison. Its purpose is to continuously release data, presenting micro and macro statistics for the medical records and health information management industry. Although its purpose is to continuously release information, most of the links have not been recently updated. The most current statistics are from 2003, one job posting is listed from 2005, and trade shows listed are from 2006. The North Carolina news link lists news headlines with no additional URL links. Also, the research link is limited to four articles by two authors. The current news

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link provides access warnings or error messages—not at all valuable. Furthermore, the forum and contact links are not valid. If you are looking for definitions for electronic health records, EMRs, personal health records, the community of care record, or the clinical document architecture, you can find them here, but more current definitions of these terms are available from other resources. Electronic Medical Records, Inc., does have one of 26 healthcare trade journals with healthcare informatics information on its Web site.

Unfortunately, information on this Web site is not being updated, most of the information provided is from 2005, and several of the links are not valid or generate error pages.

Reviewed by Deborah A. Dowling, MPH BSN CPHQ, senior director of quality management at Randolph Hospital, Asheboro, NC

Agency for Healthcare Research and Quality: Your Guide to Choosing Quality Health Care—Choosing Long-Term Care

www.ahrq.gov/consumer/qnt/qntltc.htm

Key Words: consumer advocacy, long-term care, Medicare, program evaluation, social work

This up-to-date Web site provides consumers and people involved in discharge planning with excellent information about choosing a long-term care (LTC) facility. Information is provided on how to perform a quick quality check for health plans, physicians, and hospitals, as well as for LTC facilities. After reviewing the Web site, I immediately forwarded the link to our case management and discharge planning department. The Web site also provides a link to information in Spanish. Although a wealth of information on the site is available in Spanish, the information about choosing long-term care is not. In addition to the excellent, up-to-date information about LTC, a link to the home page for the Agency for Healthcare Research and Quality provides a valuable resource for all healthcare quality professionals.

Reviewed by Deborah A. Dowling, MPH BSN CPHQ, senior director of quality management at Randolph Hospital, Asheboro, NC

Urgent Care Association of America

www.ucaoa.org

Key Words: professional associations, urgent care

The Urgent Care Association of America (UCAOA) is a professional organization founded to represent urgent care. UCAOA's mission is "to encourage and facilitate the development and the success of urgent care centers and the urgent care industry."

The UCAOA Web site has information on education, accreditation, fellowships, publications, and forums. Visitors may sign up for the organization's mailing list; other sections are available for sponsors and members. To send comments or questions to the Webmaster, you can use the "Join Our Mailing List" tab. The UCAOA has a voluntary accreditation offering available for urgent care centers, and the organization also bestows the UCAOA Award of Distinction. The *Journal of Urgent Care Medicine* is available online and is free for urgent care clinicians with registration. Those wishing to receive the monthly newsletter may sign up online. In the buyer's guide section, the public can view the urgent care sites (by state) that are accredited by UCAOA. I found the Web site interesting and learned a great deal about urgent care.

If you have an interest in urgent care or if your organization is interested in pursuing accreditation for your urgent care center, this Web site provides the applications, forms, and guides to assist with this process.

Reviewed by Barbara Corn, MA BSN RN CPHQ, vice president of United HealthCare, St. Louis, MO, and a member of JHQ's review panel

Help Identify and Review Web Sites

The JHQ team invites you to help identify and review Web sites. A review consists of the name of the Web site or sponsoring organization, a URL reference, key words, the intent of the Web site, and comments about ease of navigation, value, pertinence to the healthcare quality professional, timeliness, and cost, if any.

Please forward—via e-mail—questions, names of Web sites for review, or, better yet, names of Web sites with reviews, to Quality NETWORK editor Daniel van Leeuwen at dvanleeu@nycap.rr.com.

Daniel H. van Leeuwen, MPH RN CPHQ, is a manager in information technology at St. Peter's Hospital, Albany, NY.

Quality Products and Resources

Luc R. Pelletier, Susan Yeager-Chowning

This *JHQ* feature provides members with interesting, up-to-the-minute resources that will help them navigate through the constant flood of healthcare quality information. Brief descriptions of recently released media are provided, as well as ordering and Internet access information. New product announcements and company contact information are also provided.

Products

Compiled by Luc R. Pelletier

Patient Safety Program from Rightfield Solutions

Finding ways to keep patients safer during surgical or medical procedures is the first objective of Rightfield Solutions's expectation management and medical information (EMMI) program.

EMMI is a patient education tool that combines clinical and legal best practices into a Web-based tool for healthcare providers and patients. The 15-minute patient safety EMMI is designed for any patient scheduled to have a medical or surgical procedure. EMMI helps patients learn, in a conversational way, how to navigate their way through the process of having a procedure and how to maximize their time with their doctors so they receive optimal care. The message is clear: patients can help ensure their safety by becoming informed, strong advocates for their own care.

The patient safety EMMI incorporates a broad range of safety initiatives promoted by national leaders, including Patients for Patient Safety; the National Patient Safety Foundation; and the Joint Commission's "Speak Up" campaign, an educational program developed by the Joint Commission and the Centers for Medicare & Medicaid Services.

Information in the patient safety EMMI includes

- what patients should tell their doctor about their medical history, allergies, and the medications they take

- what every patient should know before having a procedure
- what the different types of anesthesia are and how it is administered
- how to stay safe from infections and falls in the hospital
- what to do to help prevent medication errors
- how to stay safe at home (e.g., keep any incisions clean and dry) and how to spot signs of problems during recovery
- the risks of any procedure
- the dos and don'ts of medication safety.

All EMMI programs guide the patient through his or her medical condition, risks, benefits, and what to expect before and after the procedure. EMMI programs are developed by board-certified physicians in their respective fields. There are currently EMMI programs covering general, bariatric, oral, cosmetic, and orthopedic surgeries, as well as cardiovascular, obstetrics and gynecology, and LASIK procedures.

To view a demonstration of the EMMI program, visit www.tryEMMI.com, enter access code 14667986997, and enter date of birth January 1, 1960.

SilverSeal® Wound Care Products

PrimeMedical, a provider of medical supplies, equipment, and services to the long-term care industry, will be distributing the SilverSeal product line developed by Noble Biomaterials. This product line provides continuous, sustained release of silver cations for broad-spectrum wound care. Recently, Noble Biomaterials received seven FDA approvals for their SilverSeal wound care medical products, including wound-contact dressing, burn-contact dressing, hydrogel, hydrocolloid, tubular component, ortho component, and bandages.

For more information on SilverSeal products, visit www.silverwoundcare.com or contact Jeffrey Glattly at 877/811-3522.

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Patient and Asset Tracking Software

Patient Care Technology Systems (PCTS), a subsidiary of Consulier Engineering, Inc., and Sonitor Technologies collaborated earlier this year to market their hospital workflow technologies. This alliance created a turnkey workflow solution that integrates Sonitor's ultrasound-based indoor positioning system with PCTS's Amelior automatic patient and asset tracking software, resulting in real-time identification of patient care milestones and an accurate location of clinical resources for emergency, surgery, and outpatient service caregivers.

The Sonitor indoor positioning system uses detectors and tags that are linked through hospitals' existing wired or wireless local area network (LAN) to a digital file containing all vital statistics and information about the item or person being monitored. The motion-activated tag transmits an ultrasonic identification signal to special detectors that use Sonitor patented, ultrasound, digital signal processing algorithms. The detectors then transmit signals through the LAN to a central computer that stores the information about the tag's room location and time of the signal. The technology ensures no interference from any environmental noise and does not interfere with sensitive instruments.

For more information, visit www.pcts.com or www.sonitor.com.

Resources

Compiled by Susan Yeager-Chowning

A Workbook for Long-Term Care Providers

Champions for Care provides handouts and guidelines for the development of team-building and leadership skills in long-term care facility staff. This workbook is designed to allow team members to take charge, plan, and direct their own training. Based on the nationally recognized Wellspring Model, this workbook provides tools for creating organizational culture change within the long-term care setting. Coupled with clinical quality improvement initiatives, this culture change serves as a foundation and allows staff to work together to create an enhanced quality of life for residents.

The training sessions in Champions for Care are divided into four sections. The Share the Leadership section focuses on attributes of leadership and a team meeting model. The Decision Making section allows skill development in consensus building through a series of guidelines and handouts. The Growing People Skills section provides learning opportunities in the areas of observing behavior, listening, and giving feedback. The final section, Growing Team Skills, offers evaluation tools and exercises.

Champions for Care is written by Action Impact and is funded by the Commonwealth Fund through the University of Minnesota department of healthcare management.

Copies are available for \$35 each through the Action Impact Web site at www.actionpact.com. For \$150, a six-pack of workbooks is available.

New Report on Complexities of Long-Term Care

In January 2007, Avalere Health released *Long-Term Care in America: An Introduction*, by Anne Tumlinson and Scott Woods. Prepared for the nonpartisan National Commission for Quality Long-Term Care, this report outlines the complexities of providing and paying for long-term care. The National Commission for Quality Long-Term Care is an independent body working to create a comprehensive approach to reform the long-term care system. This introductory report examines the current state of the care system, including the following components:

- comparison of historical usage rates and current usage rates of the long-term care system
- description of providers of long-term care, such as assisted living facilities, nursing homes, senior housing, adult daycare, home-based care, and hospice and palliative care
- exploration of consumers' costs and demographics for each type of provider
- brief overview of quality initiatives, such as Quality First
- review of payment programs, including Medicaid, Medicare, and private long-term care
- significant challenges, including workforce and quality.

Long-Term Care in America: An Introduction can be downloaded free of charge at www.avalerehealth.net.

Quality-Based Payment Strategy for Nursing Home Care in Minnesota

A new study published by Robert Kane, MD, and colleagues in *The Gerontologist* describes a pay-for-performance system developed for Minnesota nursing homes (Kane, Arling, Mueller, Held, & Cooke, 2007). At this time, the system is not yet fully operational, but it allows nursing homes to retain a greater portion of the differences between their costs and the average costs on the basis of their quality.

According to Kane, "the new payment system was designed to create a business case for quality when used in addition to a nursing home report card that uses the same quality elements to inform potential consumers about the quality of nursing homes."

The quality score is determined by five elements: staff retention, staff turnover, use of temporary staff, nursing home quality indicators, and survey deficiencies. Resident interviews on the quality of life and satisfaction data are available and will be included in future versions. This system has been proposed to the state legislature but has not been enacted.

Reference

Kane, R., Arling, G., Mueller, C., Held, R., & Cooke, V. (2007). A quality-based payment strategy for nursing home care in Minnesota. *Gerontologist*, 47(1), 108-115.

This study was supported by the Commonwealth Fund and is available online at www.commonwealthfund.org/publications.

Potential Key Quality Problems in Nursing Home Care

In 2005, the Commonwealth Fund reported that as many as 48% of long-stay nursing patients experience at least 1 of 12 specific problems or conditions that might indicate gaps in quality of care. Some residents may experience more than one of these identified problems, and some of the problems may be unavoidable, even with good care.

Several key issues were identified.

- Frequent loss of bladder control (50% low-risk patients) or catheter inserted and left in a patient's bladder (1 of 16 patients). In addition, 1 of 11 residents had had a urinary tract infection within the past 30 days.
- An increased need for assistance with basic activities of daily living was noted in one of six residents. Additionally, residents were less able to move about their

room (one of six) or spent most of their time in a bed or a chair (1 of 25). One of 14 residents had been physically restrained within the past 7 days.

- One of seven residents experienced an increase in depression or anxiety. Eight percent lost too much weight, which might indicate inadequate nutrition or medical care.
- Pressure sores within the past 7 days were noted in 12.5% of high-risk patients and 2% of low-risk patients.
- Residents had suffered moderate or severe pain within the past 7 days (1 of 16 patients).

Key collaborative projects are under way to address pain assessment and management and to improve the use of pressure sore prevention. The Institute of Medicine has also recommended that minimum staffing levels be used within the nursing home setting in support of quality-of-care goals.

This article was a compilation of multiple reference citations, and the rates were determined by the Centers for Medicare & Medicaid Services (2006) using the Minimum Data Set. The quality indicators were endorsed for public reporting by the National Quality Forum (2004).

References

- Centers for Medicare & Medicaid Services. (2006). *Nursing Home Compare*. Washington, DC: U.S. Department of Health and Human Services.
- National Quality Forum. (2004). *National Voluntary Consensus Standards for Nursing Home Care*. Washington, DC: Author.

This article may be found at www.commonwealthfund.org/snapshotscharts/snapshotscharts_show.htm?doc_id=386339 or by contacting the Commonwealth Fund at 1 East 75th Street, New York, NY 10021.

A New Toolkit for Citizen Advocates

The National Citizens' Coalition for Nursing Home Reform (NCCNHR) designed and released a toolkit, "Organizing to Improve Long-Term Care in Your State and Community: A NCCNHR Toolkit for Citizen Advocates," to support citizen advocacy groups (CAGs). The NCCNHR was formed to address public concerns about nursing home conditions and substandard nursing home care.

The toolkit has four sections:

- The Basic Elements for Creating a Lasting Citizen Advocacy Group section provides a tool for starting an advocacy group or expanding an existing group.

- The Fundraising section provides strategies for identifying and obtaining funding from various sources, such as grants and online fundraising.
- The Technology section directs CAGs to resources to help develop the capacity to use new technologies.
- The Culture Change section provides information and gives examples of CAGs' involvement in culture change projects, which seek to empower staff and residents.

The toolkit may be downloaded free of charge at http://nursinghomeaction.org/public/245_2079_13565.cfm.

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Susan Yeager-Chowning, MA CPHQ, is the chief learning officer for Saint Luke's Health System in Kansas City, MO. She has served as a Missouri Quality Award senior examiner and is a member of JHQ's review panel.