Barriers to and Facilitators of Clinical Practice Guideline Use in Nursing Homes

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Abstract

OBJECTIVES—To identify barriers to and facilitators of the diffusion of clinical practice guidelines (CPGs) and clinical protocols in nursing homes (NHs).

DESIGN—Qualitative analysis.

SETTING—Four randomly selected community nursing homes.

PARTICIPANTS—NH staff, including physicians, nurse practitioners, administrative staff, nurses, and certified nursing assistants (CNAs).

MEASUREMENTS—Interviews (n = 35) probed the use of CPGs and clinical protocols. Qualitative analysis using Rogers' Diffusion of Innovation stages-of-change model was conducted to produce a conceptual and thematic description.

RESULTS—None of the NHs systematically adopted CPGs, and only three of 35 providers were familiar with CPGs. Confusion with other documents and regulations was common. The most frequently cited barriers were provider concerns that CPGs were ''checklists'' to replace clinical judgment, perceived conflict with resident and family goals, limited facility resources, lack of communication between providers and across shifts, facility policies that overwhelm or conflict with CPGs, and Health Insurance Portability and Accountability Act regulations interpreted to limit CNA access to clinical information. Facilitators included incorporating CPG recommendations into training materials, standing orders, customizable data collection forms, and regulatory reporting activities.

CONCLUSION—Clinicians and researchers wishing to increase CPG use in NHs should consider these barriers and facilitators in their quality improvement and intervention development processes.

Keywords

clinical practice guidelines; nursing facilities; qualitative research

To improve quality of care, the Institute of Medicine recommends the use of clinical practice guidelines (CPGs), which synthesize the best available evidence and expert opinion.[1] An increasing number of CPGs have been developed specifically for nursing homes (NHs). NHs frequently attempt to improve care by creating clinical protocols, or ''policies and procedures''; these protocols may or may not be derived from relevant CPGs.[2,3] The American Medical Directors Association advocates incorporating CPGs into facility training and clinical protocols.[4]

Although CPGs are increasingly available, they are not routinely used in NHs.[5–8] Programs that train NH staff to implement CPGs have had limited success.[9] Poor adoption in other healthcare settings has been attributed to physician attitudes and values,[10,11] conflicting patient goals and expectations,[12,13] and organizational characteristics.[14–16] It has been hypothesized that identifying factors that impede or facilitate adoption in NHs will lead to more-effective efforts to improve CPG use.[17–19]

The aim of this study was to identify barriers to and facilitators of CPG and clinical protocol use in NHs from the perspective of a wide range of provider types. The stages of adoption (defined in Table 1) from Rogers' Diffusion of Innovation model[20] were used to frame the findings.

METHODS

This project was a substudy of an in-depth case study of eight NHs (2R01NR03178-04A2, R. Anderson, PI). The first four NHs were used as sites for substudy data collection. Facility administrators agreed to participate in the substudy. Staff completed an informed consent process before all interviews. The Duke University institutional review board approved all procedures.

Potential sites were selected from NHs in central North Carolina using a random number generator. Staff involved in selecting or implementing CPGs or clinical protocols were selected using a purposive sampling strategy. An attempt was made to interview the medical director, nurse practitioner (NP), if applicable, director of nursing (DON), and assistant director of nursing (ADON), if applicable, in each NH. Each administrator and DON identified additional clinical leaders. In addition, an attempt was made to interview two to three floor nurses and two to three certified nursing assistants (CNAs) in each NH, because they are the most directly involved in implementing clinical protocols. These were randomly selected during a day shift. One medical director declined, and one DON was terminated before the interview. The final sample included three medical directors, one staff physician, two NPs, three DONs, one ADON, four administrative nurses (1 quality assurance nurse, 1 staff development nurse, 2 nurse supervisors), 10 floor nurses, one medication technician, and 11 CNAs.

Data Collection

The first author (CSCE) conducted all interviews using a semistructured interview guide. Interview questions probed for awareness of and attitudes toward CPGs and barriers to or facilitators of adoption to clinical protocols. For example, ''Can you think of a time when you thought about using a clinical protocol, but didn't?'' Questions probed for barriers to CPG adoption previously described in other practice settings.[15,16] In the event that a staff member was not familiar with CPGs, the interviewer defined them and probed for thoughts on how they

might be incorporated into practice. Three common conditions with established CPGs whose evaluation was primarily nurse led (falls)[21] or physician led (osteoporosis)[22,23] or required collaboration (fever evaluation) were chosen.[24,25] Staff members were asked to describe the care of a resident with each condition to explore whether CPGs or protocols were used. When available, facility protocols were obtained and compared with the CPG recommendations.

Analysis

All authors read all of the interviews. At least two team members coded each document with ATLAS-ti software (ATLAS.ti, Berlin, Germany) using an open coding technique. Emerging themes were discussed at weekly team meetings. Field researchers provided immediate feedback on the validity of the themes and were then asked to seek additional data from participants that substantiated or refuted the theme.[26]

Using Rogers' Diffusion of Innovation model as a conceptual guide,[20] meaning condensation was used to create a ''conceptual/thematic description'' of barriers and facilitators within each stage of change.[27] The first author developed summaries for each site. Other team members reviewed these independently and identified missing themes and themes not adequately supported by the data. Tables of barriers and facilitators were compared across sites to identify similarities and differences.

Interviews were conducted with a wide range of staff until no new themes emerged (theme saturation). Outside research consultants completed independent checks on the study procedures and analyses. Data triangulation included data collected from observation, interviews, and facility documents collected in the parent study.[26] ''Member checks'' were completed at the end of each case study during an exit consultation interview, and in all cases participants confirmed the themes identified.[28]

RESULTS

The characteristics of the four study NHs suggested that they were similar to NHs in North Carolina (Table 2).[29] No substantive differences in CPG use or reported barriers or facilitators were found between NHs in cross case analysis, and the results are synthesized for clarity.

Below, the current CPGs used in the study NHs are described, followed by barriers to and facilitators of CPG and clinical protocol use reported by participants (Table 1). Quotations have been edited to correct grammar.

Description of CPG and Clinical Protocol Use

CPGs were not used at all in three study NHs. In the fourth, the NP reported that she and the medical director routinely applied internal medicine CPGs and used standing orders based on heart failure and diabetes mellitus CPGs. Nursing staff in this NH were unaware of any CPG use.

Staff from all facilities reported using ''policies and procedures'' to guide their care for common medical conditions. These were referred to as clinical protocols to distinguish them from administrative policies and procedures and from CPGs. The facility or the NH corporation created these, and they served to document and guide care decisions.

Knowledge-Stage Barriers and Facilitators

Unfamiliarity with CPGs—The most prevalent barrier was that only three of 35 staff interviewed were familiar with CPGs. Others (including 3 of 6 medical staff) had never heard

of, or confused CPGs with, a variety of paperwork, including state regulations, incident report forms, training tools, nursing procedure manuals, and standing orders.

Limited Education of Licensed Practice Nurse and CNA Staff—Administrative nurses expressed concern that the limited training and scope of practice of licensed practical nurses (LPNs) would hamper their ability to apply a CPG or clinical protocol. Other staff members noted the limited health literacy of some CNAs with high-school education and suggested that simplified versions were needed.

> LPN: Now, if [protocols] were technical and difficult for a lay-person to read, then they weren't useful to me.

No facilitators of the knowledge stage were identified.

Persuasion-Stage Barriers and Facilitators

"Checklists'' Replacing Clinical Judgment—Multiple providers in all facilities, including CNAs, nurses, NPs, and physicians expressed the belief that CPGs and clinical protocols are inconsistent with an ideal of individualized, patient-centered care and inferior to their professional experience.

> LPN: As far as a guideline, I'll be honest with you, no. [I would never say] ''I'll follow down this list.'' No.

> Physician: Protocols are great and all, but the specific milieu varies from patient to patient. I know what I need to focus on for each patient.

> CNA: I've been doing this for twenty-some years, and I think that some of my ways are better than some of the ways they're wanting us to do it.

Conflict with Resident and Family Goals or Expectations—Two nurses noted that sometimes resident or family goals and preferences conflict with CPG recommendations.

> Nurse Supervisor: It's not that we don't know [hip protectors] are effective, we just don't have many [residents] that will wear them.

In contrast to these barriers, staff noted several facilitators to the persuasion stage of diffusion of innovation.

Flexible Suggestions and Reminders—Six nurses valued being reminded about the appropriate management steps to improve the quality and timeliness of care.

> Quality Assurance (QA) Nurse: And then they have [the protocol] to follow so you don't miss things. . . . You forget about the basic little things sometimes.

For these staff, a ''checklist'' was valued as promoting thoroughness. It is not clear why some staff were more amenable to the notion of checklists than others.

Teaching and Empowering Front-Line Staff—Three nurse managers expressed the belief that CPGs and clinical protocols may empower the charge nurses to take more initiative and better understand the rationale for recommended care.

> LPN Supervisor: The CNAs need to know why this is important. Not just, ''I need you to do this, I need you to do that.'' . . . This is why this is important for this particular resident.

Promote Evidence-Based Care—The NP who used CPGs in her practice stated that institutional memory can sometimes lead to the continuation of ineffective practices and believed in CPGs as a way to promote ''proven'' care.

NP: I think it is better to do stuff that has been proven to be effective . . . rather than just doing them because that's the way everybody used to do it.

Decision-Stage Barriers and Facilitators

Time to Implement—Once staff was persuaded that CPGs and clinical protocols were valuable, staff at all four homes reported that time concerns forced prioritization of other tasks ahead of the decision to implement protocols.

QA Nurse: I think we are going to get to it, and then something else comes up. . . . Because we are all juggling a lot of extra jobs, and then more gets dumped on you.

Staffing Issues—Charge nurses at two homes reported that perceived understaffing resulted in an environment in which protocols were often bypassed.

LPN: So you take your shortcuts. . . . You don't document like you should, you don't really observe that patient frequently like you should, and you miss things.

Corporate or State Mandates—In this environment of limited staff time, the only factor reported to facilitate the decision to adopt a CPG or clinical protocol was corporate or state requirements.

Interviewer: Has [your facility] decided to use any practice guidelines?

DON: Yeah. We have to do the policies and procedures [that come from] the company.

Implementation-Stage Barriers and Facilitators

Limited Facility Resources—Two nurse managers noted that facility resources did not always allow for adherence to all steps in protocols.

Staff Development Nurse: For example, patient comes in . . . has high risk for falls. Some of us might think that the patient needs a [low] bed, but we don't have any [low] beds in the building.

A DON believed that input from charge nurses and CNA staff was required to make the protocol feasible in their environment.

DON: Some of the things are unrealistic. . . . Let's say, for instance, with toileting, every 30 minutes. Come on, that is not going to work, because you have 10 patients, and you are not able to get back to those patients every 30 minutes.

Poor Communication of Clinical Issues—Staff at all four NHs noted that poor communication between provider groups and across shifts was a barrier to dissemination of protocols.

Medical Technician: Care plan [team members] don't communicate with me . . . I don't get much information from care plan [team]. I don't deal with them much!

Health Insurance Portability and Accountability Act Interpretations Limit CNA Clinical Information—A further issue affecting the use of clinical protocols is the interpretation of Health Insurance Portability and Accountability Act (HIPAA) regulations by three of the four NHs to restrict CNAs from access to the resident chart, even though they would be carrying out many protocol interventions.

> CNA: There are a lot of people that don't think CNAs need to know [the residents' diagnoses], but I think we do. I think that helps us to deal with them. . . . When I was in orientation, I was told we didn't have the authority to look at the resident's charts. It is confidential.

Computer Availability—Although computers were available at the nursing station in only one NH, the DON believed that this would facilitate access and implementation of clinical protocols.

> DON: We [will soon be getting] procedures online, for pretty much everything we do. And I think that would help [the nurses], because they can print it off, and they can study it.

Confirmation Stage Barriers and Facilitators

Once staff had implemented clinical protocols, several attitudes affected whether they were fully accepted throughout the NH.

Resident Variability Means CPGs Do Not Work for Everyone—Three floor nurses and four CNAs stated that high variability in resident comorbidities and goals resulted in few solutions that would work for all residents. They appeared to believe that this limited the utility of clinical protocols.

> LPN: Every situation is different. I guess, like it says, they're guidelines; something to go by. . . . Sometimes they are helpful, and then sometimes this one isn't going to work for this resident necessarily.

Numerous ''Protocols'' Overwhelm Staff—The tremendous burden of paperwork was a common theme in all four NHs. Clinical protocols were seen as yet another requirement to follow.

> Staff Development Nurse: Sometimes they get a little too much, overload. You got guidelines for care plans, tube feedings, [tracheostomy] care, HIPAA, OSHA, dysphagia protocol . . .
>
> The nurses can't get the bulk of the work done because, once they have finished the clinical stuff, they got to do the paperwork.

In contrast, several staff noted that clinical protocols and CPGs were valuable when incorporated into their routines.

Training Tools—LPNs, CNAs, and nurse managers reported that CPGs and protocols are useful as training materials to help them keep ''up to date'' with progress in a field.

> Interviewer: Do you think guidelines would be helpful to you? CNA: Sure, we can use all the information we can get. . . . Talking about how to take care of Alzheimer's patients, . . . Parkinson's, and stuff like that.

CPG-Based Standing Orders—In one facility, the medical director created standing orders for chronic conditions such as CHF and diabetes mellitus that incorporated CPG recommendations. If followed routinely, standing orders such as these would be a systematic means of adopting CPGs for some conditions.

Incorporated into Required Tasks—Two registered nurses were able to promote CPG-recommended care while carrying out their regulatory tasks. A QA nurse created data collection forms for weight loss, which prompted staff to add recommended interventions, and a

Minimum Data Set (MDS) nurse placed clinical information on charts to help guide the LPN's documentation.

> LPN: If we have a resident come in with pneumonia, our MDS Nurse will put guidelines on the front of the patient's chart. . . . And if you don't use the guideline to make sure you monitor every little thing on that sheet, you just get the main things.

DISCUSSION

These results add to the understanding of why CPGs and clinical protocols are not widely used in NHs. The study has several limitations. Qualitative analysis limits this article to description and hypothesis generation.[30] As anticipated by the early stages of the diffusion-of-innovation model, knowledge and use of CPGs was low. To overcome this, a wide range of providers likely to be subsequently involved in diffusion was included, and the concept of CPGs was expanded to include clinical protocols, which are frequently created to operationalize them.[2–4] Despite these concerns, the factors that were identified have implications for researchers and clinicians and could inform future hypothesis testing and interventions.[18]

Most providers in the study were unaware of CPGs, although the results suggest that better dissemination is not likely to improve use unless the persuasion, implementation, and confirmation barriers are also addressed. Unlike in other practice settings such as outpatient clinics, clinical protocols are already in frequent use, and corporate or regulatory policies promote standardized data collection tools. These offer an opportunity to systematize CPG use. A central Web-based or electronic repository for CPG-based clinical protocols may be useful, although lack of computer access remains problematic.

In the diffusion-of-innovation model, attributes of the innovation are associated with the rate of adoption. If the innovation is not perceived as having a relative advantage, is not compatible with values and beliefs, or is too complex; if results are not readily observed; or there is limited opportunity to try the idea on a small scale, then adoption is slow or may not occur at all.[20] The results of the current study reveal how the staffs' perceptions of the attributes of CPGs may influence their diffusion. Professional notions of patient-centered care may cause staff to reject ''checklists'' but also prize thoroughness and the use of best available evidence. Training should emphasize these attributes and describe customization to resident goals. Strategies that engage MDS and QA nurses to use CPGs during their care planning and quality improvement activities may be a way to improve care in an observable way by linking nurses to evidence-based practice rather than regulatory or corporate-driven policies and procedures.

Improving the use of CPGs in NHs has the potential to improve resident outcomes, although such efforts are unlikely to succeed without attention to the particular barriers and facilitators that are most salient in this challenging environment.

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Table 1

Barriers and Facilitators to Adoption of Clinical Practice Guidelines (CPGs) and Clinical Protocols in the Framework of Rogers' Diffusion-of-Innovation Model[20]

Stage	Barriers	Facilitators
Knowledge—learning about the existence and function of the innovation	Unaware of CPGs Limited education of certified nursing assistant/licensed practical nurse staff	
Persuasion—becoming convinced of the value of the innovation	"Checklists" replacing clinical judgment Conflict with resident/family goals	Flexible suggestions Teach/empower staff Promote evidence-based care
Decision—committing to the adoption of the innovation	Time to implement Turnover, understaffing	Corporate or state mandates
Implementation—putting the innovation to use	Limited resources Poor communication Health Insurance Portability and Accountability Act interpretations	Computer availability
Confirmation—the ultimate acceptance or rejection of the innovation	Variability in residents, "don't work for everybody" Numerous "protocols" overwhelm staff	Training tools Incorporated into regulatory tasks CPG-based standing orders

Table 2

Characteristics of Participating Nursing Homes

Characteristic	Home 1	Home 2	Home 3	Home 4
Bed size[*]	110	200	70	120
Ownership	Religious, nonprofit	National corporation	Regional corporation	National corporation
Payer mix[*]	<20% Medicaid	>80% Medicaid	60% Medicaid	60% Medicaid
	10–20% Medicare	10–20% Medicare	10–20% Medicare	10–20% Medicare
	>50% Private pay	<20% Private pay	20–30% Private pay	20–30% Private pay
Resident mix[*]	Older	Wide age range	Older	Older
	100% Caucasian	70% Caucasian	70% Caucasian	50% Caucasian
	High socioeconomic status	Low socioeconomic status	Middle socioeconomic status	Low-middle socioeconomic status
Behavioral unit	No	Yes	No	Yes
Assisted living	Yes	No	Yes	No

[*] Numbers are approximated to maintain confidentiality.