A Case for the Implementation of Cognitive-Communication Screenings in Acute Stroke

Jacqueline J. Hinckley*

Purpose: The purpose of this article was to illustrate the importance of the implementation of cognitive-communication screenings in acute stroke and to discuss the need for further research on whether and how these screenings are implemented. Cognitive-communication screenings after stroke are the subject of existing practice guidelines and are supported by accumulated evidence.

Method: The author uses an autoethnographic narrative—a tool founded in phenomenology—to provide an in-depth description of the experiences of a family in which one member experienced right-hemispheric stroke. She uses systematic introspection to produce a narrative using literary techniques.

Results: The narrative illustrates the experiences of one family when one of their members has a right-hemisphere stroke, and cognitive-communication impairments are never formally identified by professionals involved in the patient’s care.

Conclusions: The narrative is linked to the published literature and the importance of identifying and managing cognitive-communication impairments after stroke. A model of implementation science is presented as one way to consider the challenges clinicians face when attempting to implement evidence-based practices. The model and examples from other fields show avenues for further research.

Key Words: evidence-based practice, cognitive-communication, screening, stroke, rehabilitation

Cognitive-communication impairments are among the most common consequences of stroke (Lawrence et al., 2001). These impairments include disorders of arousal; attention; learning and memory; and visual perception including neglect, executive functions, speech, and language, consistent with the American Speech-Language-Hearing Association’s (ASHA) definition of cognitive-communication disorders (ASHA, 2005). Estimated prevalence of cognitive-communicative impairment after first-ever stroke ranges from 39% (Patel, Cosshall, Rudd, & Wolle, 2003) to 49% (Nys, van Zandvoort, de Kort, Jansen, et al., 2005) and up to 77% (Riepe, Riss, Bittner, & Huber, 2004). A conservative estimate, then, is that perhaps as many as half of all patients with stroke have some form of cognitive-communicative impairment.

To put this in perspective, incidence rates for swallowing disorders after stroke also range from 37% to 78%, according to a systematic review based on 24 published articles (Martino et al., 2005). Estimated incidence rates varied with type of assessment. The lowest rates of impairment were associated with bedside screenings, and higher estimates were associated with instrumental assessment. Of interest, the range of estimated incidence of dysphagia after stroke is similar to the estimated incidence of cognitive-communicative impairments after stroke.

Cognitive-communicative impairments after stroke have potentially serious long-term consequences. Cognitive impairments after stroke are associated with a higher rate of death and a higher risk of future stroke (Donovan et al., 2008; Tatemichi et al., 1994). Patients with cognitive impairments have a mortality rate of 19.8 deaths per 100, compared with a rate of 6.9 deaths per 100 for those without cognitive impairments, after controlling for other demographic and physical factors such as age, other health risk factors, and physical disability (Tatemichi et al., 1994). Although the exact nature of the relationship between cognitive impairment and death rate after stroke is unclear, cognitive-communicative impairment may lead to (a) lack of adherence to medication or other medical regimens or (b) lack of judgment or decision making in health-related behaviors. The relationship between cognitive impairment and poorer outcomes has been observed in a number of studies (for reviews, see Barker-Collo & Feigin, 2006; Nys van Zandvoort, de Kort, van der Worp, et al., 2005; Paolucci et al., 1996; Patel

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et al., 2003; Wade, Leigh-Smith, & Langton Hewer, 1985; Wai-Kong Man, Fai Tam, & Hui-Chan, 2006; Zinn et al., 2004).

It is not surprising, then, that clinical practice guidelines, which are based on syntheses of the literature, recommend the identification of cognitive-communication disorders after stroke. Practice guidelines are recommendations for the best care based on currently available moderate-to-strong evidence (ASHA, 2004). Clinical practice guidelines are one way in which research findings about best practices are summarized and disseminated, with the goal that the guidelines will be implemented in clinical practice (Haines & Jones, 1994).

One clinical practice guideline that addresses cognitive-communication impairment in stroke is the Veterans Administration/Department of Defense (VA/DoD) Clinical Practice Guideline for the Management of Stroke Rehabilitation (Management of Stroke Rehabilitation Working Group, 2010), a practice guideline endorsed by the American Heart Association and the American Stroke Association. The purpose of this practice guideline is to provide an evidence-supported process that will yield best practices in stroke care. The guideline presents a 31-step algorithm that covers the nature and timing of different types of screenings, assessments, treatments, and family education from the acute phase to community living. The practice guideline was developed on the basis of expert panel ratings of a comprehensive and systematic literature review for each of the steps in the algorithm, ultimately including 301 published articles. Screenings followed by assessments, when indicated, are among the guidelines’ recommendations. These screenings and assessments serve to determine rehabilitation needs in domains of clinical practice for speech-language pathologists (SLPs), including swallowing, speech, language, and cognition. This process should lead to enrolling identified patients into a comprehensive rehabilitation program, which is linked to improved patient outcomes (Reker et al., 2002).

A similar process of cognitive-communicative screenings followed by assessments is recommended by the stroke practice guideline of the Scottish Intercollegiate Guideline Network (SIGN, 2010) and also the Canadian Best Practice Recommendations for Stroke Care (Lindsey et al., 2010). The three guidelines (VA/DoD, SIGN, and Canadian Best Practice Recommendations) recommend that all aspects of communication and cognition—which include speech, language, attention, memory, executive functions, and visual–spatial abilities—be assessed for the purpose of determining rehabilitation needs. These practice guidelines are intended for use by all professionals treating individuals with stroke, including SLPs.

The VA/DoD practice guideline (Management of Stroke Rehabilitation Working Group, 2010) recommends the use of standardized assessments from which clinical recommendations about the need for rehabilitation can be made. In a study designed to assess the validity of an older, related practice guideline (Gresham, Duncan, & Stason, 1995), Edwards and colleagues (2006) compared the results of a formal cognitive-communicative screening to routine practice. They allowed all of the professionals seeing patients with stroke to complete their typical routines and make notes in the chart. Then, they compared these clinical notations in the medical chart to the results of a formal cognitive-communicative and language screening battery administered by a member of the research team. They observed that 65% of the 59 patients with acute stroke who received the formal screening battery demonstrated anomia, followed by high incidence rates for memory impairments (61%), neglect (52%), hearing impairments (41%), and aphasia (36%).

When the formal screening results were compared to typical clinical observations made in the patients’ charts, large percentages of cognitive-communicative impairments were overlooked in routine care compared with the results of the formal cognitive-language screening. Anomia was missed in 97% of cases for which it was detected on the formal cognitive-communicative screening; only one of the 34 cases of anomia was identified in routine clinical observation. Hearing impairment was missed in 86% of cases, and aphasia was missed in 79% of cases compared with the number of cases positively identified on the formal screening. Visual–spatial neglect was missed in 61% of cases, and memory impairments were missed in 31% of cases. The critical importance of using formal screening tools, as recommended by the practice guideline, is emphasized by these high numbers of overlooked and missed impairments when practitioners relied solely on informal observation.

It is critical to identify cognitive-communicative impairment because identification offers the potential to manage these impairments either through direct rehabilitation or by providing accommodations. Cognitive-communicative impairments that are not identified cannot be managed in any way. The use of formal assessment tools, supported by existing practice guidelines, is an important way to identify potential impairments.

**Implementing Practice Guidelines**

Although the development of practice guidelines has advanced research-to-practice transfer (Dijkers, Murphy, & Krellman, 2012), concerns have arisen about the frequent lack of implementation of clinical practice guidelines (Grimshaw et al., 2004; Turner, Misso, Harris, & Green, 2008). There is some evidence from other disciplines which suggests that screening tools and other clinical procedures, even when recommended by practice guidelines, are not always implemented (Rosen et al., 2004). In mental health, best practice guidelines support the screening for co-occurring disorders when patients present for substance use treatment. A nationwide survey of mental health facilities showed a low-to-moderate adherence rate to these screenings (from 26% to 62% of facilities; Maisto & Kivlahan, 2008). On the basis of a survey within the VA health care system, only 68% of mental health clinicians who were surveyed adhered to the recommended practice of conducting a cognitive screening for patients diagnosed with dementia (Rosen et al., 2002).

Adherence to the recommendation for the implementation of a formal cognitive-communicative screening.
according to the Canadian Best Practice Recommendations for Stroke Care (Lindsay et al., 2010) was assessed through a retrospective chart review of 123 patients who had been discharged from an inpatient stroke rehabilitation unit in Ontario, Canada (McClure, Salter, Foley, Mahon, & Teasell, 2012). These researchers abstracted, reviewed, and coded medical records for the reporting of a formal measure for cognitive screening. Of the 123 patients’ records reviewed, 82.9% received a formal cognitive assessment, and 80% of those received the cognitive assessment within 5 days of admission. A majority of those screened (77.5%) scored within the screening threshold for possible cognitive-communication impairment, which would suggest the need for further evaluation. It is unfortunate that only 3.7% of the patients who met the screening criteria for possible cognitive impairment were referred for additional evaluation. Some of the patients who did not receive a cognitive-communication screening may have had obvious impairments that indicated a need for full evaluation rather than screening. Nonetheless, this study may have had obvious impairments that indicated a need for further evaluation. Some of the patients who did not receive a cognitive-communication screening may have had obvious impairments that indicated a need for full evaluation rather than screening. Nonetheless, this study of one inpatient stroke rehabilitation unit in Canada suggests that there may be inconsistent compliance with the practice guideline recommending cognitive-communication screening, and as a result, patients with cognitive-communicative impairments may be underidentified.

A field of study termed implementation science has evolved around the need to focus investigative efforts on how evidence-based practices are applied. Implementation science has been defined as the process by which an evidence-based program is used by clinicians and delivered successfully and faithfully to clients (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Efforts in implementation science are far-reaching, and they attempt to characterize and facilitate how individual clinicians can efficiently and effectively use evidence-supported practices.

In an extensive literature review across several disciplines, Fixsen et al. (2005) systematically reviewed 743 published articles to abstract key components of the implementation of evidence-supported innovations across a number of different disciplines. The conceptual framework that emerged has three main components. First, a source develops a particular intervention or technique and demonstrates its efficacy through accumulated evidence. The information from the source is typically conveyed to a destination, or those users of the evidence-supported practice. Between the source and the destination is a communication link of some kind, whose role is to facilitate the use of the practice with fidelity through activities such as staff training, coaching, and evaluation.

SLPs perceive that a lack of information about how to implement an evidence-based practice in real clinical settings is a barrier to evidence-based practice (Metcalfe et al., 2001; Rowe, 2010). One way to address clinicians’ concerns about how to apply generalized evidence-based practice guidelines to clinical circumstances is to disseminate detailed case examples that provide an opportunity to discuss how general evidence-supported practices can be implemented within a set of particular contextual constraints and characteristics. A detailed case example can describe and discuss issues relevant to clinician practice choices, institutional/managerial policies and programs, family and psychological issues, economic and insurance constraints, and specific patient characteristics and complexities (Hinckley, 2008). Case examples can be selected as extreme or deviant examples to illustrate a particular phenomenon (Hatch, 2002). Such an example can serve to demonstrate the need for attention and further study in a particular area.

In this article, a highly contextualized example of the issues surrounding cognitive-communicative screening after stroke from the point of view of a family member is presented. The experiences of my family during my brother-in-law’s right-hemisphere stroke are used as an in-depth contextualized exploration of the need for the implementation of cognitive-communicative screening after stroke. The narrative is intended to illustrate what can happen when a formal cognitive-communicative screening is not implemented.

The case is presented in the form of an autoethnography, a qualitative methodological tool. The purpose of this autoethnography is to illustrate the importance of implementing the practice guideline in a specific case and to point to clinical challenges that may need to be addressed with further research.

### Autoethnography

Autoethnography is a form of ethnographic narrative that links the researcher’s own life events and perceived experiences to analysis and interpretation of professional literature. It is the use of the researcher’s own experience within a narrative form that portrays some aspect of lived experience, in accordance with principles motivated by phenomenology, and builds on social science inquiry methods in anthropology. It has been defined as “a form of self-narrative that places the self in a social context” (Reed-Danahy, 1997, p. 6). Autoethnography differs from personal narrative or memoir in its efforts to analyze connections between personal experience and culture, interpreting observations in the context of an established literature (Chang, 2008; Ellis, 2004; Hinckley, 2008; Hinckley, 2014; Muncey, 2010).

Autoethnography is not simply a retelling of life events, as in an autobiography or personal narrative. While important events and experiences are described, the researcher’s reactions to these events, including emotional reactions, are included in the narrative. These reactions are important because they illustrate the social and personal meaning that is constructed from the events. In this approach, the researcher explicitly acknowledges that his or her personal experiences affect the scholarly work, while clearly and specifically bringing those experiences to bear on analysis and interpretation.

An autoethnographic narrative is produced by first engaging in systematic introspection (Ellis, 1997), a process that requires the reliving of the events, including reactions to them. During this process, the events that are being studied are reflected upon, and their meanings are interpreted. Temporal distance between the lived event and the writing of the autoethnography allows for separation and reflection in order to reconstruct it evocatively.
A key component of the autoethnography is the writing process itself. The written narrative is both method and result; the researcher relives the experience both through systematic introspection and through the creation of an evocative narrative (van Manen, 2007). In addition to describing the emotional aspects of the experience, the writer attempts to evoke a similar experience in the reader through the use of literary or evocative writing techniques. The purpose of the written autoethnography is to invoke literary truth or lifelikeness. Thus, the text should convey the meaning of the experience rather than a chronology of events.

Literary techniques help to accomplish one of the purposes of autoethnography, which is to explore and communicate aspects of emotional, lived experience that are difficult or impossible to capture otherwise. Autoethnography can be used to illustrate a concept, explore an issue, tell a story, or reflect on a culture or state. This ethnographic tool is being used in the disciplines of medicine, including narrative medicine, and also in communication, occupational therapy, and nursing (Charon, 2006; Ellis, 2004; Hinckley, 2008). Two examples of autoethnography in speech-language pathology include the reflective processes that contribute to implementing a client-centered approach in a single aphasia therapy sessions (Hinckley, 2005), and clinical experiences during a clinical trial of goal-setting techniques in rehabilitation (Bright, Boland, Rutherford, Kayes, & McPherson, 2012).

This article presents an autoethnography intended to explore the issues surrounding the implementation of formal cognitive-communicative screening and assessment after stroke. The experiences of my family during my brother-in-law’s right-hemisphere stroke are described in an evocative narrative, and this narrative is linked to the literature addressing cognitive-communicative screening after stroke.

Method

In this case, I used systematic introspection to reflect on a series of events surrounding my brother-in-law’s stroke. I wrote notes during the actual events and referred to them during the reflective process that helped me produce the narrative that follows. The narrative in the next section is the result of an active introspective process in which the events are recalled at least 2 years after their occurrence. I use literary techniques in an effort to recreate my emotional experiences. Conversations were not recorded; they are written here in the way that they are now recalled in my memory.

The separation in time between the actual events and the written narrative contributes to the personal and social construction of meaning. In this case, the time has also allowed me to link my personal experiences to our professional literature.

I am going to tell you the story of my brother-in-law’s stroke for two purposes. First, I want to demonstrate, in a highly contextualized way, the potential ramifications when cognitive-communicative screenings are not performed after right-hemisphere stroke. Second, I want to explicitly acknowledge the lens through which I am addressing the topic of cognitive-communicative screenings.

After writing a first draft of this entire article, and before submitting it for peer review, I gave the article to my brother-in-law and my husband to read. I asked them to respond honestly to the article. After conversations with each of them separately, I also asked each of them whether there would be any concerns about publishing this story in a professional journal. My husband, brother-in-law, and two other members of my immediate family stated that they felt it was an important issue to bring to a professional audience and granted their full consent to the submission, review, and ultimate publication of this article. In an attempt to respect my family members’ privacy as much as possible, and with their consent, I have changed identifying information within the narrative.

An Autoethnography

“Lee had a stroke,” my husband, John, said as I got into the car.

“What?”

“Lee had a stroke. I just got a call from his son.” My husband told me that his brother, Lee, a 55-year-old professional cartoonist, had experienced a right cerebral hemorrhage due to a ruptured aneurysm. Lee had been sketching as usual in his studio. A colleague dropped by and found him lying unresponsive on the floor. He was immediately taken to the hospital where the hemorrhage was managed, and his life was saved.

As medical SLPs, both my husband and I knew the range of possible consequences for a stroke that begins with at least a few hours of unresponsiveness. Cognitive impairments, aphasia, hemiparesis, apraxia, dysarthria, dysphagia … we knew from the serious, searching look on each other’s faces that we were both superimposing Lee’s face on all the patients with stroke we have ever seen.

John left immediately for the hospital, which was 300 miles away. When he called after his arrival, he reported that some of our worst fears were confirmed. Barely opening his eyes, Lee lay in the bed with a dense left hemiparesis, almost completely unresponsive.

By the third day, an SLP came by to conduct a bedside swallowing evaluation on Lee, who was still in the Intensive Care Unit (ICU). Lee was too unresponsive to participate in an evaluation. The swallowing assessment was deferred until the sixth day, when Lee was able to stay awake long enough to safely take in food. By that time, Lee was awake for short periods and was talking. The nasogastric tube was pulled, and he was placed on a pureed diet.

John was there for that bedside swallowing evaluation, observing and drawing his own conclusions. Lee was not dysarthric, although he had a dense left hemiparesis. John suspected that Lee would not have much trouble eating, but for the first 2 or 3 days, John was there in the hospital with Lee at almost every meal, watching, conducting his own unofficial continuous evaluations.

“He doesn’t know where he is,” John told me over the phone. “I think he knows who I am and that I’m here, but I’m not sure.”

There was no apparent swallowing problem, and Lee was advanced to a soft mechanical diet with thin liquids. John
fed him and talked to him during his meals, considering mealtimes were when he was most likely to be awake and alert.

“I told him today that he had a stroke,” John told me. “He said, ‘No, I didn’t. Get me out of here.’”

After 18 days in the ICU, Lee was transferred to a regular inpatient service. He was restrained with a posey and mittens because he kept pulling his IV out.

“He can eat, but he’s not making sense,” John reported. “Today he leaned forward to tell me he was in the middle of a conspiracy. He said, ‘You know, this may look like a hospital, but when you leave it turns into a big infomercial, and they all try to sell me things.’”

“The physiatrist came by today,” John continued before I could respond. “But he only examined movement on Lee’s left side—nothing else.”

“Where are the therapists?” I asked him. “What happened to that speech pathologist who did the swallowing eval?”

“I don’t know. I’m here all day, but I can’t find anybody, and nobody comes by. The nurse and the social worker tell me they will pass the message, but there’s no therapy.”

The next day, Lee was seen by a physical therapist, and he began to make noticeable physical improvements each day. Still no SLP came to see him.

“They had him walk out of his room into the hall today,” John told me by phone a few days later. “He’s really doing well. But I wish someone would check into his cognitive status. I keep trying to explain to his friends and his son that he’s confabulatory and disoriented, but they keep explaining these things away, saying ‘Well, he’s an artist.’”

“Do you think anyone—the doctor or anyone—has ever made a note in his chart about his cognitive impairments?” I asked John.

“Maybe nursing,” John replied. “Apparently last night, Lee stumbled to the nursing station at 3 a.m., saying he needed his wallet and keys because he was hungry and needed to go out to get something to eat. The nurse explained that he was in a hospital, wearing a hospital gown, and he didn’t have any wallet and keys. Lee made quite a fuss and needed ‘help’ to get to sleep after that.”

“I’m going to call the speech pathology department myself,” I said to John. “Where are they? We need some authority figure, some therapist, to explain to the rest of the family that Lee has cognitive problems. I’m not sure why Lee’s friends and his son don’t really believe that we know something about this, but they don’t. Is it because we are part of the family? Do they think we’re just being negative? They don’t even understand that he still needs rehab! How is he going to get the right postacute services if no one even acknowledges these cognitive issues? I have to figure out something to do about this!”

John tried to reassure me. “No, honey, it’s OK. I’m here in the hospital every day. Let me talk to everyone here.”

“Do you think they are assuming that you and I are taking care of his cognitive issues, since we’re SLPs, even though we’re family?” I asked.

“I don’t think any nurse, doctor, or therapist here has the slightest idea what we do for a living,” John replied, dejected.

About 5 days before Lee’s expected discharge from acute care, John administered parts of the Cognitive Linguistic Quick Test (Helm-Estabrooks, 2001). We were interested to know whether his clock drawing performance, which is often used in neurological evaluations, suggested any impairment. We thought this task might be particularly revealing considering the fact that Lee was an artist. (The clock he drew is shown in Figure 1.) John also asked him to copy the figures from the Mini-Mental State Exam (Folstein, Folstein, & McHugh, 1975; see Figure 2). We were saddened to see his drawings and were fearful of the implications that this impairment might have on his future ability to work. I became even more upset that no one in acute care was mentioning what seemed, to me, like impairments that were quick and relatively easy to identify based on clinical screening tools like the clock drawing task, not to mention his irrelevance and confabulation during conversation.

John handled part of his frustration by giving Lee a short battery of tasks (see Table 1). On these simple tasks, memory and executive function impairments became very apparent.

Looking at those drawings and data now, I feel a hollow sadness, a sense of loss and abandonment. I know how much SLPs have to offer to individuals with cognitive-communicative impairments. But that expertise and care were not offered in the particular facility where Lee was—or by those particular therapists. Lee was lucky to have two experienced SLPs in his family, but most people do not.

Figure 1. Lee’s clock drawing at about 2.5 weeks post onset.
On the 25th day of his hospitalization, Lee was discharged to a rehab facility. During 3.5 weeks in the hospital, he was seen only two times by an SLP, and both visits were only for swallowing evaluation. No doctor and no therapist ever told him or anyone in his family that there were cognitive impairments or that there was even the possibility of cognitive impairments after a right-hemispheric stroke.

In our combined 45 years of hospital-related experience, my husband and I have seen good and bad medical practice, good and bad therapeutic practice, and the whole range of family responses to all kinds of rehabilitation goals and efforts. We understand the challenges that clinicians face as they try to give the best care possible within the constraints of imperfect work conditions, unclear organizational structures, and an inadequate health care system. Nevertheless, our hearts were broken. The profession in which we have spent our lives did not offer the full battery of help our hearts were broken. The profession in which we have

ted impairments after a right-hemispheric stroke.

Recall of three unrelated words
after 2-min delay
Animal naming (60 s)
Wisconsin Card Sort
(Grant & Berg, 1993)

<table>
<thead>
<tr>
<th>Task</th>
<th>Performance (accuracy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall of three unrelated words</td>
<td>One item recalled</td>
</tr>
<tr>
<td>after 2-min delay</td>
<td></td>
</tr>
<tr>
<td>Animal naming (60 s)</td>
<td>Eight named</td>
</tr>
<tr>
<td>Wisconsin Card Sort</td>
<td>Two categories learned</td>
</tr>
</tbody>
</table>

Speaking to several friends and colleagues in speech-language pathology about Lee, I was stunned when I heard others echo our experiences. “I know; that happens all the time,” one said. Another commented, “That happened to me when my grandmother was in the hospital and had aphasia.” And another: “That happened to a friend of mine, and she couldn’t get the speech pathologist in the acute-care hospital to ever see her mother-in-law.”

When I realized that my experience was not an isolated one, I sought consolation in the familiar territory of professional literature. I began searching systematically. Immersion into the role of “family member” seemed to have loosened my grip on evidence, guidelines, and standards. I accessed the ASHA website, and went to the Compendium for Evidence-Based Practice (www.asha.org/members/ebp/compendium). Right-hemisphere disorder was not listed as a separate entry at the time that Lee’s stroke occurred (although, it is now). Reading the VA/DoD guidelines, I felt sudden relief—the notion of “best practice” for stroke was still there, the way I thought I remembered it—and at the same time, I felt despair that my profession was not coming through for Lee. I was living an experience that did not accord with my professional knowledge.

Reflecting on my experience, I realize that I at once feel empathy and anger. I can imagine the harried SLP in Lee’s facility, trying to do the best possible given a too-large case-load, too little time, and too many organizational pressures about reimbursement, productivity, or the technicalities of referral type. But the lack of attention to Lee’s cognitive-communicative needs was not fair, not helpful, and—without two SLPs in the family—potentially harmful. Would Lee ultimately have received any cognitive therapy if he had not had us as advocates? Would he have been discharged with little to no cognitive rehabilitation? Would untreated, residual cognitive impairments prevent him from being able to make a living or live independently? Would his friends simply dismiss him as “eccentric,” or would he lose his friends because he was just too socially odd?

It is impossible to say whether Lee would have received needed cognitive rehabilitation without my husband and me as advocates; but practice guidelines, such as those generated by the VA/DoD and endorsed by the American Heart Association and the American Stroke Association, indicate that patients with stroke who receive appropriate rehabilitation during the acute period make substantially better improvements than those who do not (Duncan et al., 2005). Receiving this needed cognitive rehabilitation begins with the screening in acute care.

Lee was discharged to a rehabilitation facility, where he received occupational therapy (OT) and physical therapy (PT) for about 5 weeks. Although he was offered the opportunity to paint a mural to assess previous work skills, he refused to do so. It seemed to my husband and me that this was too complex a task to ask of him at the time. Had the therapists asked him to start with something simpler or smaller, perhaps he might have participated. He received some traditional, workbook-style cognitive therapy in OT, including work on his impaired way-finding.
At the end, Lee was discharged to his home with assistance from his son. My husband and I completed a key life activities assessment (Simmons-Mackie, 2001) for Lee. That description of what his life was like before and what it is like now is shown in Table 2.

Discussion

The purpose of this autoethnography was to explore the importance of implementing cognitive-communicative screenings after stroke in a highly detailed example. This narrative illustrates that the lack of a cognitive-communicative screening after stroke may have personal, long-lasting consequences to the patient and the family.

It is impossible to say whether outcomes for Lee would have changed if a cognitive-communicative screening had been administered during his acute-care stay. To my knowledge, the only empirical data about the frequency with which standardized cognitive-communicative screenings are administered after stroke in routine clinical care come from a single report of an inpatient stroke unit in Ontario, Canada (McClure et al., 2012). Therefore, it is impossible to know whether my narrative represents an extremely unusual example across all U.S. health services, a typical example for this facility but an unusual example nationwide, or an average example. A number of cognitive-communicative impairments are commonly observed among individuals with right-hemisphere disorder (Blake, Duffy, Myers, & Tompkins, 2002), and a systematic review of the literature on cognitive rehabilitation supports cognitive-communication treatment for patients with stroke (Cicerone et al., 2005). Thus, there is evidence-driven motivation to identify cognitive-communication impairments so that they can be effectively managed.

Current Best Practice for Cognitive-Communicative Screenings

Cognitive-communicative screenings followed by additional assessment as needed are recommended as part of a comprehensive stroke management process by multiple clinical practice guidelines (Lindsay et al., 2010; Management of Stroke Rehabilitation Working Group, 2010; SIGN, 2010). The evidence supporting this recommendation is rated as fair; there is moderately strong evidence to support the use of routine cognitive-communicative screenings and assessments in stroke.

Some stroke practice guidelines either do not mention cognition or communication specifically or they describe guidelines for assessing aphasia and/or dysarthria only—without mention of cognitive-communicative impairments. Clinical practice guidelines vary depending on the publications and publication years incorporated, the rating of the evidence, and many other factors. Indeed, rating scales such as the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument have been created to evaluate clinical practice guidelines (AGREE Collaboration, 2001).

Clinical practice guidelines and their recommendations are intended as a tool to summarize current best evidence that the clinician will incorporate into their practice using their clinical expertise and judgment (Dijkers et al., 2012). At this time, there are no known recommendations against conducting cognitive-communicative screenings, and there is some moderate evidence on which to recommend it. Thus, the best supported practice, at present, is to conduct cognitive-communicative screenings using formal screening tools for patients who have experienced stroke. Multiple formal tools for cognitive-communication screening exist, with no clear evidence yet on the psychometric or predictive superiority of any single tool. However, the Montreal Cognitive Assessment (Nasreddine et al., 2005) is emerging as one of the more sensitive and accessible tools for use in stroke management (Blackburn, Bafadhel, Randall, & Harkness, 2013).

Clinician and Organizational Factors for Implementation

Implementing any evidence-based practice can be a complicated and wide-ranging issue (Ratner, 2006). Any individual clinician may be balancing a number of different demands on time and effort across the caseload over the

<table>
<thead>
<tr>
<th>Pre-onset</th>
<th>Initial assessment (acute-care discharge)</th>
<th>Follow-up (1 yr after rehabilitation discharge)</th>
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<tbody>
<tr>
<td>Lived alone</td>
<td>In a skilled nursing facility for rehabilitation</td>
<td>Lives alone</td>
</tr>
<tr>
<td>Long walks with the dog along a variety of routes</td>
<td>Talked to family and friends frequently by phone</td>
<td>Talks to family and friends frequently by phone</td>
</tr>
<tr>
<td>Talked to family and friends frequently by phone</td>
<td>Went out to eat frequently</td>
<td>Goes out to eat occasionally</td>
</tr>
<tr>
<td>Traveled regularly for work</td>
<td>Hosted large family holiday dinners and events</td>
<td>Travels rarely for work or pleasure</td>
</tr>
<tr>
<td>Worked as an independent artist/cartoonist with a good income</td>
<td>Supportive visits by family and friends</td>
<td>Attends family dinners and events</td>
</tr>
<tr>
<td></td>
<td>Works some weekends at a large discount store distributing samples; paints vases and other small projects</td>
<td></td>
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</table>

Table 2. Key life activities assessment (Simmons-Mackie, 2001) for Lee before and after his stroke.
course of any given day. Clinicians have to make adjustments and compromises on issues that can challenge their professional ethics, their time, their skills, and their desire to provide high-quality care to their clients. Clinician variables are critical factors that contribute to guideline implementation; they can include attitudes toward the practice, perceived value of the practice, or perceived ethical considerations vis-à-vis the practice (Barosi, 2006).

Administrative and institutional policies and procedures also affect clinical decisions and the implementation of clinical practices. Organizational policies about the types of assessments to be administered, the timing of evaluation or treatment, how the clinician’s performance is evaluated by the institution, and other issues can constrain the way in which a clinician implements any evidence-based practice.

Clinician factors. Professional ethics may motivate clinicians to act on the clinical practice guideline for cognitive-communicative screening after stroke. In her eloquent article, Catt (2000) discusses the complementary nature of patient-centered clinical ethics and professional-centered ethics and argues that a critical feature of ethical clinical conduct is the discourse between all stakeholders. Among her list of critical elements for ethical problem solving in clinical practice, one question to consider is, “What are the short-term and long-term benefits and risks of alternative courses of action?” (Catt, 2000, p. 146).

I do not know what the SLP who saw Lee would think about the short- and long-term benefits or risks of her priorities and actions. But I can think about how I would analyze the tensions between productivity policies and my conduct toward my patients. It seems to me that although the risk of not addressing additional communication consequences, beyond swallowing, might hold the short-term risk of making me run late at the end of the work day, it probably would not have any serious long-term risks. The benefits might be that the patient and one or more family members begin to wonder if there is something going on that will need to be addressed over a longer period of time, beyond the hospital stay. There are no obvious risks of spending a couple of minutes mentioning possible communicative-cognitive consequences. The benefit of discussing other communication issues is to facilitate appropriate discharge planning and to help family members adjust to the potentially long road ahead. From my experience as Lee’s family member, the short-term effects of a lack of identification of cognitive-communicative impairments were stressful: Other family members and friends misunderstood the situation and did not take it seriously enough, thus impeding the family’s ability to plan appropriately for Lee’s longer-term needs. We began to experience tensions between my husband and me, who were already thinking about applications for disability and vocational rehabilitation, and the rest of the family, who could only consider the option that Lee would be discharged to his home as though nothing had happened. With no physician and no therapist even suggesting the possibility of cognitive-communicative impairment, it was difficult for family members to conceive of what future life would be like for Lee and all of us.

Individual clinicians who desire to implement an evidence-supported practice must often do so of their own initiative, perhaps without organizational support. SLPs serving adults in health care settings spend a majority of their time providing service in the area of dysphagia (46%), followed by service provision in the area of cognition communication (21%), according to ASHA’s 2007 SLP Health Care Survey (ASHA, 2007). There are practical, important reasons for this. Patients have immediate needs to get safe and adequate nutrition, and health care practitioners and the patient need to be able to make appropriate hospital discharge plans. Food and the ability to eat are considered a basic human right along with shelter and health (Catt, 2000). However, the potential long-term consequences of unidentified cognitive-communication impairments are also serious and include higher risk of death, recurrent stroke, and lack of independence and mobility (Donovan et al., 2008; Tatemichi et al., 1994). Indeed, cognitive screening in the acute-care phase after stroke, such as ability to eat and swallow, is a significant contributor to successful discharge planning (van der Zwaluw, Valentijn, Nieuwenhuis-Mark, Rasquin, & van Hugten, 2011).

It seems clear that performing cognitive-communicative screenings after stroke in the acute-care setting is critical. It is unknown whether there are any differences in adherence rates for swallowing screenings and cognitive-communicative screenings in stroke. It is also unknown how many SLPs practicing in hospital environments are knowledgeable about practice guidelines such as administering a formal cognitive-communicative screening after stroke.

Organizational factors. The clinician is operating within a complex health care environment and is ultimately responsible for the performance of activities that are the result of the interaction of scientific evidence, policies, professional interrelationships, and logistics. Pressing multidisciplinary and institutional processes, such as formulation of the discharge plan and medical management, often motivate the completion of swallowing screenings. It would be very interesting to investigate whether these institutional and medical pressures contribute to a difference in the implementation of swallowing screenings versus cognitive-communicative screenings.

In a model of implementation of evidence-based practices (Fixsen et al., 2005), the source of a practice establishes its efficacy. This has been achieved in the case of cognitive-communicative screenings; enough evidence has been accumulated to result in recommendations for the practice in practice guidelines. The destination of this evidence is clinicians who work in the acute-care hospital setting with patients with stroke. An important component in the Fixsen et al. (2005) model that appears to be missing in most practice settings is the communication link—individuals or an organization that facilitate the use of the practice with fidelity through staff training, coaching, evaluation, and related activities. Without this link, clinicians are individually responsible for carrying out this evidence-based practice, within the context of a practice environment that may be more or less supportive of the practice.
The role of the communication link can be achieved through organizational processes, such as management and administrative leadership, staff training, staff coaching, and staff evaluation. Active participation and education—including staff training, coaching, and staff evaluation—is required to achieve implementation of any given practice guideline (Barosi, 2006). Personnel must be specifically trained on the practice guideline within the institution, there should be central support for use of the practice guideline, and cultural readiness and acceptance for practice change within the institution must be addressed. Thus, there must be support for the use of the practice guideline at the organizational, managerial, and individual clinician levels. Direct coaching and training processes that stem from organizational and managerial levels are necessary because lecture or education to the clinician alone is not sufficient to impact practice patterns in stroke care (Dykes et al., 2005; Heinemann et al., 2003). Without active implementation processes, the dissemination of a practice guideline via traditional scientific publications does not translate into widespread practice.

**Future Directions**

Similar to other forms of ethnography, autoethnography can serve to illustrate a potential need area and raise additional questions about a phenomenon that will need to be investigated using a variety of research tools, both quantitative and qualitative (Damico & Simmons-Mackie, 2003; Hinckley, 2008). This exploration points to many other questions that should be pursued, including the following research questions.

- How many U.S. hospitals routinely use a formal cognitive-communicative screening after stroke, consistent with clinical practice guidelines?
- With what consistency is the screening administered?
- Is a formal screening administered with fidelity?
- What effect does the use of the formal cognitive-communicative screening have on patient outcomes such as mortality, recurrent stroke, independence, or patient satisfaction?
- What institutional facilitators and barriers exist in the implementation of cognitive-communicative screening after stroke?
- What policy, management, or institutional practice changes are needed, if any, to facilitate compliance with an evidence-based practice, such as conducting formal cognitive-communicative screenings after stroke?

To address these and related questions, we will need to form broad alliances among researchers, clinicians, institutional administrators, and policy makers, who have as their common goal the benefits that are associated with an evidence-based practice such as formal cognitive-communicative screening after stroke. In the field of speech-language pathology, we will need to confront the issue of whether we need organizations that serve as a formal communication link to help individual clinicians and institutions negotiate ways to use evidence-based practices. We must acknowledge the complexities of implementation and recognize that simple dissemination in publications is insufficient to accomplish broad-based implementation of evidence-supported practices. I hope that this autoethnography, framed by the professional literature, will help convince clinicians to conduct cognitive-communicative screenings after stroke and persuade researchers to address the questions that it raises.

**References**


