

Focus on communication: increasing the opportunity for successful staff–patient interactions

Kathy McGilton RN, PhD

Senior Scientist, Toronto Rehabilitation Institute, Associate Professor, Lawrence S. Bloomberg, Faculty of Nursing, University of Toronto

Riva Sorin-Peters PhD, Reg CASPLO, SLP(c)

CCC (Sp) Speech Language Pathologist, The Regional Stroke Program - North and East Greater Toronto Area, Assistive Technology Clinic, Sunnybrook Health Sciences Centre

Souraya Sidani RN, PhD

Professor, School of Nursing, Ryerson University, CIHR Canada Research Chair

Elizabeth Rochon SLP(c), PhD

Associate Professor, Department of Speech-Language Pathology, University of Toronto, Senior Scientist, Toronto Rehabilitation Institute

Veronique Boscart RN, PhD(c)

Lecturer, Lawrence S. Bloomberg, Faculty of Nursing, University of Toronto, Research Assistant, Toronto Rehabilitation Centre

Mary Fox RN, PhD

Assistant Professor, School of Nursing, Faculty of Health, York University, Career Scientist, Ontario Ministry of Health & Long-Term Care

Submitted for publication: 28 May 2009

Accepted for publication: 16 October 2009

Correspondence:

Kathy McGilton RN, PhD

Department of Research

Toronto Rehabilitation Institute

E.W. Bickle Centre for Complex

Continuing Care

130 Gunn Avenue, Suite N236

Toronto, Ontario, Canada

M6K 2R7

Telephone: (416) 597-3422 ext. 2500

E-mail: mcgilton.kathy@torontorehab.on.ca

MCGILTON K., SORIN-PETERS R., SIDANI S., ROCHON E., BOSCARTE V. & FOX M. (2011) Focus on communication: increasing the opportunity for successful staff–patient interactions. *International Journal of Older People Nursing* 6, 13–24 doi: 10.1111/j.1748-3743.2010.00210.x

Objectives. This study reports on a pilot study examining the feasibility of a Patient-Centred Communication Intervention. Aims of this study include: assessing the implementation of the communication care plans; identifying staff perceptions of the intervention; exploring changes in patients' perceptions of care and psychosocial functioning; and exploring changes in nurses' knowledge of and attitude towards communication with patients.

Background. More than 50% of stroke survivors have speech and language impairments. Many nurses lack the specialized skills to effectively communicate with patients and therefore have difficulties understanding the patients' needs.

Design. A one-group pre- post-test design supplemented with a focus group session with nursing staff was used. The intervention consisted of developing individualized communication plans; attending at a workshop; and implementing

a system to support nurses when using the plans. The plans were used over a 2-month period. Focus groups were held with seven nurses.

Results. The pilot study demonstrated feasibility. There was an excellent response rate and nurses adhered to the intervention.

Conclusion. The Patient-Centred Communication Intervention is feasible and has demonstrated potential for a larger-scale study.

Relevance to clinical practice. Providing tailored approaches to communication-enhancement education may be necessary for changes in practice to occur.

Key words: communication impairments, communication intervention studies, interpersonal relations, nurse–patient communication, nurse–patient relationship, patient-centred care

Introduction

While stroke is a leading cause of death in Canada, more than 80% of Ontario stroke patients survive (Tu & Porter, 1999) and of those, 20% live in residential institutions (Heart and Stroke Foundation, 2007; Hakim *et al.*, 1998). In the UK, 25% of long-term care (LTC) admissions are stroke patients (Bowman *et al.*, 2004) and in the US, 20.4% of patients in LTC facilities are stroke patients (Quilliam *et al.*, 2001). Stroke survivors in these settings typically live with substantial and lasting physical limitations and neuro-cognitive deficits including communication impairment (Hakim *et al.*, 1998). To make their needs known, meaningful interactions with care providers, such as nurses, are required. Up to 50% of stroke survivors have speech and language impairments (Bryan *et al.*, 2002). When patients cannot articulate their needs or cannot be understood following a stroke, frustration and agitation are frequent patient responses (Cameron *et al.*, 2008). Symptoms of depression, anxiety and agitation are the ‘neglected’ outcomes of stroke (Mayo, 1998). There is evidence that 35% of patients with stroke have cognitive and behavioural symptoms (Cameron *et al.*, 2008).

Unfortunately, many nursing staff lack the requisite specialized skills and abilities to effectively communicate with patients who have communication impairment and hence have difficulties understanding the patients’ needs (Bryan *et al.*, 2002). Providing assistance with personal care activities such as dressing, toileting and transferring requires frequent interactions between patients and nursing staff. If these interactions are compromised by communication breakdown and associated agitation, personal care interactions are disrupted, undermining the quality of care (Roth *et al.*, 2002). The end result is that the patient’s poststroke abilities and well-being are not optimized. An intervention was developed that focused on training nursing staff in a communication intervention called Patient-Centred Communication Intervention (PCCI).

Background

A growing research base focuses on the training of staff to enhance overall communication with patients in LTC. Results of 11 cohort and observational intervention studies reviewed (McCallion *et al.*, 1999; Burgio *et al.*, 2000; Caris-Verhallen *et al.*, 2000; Bowles *et al.*, 2001; Bryan *et al.*, 2002; Williams *et al.*, 2003; Genereux *et al.*, 2004; Bourgeois *et al.*, 2005; Perry *et al.*, 2005; McGilton *et al.*, 2006; Shelton & Shryock, 2007) indicated that communication training increased nurses’ willingness and comfort to communicate with patients (Bowles *et al.*, 2001; McGilton *et al.*, 2006), reduced staffs’ use of elderspeak (i.e. terms of endearment), increased respect from staff towards patients (Williams *et al.*, 2003) and reduced nurses’ level of frustration (Bryan *et al.*, 2002). Shelton and Shryock (2007) found that, upon completion of training, staff used several of the communication strategies they had been taught. Patients benefited in terms of an increase in social interaction and a decrease in depressive symptoms (Burgio *et al.*, 2000).

McGilton *et al.* (2009) recently conducted a systematic review of controlled communication interventions for staff in residential care settings. Only six studies consisted of randomized controlled trials (RCT) or quasi-experimental with control group designs. Three studies involved patients who had behavioural disturbances (Burgio *et al.*, 2002; Dijkstra *et al.*, 2002) along with communicative disabilities (Tappen *et al.*, 2001). Results of these studies indicated that nursing staff showed improved verbal communication, gave more information to patients, used more open-ended questions, and were less patronizing to patients at post-test than at baseline. Patients demonstrated increased responsiveness and eye contact with the staff, and verbal approval, as well as decreased anger, and agitation at post-test.

Several limitations across the studies exist. Firstly, approaches to communication training have been based on general recommended linguistic strategies (Bowles *et al.*, 2001;

Williams *et al.*, 2003). Secondly, few studies have addressed behavioural management strategies while focusing on communication strategies. It has been suggested that nursing staff should be taught specific communication strategies on how to respond to patients when a behaviour problem occurs and that this, in turn, can influence the occurrence of behavioural disturbances (Burgio *et al.*, 2002; Cameron *et al.*, 2008). Thirdly, only one of the six studies focused on stroke patients with communication impairment (Shelton & Shryock, 2007). Given the gaps in prior research, we developed the PCCI for the stroke population guided by the Aphasia Framework for Outcome Measurement (A-FROM).

Conceptual framework

The A-FROM (Kagan *et al.*, 2008) provides the conceptual framework for this study (Fig. 1). Developed broadly from

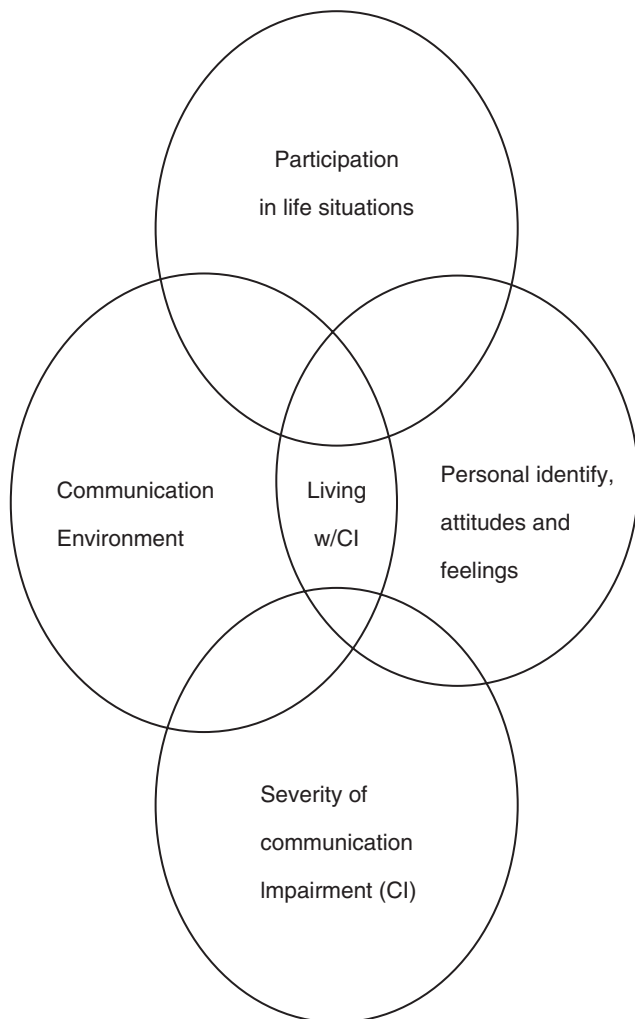


Figure 1 Aphasia Framework for Outcome Measurement (A-FROM; Kagan *et al.*, 2008).

the International Classification of Functioning, Disability and Health (ICF; World Health Organization., 2001), the A-FROM model represents a simple and useful model for understanding and evaluating the PCCI for those living with aphasia/communication impairments. Living with communication impairments can be seen as resulting, at any point in time, from the interaction of several components, including participation in life, the communication environment, severity of communication impairments, personal characteristics and the experience of living with communication impairment. Each component influences and is influenced by the mutual interactions which occur with all the other components of the model.

Within this framework, and for the purposes of this research, aspects of each component are identified as having particular relevance to communication impairment outcomes in our study. The PCCI intervention includes intervention components aimed at improving the attitude, knowledge and skills of staff (communication environment). It also involves providing opportunities for genuine conversation (participation in life situations) to enhance the patient's well-being (personal attitudes and feelings).

Aims

The purpose of the pilot study was to test the feasibility of the PCCI intervention prior to a large study for evaluating its effects. The specific aims were: (1) to assess the extent to which nursing staff implement the communication care plans; (2) to identify staff's perceptions of the intervention; (3) to explore changes in patients' perceptions of the nurses' relational care and psychosocial functioning; and (4) to explore changes in nurses' knowledge of, and attitude towards communication with patients.

Methods

A one-group pre- post-test design, supplemented with a focus group session with nursing staff, was used to address the study aims. Pretest data were collected from nursing staff and patients within a month before implementation of the PCCI intervention, while post-test was conducted 2 months after pretest. Pre- and post-test quantitative data allowed assessment of implementation of the communication care plans and exploration of changes in patients' and nurses' outcome. The focus group session was held within 2 months following delivery of the PCCI intervention to identify staff's perception of the intervention.

The study site was conducted on 1 unit, dedicated to patients who required continued care following stroke, in a

complex continuing care (CCC) facility in Ontario, Canada. All data were collected in 2008.

Description of the PCCI

The intervention included: (1) the development of individualized patient communication plans by the speech-language pathologists (SLP); (2) nurse attendance at a full day workshop (focused on communication and behavioural management strategies); and (3) the implementation of a nursing staff support system.

Development of individualized communication plans

Information for the individualized communication plans was derived from three sources: (1) SLP assessed the language and cognitive abilities of each patient at baseline. Language impairments (Boston Diagnostic Aphasia Examination-3-short form), visuo-spatial impairment (Birmingham Object Recognition Battery), visual neglect (Bell's test), and cognitive impairment (Mini-Mental State Examination) were assessed. (2) The nurse caring for the patient was asked to complete the Montreal Evaluation of Communication Questionnaire (MECQ-LTC; Bowles *et al.*, 2001). The MECQ-LTC evaluates the current approaches staff use to communicate with their patients, and the problematic communication situations that staff identify (Genereux *et al.*, 2004). (3) The intervener SLP (i.e. the SLP who carried out the intervention in this study) obtained information about patients' conversation preferences from discussions with patients' family members and staff on the unit. Based on this information, the SLP developed an individualized one-page communication plan for each patient (Table 1).

Workshop

All staff attended a 1-day workshop taught by the first two co-authors. The workshop covered the following: (i) Communication Management: nursing staff were trained to use communication strategies that promoted the patient's ability to communicate, and acknowledged and revealed the patient's competence level (Kagan, 1998). Video demonstrations and opportunities for nursing staff to practice the communication strategies in structured role plays were provided during the workshop. (ii) Behavioural Management: this component involved the use of the REAP (relate well, environmental manipulation, abilities focused care and personhood) model in practice (McGilton *et al.*, 2007). The development of the REAP model of care was developed by the first author and has been used in other research with older persons. Staff are taught that all behaviours have meaning, and in many cases are not necessarily related to pathology but

Table 1 Example of an individualized communication plan for a patient

How to communicate with client	How client communicates
Ask yes/no questions, but verify	Impaired auditory comprehension
Give verbal choice	Uses speech, yes/no with head movements, facial expressions and body movements
Calm him down, be attentive	Has word-finding difficulties – sometimes says word close in pronunciation to what he wants to say
Know his routines	Does not point, gesture, write/draw
Wait for him to respond	Does not participate in generic communication/conversation
Use simple sentences/instructions	
Speak slowly	
Use gestures	
Repeat instructions, if necessary	
Verify he has understood you	
Ask for help from a more familiar person	
Stand/present info on his left side	
	Client's habits to know to avoid communication problems
What client likes to discuss	
Was a sports writer/commentator	Difficult to know if he's understood you
Lived in X city	Does not express personal care needs
	Expresses need and/or refusal to eat/drink, pain, fatigue
	Does not enjoy recreational activities
	Expresses anger, disagreement, anxiety
	Only focuses on bottom left of visual field

most often represent unmet needs (e.g. physical, psychological/emotional, social and environmental) (Algase *et al.*, 1996). Staffs are taught that patients are exhibiting 'responsive behaviours', (S. Dupuis, personal communication) that is, patients are responding to their unmet need or to discomfort, boredom or loud sounds, etc. Staff are encouraged to use the REAP model to determine the patients' unmet needs and respond according to the assessment of these needs (McGilton *et al.*, 2007). The model consists of the following components: (i) Staff's *ability to relate well* as an essential component of nursing staff-patient interactions (McGilton, 2004). Staff are taught techniques to compensate for their patients' unmet needs by using strategies found to be effective when patients are agitated: calm voice, gentle touch, calm approach. (ii) *Environment-person theory* (Lawton, 1970)

argues for the need for synergy between person and environment. The environment must be modified and changed to accommodate the persons' changing needs and preferences. For example, environmental noise should be reduced when communicating with a patient who is hearing impaired (Kovach *et al.*, 2004). (iii) *Abilities focused care* (Dawson *et al.*, 1993; Sidani *et al.*, 2009) involves staff focusing on patients' retained abilities. The ability of persons with stroke to communicate is influenced by their spatial orientation, their hearing and vision, and their level of communication impairment. (iv) *Personhood* (Kitwood, 1997) refers to treating the person as a unique human being and involves becoming familiar with the individual, and gaining knowledge of a person's life. When communicating with patients, knowing what interests them helps to limit the patient's behavioural symptoms (Kovach *et al.*, 2006). Topics of interest (i.e. hobbies, families, etc.) for conversations that engage the patient in meaningful interactions were obtained from the patient and their family. All strategies were listed in the patients' communication plans.

Staff support system

The staff support system was an integral component of the intervention. Following the workshop, the SLP-supported staff to use the communication plan in every day practice. The SLP-supported staff for 2 hours a week during the course of the intervention period by observing staff interaction with patients, providing feedback, and by demonstrating specific interactional strategies with patients, which were in the communication plan. Supporting the staff at the bedside is an effective knowledge transfer strategy that has been widely used in education research (Csokasy, 1997; McGilton *et al.*, 2005a). One-on-one mentoring is provided to enhance skill development and change in behaviours (Zorga, 2002).

Sample and response

Study participants included patients who had a stroke and their nursing staff. Patients were selected according to the following criteria: (i) confirmed diagnosis of a stroke; (ii) exhibited 'difficulty in being understood by others' as identified by a staff member; (iii) assigned to at least one staff who consented to participate; (iv) used English prior to the stroke; and (v) were cognitively able to respond to questions as identified by the Recall Score (RS), which is calculated on information obtained from the RAI-MDS 2.0 (RAI User's Manual, 1999). According to Schnelle *et al.* (2005), an RS > 2 indicates that the patient has the cognitive capacity to consent and complete a self-report questionnaire. Family members served as substitute decision makers and

were asked to participate when patients needed support during the assessments. There were 30 patients on the unit, and of those, nine were identified by staff as having communication impairments. All of these patients were enrolled in the study.

Nurses were eligible if they provided direct hands-on care and were employed part time or full time. Eighteen out of thirty eligible staff members agreed to participate, achieving a 70% acceptance rate. The main reason for staff electing not to participate in the study was working permanent night shifts or casual employment. All staff completed pre- and post-test. Seven participants attended the focus group session.

Variables and measures

Sample characteristics

Patient demographics collected include age, sex, length of time on the unit, medical diagnoses, and RS. Nursing staff demographics collected include age, sex, education, job training, job status, ethnicity and length of time on the unit.

Extent of implementation of the PCCI

To determine the extent to which the PCCI was delivered by the participating nursing staff, nurse–patient dyads were observed and evaluated by the RA using the Interaction Rating Form (IRF) developed by Shelton and Shryock (2007). The checklist includes specific strategies that are commonly used by SLP when treating patients with communication impairments (Shelton & Shryock, 2007). The observation system provides data on the number of strategies that were required and delivered during the interaction, indicating a score reflecting the discrepancy between the number of strategies required and those actually given. Inter-rater reliability ($r = 0.91–0.95$) and construct validity ($r = 0.84–0.96$ with clinical judgment) have been reported (Shelton & Shryock, 2007).

Staffs' perceptions of the intervention

Two focus groups were conducted with nursing staff participants to identify their perception of the intervention. The research assistant facilitated the group discussion, guided by a set of semi-structured, general, non-directive questions and prompts to clarify or elaborate on participants' responses. The questions addressed the nursing staff perception of: (i) the training programme, in terms of the relevance of its content to practice and effectiveness of the learning strategies in enhancing understanding of strategies for promoting meaningful interactions with patients; (ii) the individualized patient communication plan, in term of its appropriateness and utility in enhancing interaction and ease of implementation; and (iii) factors that facilitated or hindered

interactions with patient, and additional benefits of the PCCI. The focus groups were conducted in a private setting within the facility using a semi-structured interview guide which contained open-ended questions exploring the acceptability of the training programme, the individualized patient plan, and any additional benefits of the intervention. Prompts were used only to clarify or elaborate participants' responses. The RA was free to vary the exact wording and order of questions, depending on the participants' responses. Focus groups took approximately one hour to complete.

Patient outcomes

Patient quality of life was assessed with the Stroke and Aphasia Quality of Life (SAQOL) Scale (Hilari *et al.*, 2003). For this study we used the psychosocial domain, which includes 11-items ($\alpha = 0.71$) and the communication domain with seven items ($\alpha = 0.74$). The communication domain has demonstrated convergent validity with the American Speech and Hearing Association Functional Assessment of Communication Skills for Adults ($r = 0.55$). The psychosocial domain demonstrated convergent validity with the General Health Questionnaire ($r = 0.65$; Hilari *et al.*, 2007). Depression was assessed with the 15-item Geriatric Depression Scale (Burke *et al.*, 1991), an established measure that has been validated and used to assess depression in adults with aphasia following a stroke (Leeds *et al.*, 2004).

Patients were asked to rate the nurse who delivered their care most often. Two scales were used to rate the nurses' interactions with the patients. The Relational Care Scale (RCS) was used to measure patient satisfaction with nurses' relational care (McGilton *et al.*, 2005a,b). The RCS has acceptable internal consistency (Cronbach's $\alpha = 0.87$) and test-retest reliability ($r = 0.70$; McGilton *et al.*, 2005a,b). The subscales have demonstrated good psychometric properties in samples similar to the target population of this study. The global perception of the closeness of the nurse-patient relationship was measured with the Patient Close Visual Analogue Scale (patient close VAS), a 100 mm VAS with the same anchor points as the Provider Close VAS. The test-retest reliability in the study sample at 2 weeks apart was 0.89 using Pearson's correlation coefficient (McGilton *et al.*, 2003).

Nursing staff outcomes

Attitudes of the nurses towards patients with communication impairments was measured with the Communication-Impairment Questionnaire (CIQ), an 8-item Self-Report Scale (Genereux *et al.*, 2004). The reliability of the scale is evident with an alpha coefficient of 0.73. The scale has shown sensitivity to change following a communication intervention

(McGilton, 2004). Knowledge of the nurses was measured with the knowledge on communication impairment scale which demonstrated acceptable reliability (Bowles *et al.*, 2001). Global perception of the closeness of the staff-patient relationship was measured with the Provider Close VAS, a 100 mm VAS with anchors 'Very close provider-patient relationship' and 'Not at all close provider-patient relationship'. The VAS was shown to have good test-retest reliability ($r = 0.90$) and responsiveness to change in a previous study by McGilton *et al.* (2003). Perception of ease of caregiving was assessed with a one-item VAS. This scale has strong test-retest reliability ($r = 0.86$) and has been used by other investigators (Wells *et al.*, 2000).

Data collection

The RA recruited patients and staff into the study over a 1-month period. Baseline demographic and outcome data were collected from staff and patients once recruitment had been completed. To ensure validity of responses from patients, written multiple choices were printed in 18 inch font and they were asked to point or verbally respond to the written option. Patient responses were verified verbally by the RA.

Following this period and once the communication plans were developed, a 1-day workshop was given to all participating staff. Back on the unit, the staff were asked to use the communication care plans for a 2-month period. Each nurse-patient dyad was also observed immediately after the workshop and 2 months later. These observations occurred during a social interaction and lasted on average from 5 to 10 minutes. While observing the interaction, the RA rated the nursing staff interaction behaviours using the IRF. Although observational studies in LTC settings are unlikely to result in problems with reactivity (Schnelle *et al.*, 2005), our non-directive approach reduced the potential for generating observer effects (Le Dorze *et al.*, 2000). Two months after implementation of the intervention, focus group sessions were conducted with a convenience sample of seven staff.

Ethical considerations

The facility research and ethics review board approved the study. Participation was voluntary, and patient and staff provided written consent. Confidentiality was assured and participants were free to withdraw from the study at any time.

Data analysis

Descriptive statistics were used to characterize the profile of participants and average standing on all variables measured

at pre- and post-test. All statistical analyses were performed using the Statistical Package for Social Sciences (SPSS) version 15.0. To explore changes in nursing staff and patient outcomes, paired *t*-tests were used to compare the means for each group at pre- and post-test. To address the extent to which nursing staff implemented the PCCI, nurse-patient dyad interactions were directly observed using the individualized observation checklist. As most patients were observed with more than one nurse, patients would be nested within nurse. Therefore, we randomly selected the patients' interaction with only one nurse. The total score for the observation checklist was calculated by obtaining the per cent of strategies implemented out of the total number of predetermined communication strategies for a particular patient.

To identify staffs' perception of the intervention, the qualitative responses of the staff obtained from the two focus groups were transcribed verbatim and content analysed following the approach outlined by Morse and Field (1995). The transcripts were cross-referenced with the corresponding audiotape for accuracy and completeness. The data were analysed using a line-by-line process for coding. The PI and one investigator met to discuss and reach consensus on the coding scheme.

Results

Description of the sample

A total of 18 nursing staff provided consent to participate (Table 2). However, one nurse did not provide demographic

Table 2 Baseline nursing staff characteristics

Characteristics (<i>n</i> = 17)	
Age in years, mean \pm SD, range, <i>n</i>	49.6 \pm 9.9, 35–63, 11
Registered Nurses	10
Practical Registered Nurses	7
Gender	
Male	1 (5.6%)
Female	16 (94.1%)
Currently working	
Full time (40 hours/week)	14 (82.4%)
Part time (20 hours/week)	3 (17.6%)
Years have worked in the facility, mean \pm SD, range, <i>n</i>	10.6 \pm 8.4, 2–24
Years have practiced nursing, mean \pm SD, range, <i>n</i>	14.2 \pm 11.8, 2–45, 15
Type of settings have worked before being employed in the current facility (<i>n</i> = 15)	
Long-term care	2 (13.3%)
Complex continuing care	5 (33.3%)
Acute care	4 (26.7%)
Community	1 (6.7%)
Psychiatric hospital	3 (20.0%)

information and two staff did not return their pretest questionnaires. The mean age of the nurses was 49.6 years (SD = 9.9); the majority (94.1%) were female and worked full time (82.4%). Half of the nurses had worked for about 10 years in the facility.

Table 3 shows the characteristics of the nine participating patients presenting with stroke. All patients were male with a mean age of 85.4 years (SD = 2.2). On average, they had

Table 3 Baseline patient characteristics

	Age (years)	Sex	Length of stay (months)	Type of communication impairment	No. of co-morbidities
1	84.4	M	1.5	Right hemisphere cognitive-communication impairment	6
2	84.0	M	7.7	Right hemisphere cognitive-communication impairment	14
3	87.5	M	25.1	Left neglect Mild flaccid dysarthria	12
4	84.8	M	20.9	Hearing and visual acuity deficits Right hemisphere cognitive-communication impairment	8
5	82.0	M	9.6	Visual/perceptual impairment Severe aphasia, cognitive impairment, dysarthria, dysphagia	5
6	86.5	M	1.3	Mild-moderate dysarthria	10
7	89.6	M	4.6	Mild flaccid dysarthria	10
8	85.3	M	73.1	Severe hearing impairment Severe visual acuity impairment Mild/moderate dysarthria	10
9	84.5	M	0.75	Cognitive-communication impairment	2

eight (ranges 2–14) co-morbid conditions. The mean stay on the unit was 16 months (ranges 3 weeks to 73 months). The patients had varied communication impairments based on their stroke and co-morbid conditions.

Extent to which the nursing staff implemented the communication strategies

To address aim 1, each patient was observed with one nurse immediately following the workshop and 2 months later. The unit of observation was the interaction involving the nursing staff–patient dyad during a social conversation. On average, during the first observation, nurses used 85% of the suggested communication strategies listed on the patients' individualized communication plan. During the second observation, 76% of the strategies were used by nurses.

Staffs' perception of the intervention

Analysis of the focus group data revealed four themes: acquiring new skills; awareness of the need for individualized approaches to patient care; additional outcomes; and continuity of care.

Acquiring new skills

Staff-expressed learning that there were gaps in their knowledge about communication impairments and supportive communication strategies. They appreciated acquiring new communication and behavioural skills. Whereas for some it was a refresher, for others it was new material. All nursing staff commented on the usefulness of the pictures in the aphasia friendly resources which were purchased for the staff. 'I used pictures with my patient with unclear speech and it really helped me to understand him better'. For some staff there was a realization that just because patients got agitated and could not articulate it did not imply that they had dementia. 'I now focus on the strategies that I can use in helping him instead of thinking he has dementia'.

Awareness of the need for individualized approaches to patient care

The staff gained a new awareness of the need to use an individualized approach to interact with patients. This was characterized by the staffs' awareness that different strategies worked for different situations dependent on the patient's mood, and that the plan gave them some direction on where to begin. A realization of the importance of trying new approaches with patients, especially when they

became 'stuck' was articulated by staff. For some staff, it was as simple as realizing that allowing the patient enough time to respond before taking over or giving up was exactly what the patient needed. 'My patient made a lot more sense and had meaningful things to say when I waited a bit longer'.

Additional benefits

New outcomes achieved from the intervention that were not formally measured in the study were identified by the staff. As a result of communication strategies, some patients became less anxious and agitated and staff were less frustrated and it was less of a struggle to understand their needs. Staff found it easier to work with some patients as they learned more about their patients from the details found within the communication plan. 'I know now that this patient can really verbalize, but that he is very shy and gets frustrated easily. Now I can work with that'. With the new strategies developed in the care plan, nurses perceived that: they better understood their patients, met their needs more frequently, and patients were less agitated. Staff in turn felt less burdened caring for these patients. As one nurse stated 'the communication plan saved me a lot of time'. Another stated 'when you understand the patients, they are less resistive, and everyone feels better'.

Continuity of care

Nurses also expressed that the communication plans were very helpful for promoting continuity of care. The plan of care was located in the patients' chart so all staff had easy access to the document. When staff did not know a patient well, a quick glance at the plan was very useful. The staff took it upon themselves to share the plan with new nurses to promote continuity of care. The staff participants expressed that this was one of the best ways to orientate new staff to the patient's needs and preferences.

Explore changes in outcomes following the PCCI

Patient care outcomes

Following the intervention, patients perceived that nurses were able to relate more effectively ($t(17) = -2.47$, $P = 0.024$; Table 4). Paired t -tests also indicated that there was a statistically significant increase in the patients' perception of their own communication abilities postintervention ($t(8) = 2.49$, $P = 0.037$). Lastly, patients perceived that they had closer relationships with their nurses ($t(17) = -2.22$, $P = 0.041$). However, the intervention did not influence the psychosocial well-being ($t(8) = -1.8$, $P = 0.601$), nor the depression of the patients ($t(8) = -0.3$, $P = 0.848$).

Table 4 Comparison of the mean scores of outcome variables for the nursing staff and their patients before and after the intervention

Variable (<i>n</i>)	One-month		<i>P</i> -value
	Baseline, mean ± SD	post-intervention, mean ± SD	
Patient outcomes: (<i>n</i> = 9)			
Relational care	23.0 ± 6.6	26.1 ± 4.6	0.024*
Communication (SAQOL)	17.2 ± 5.0	21.0 ± 3.7	0.037*
Close visual analogue scale	57.8 ± 34.7	73.7 ± 23.3	0.041*
Psychosocial (SAQOL)	38.4 ± 12.1	40.2 ± 6.5	0.601
Geriatric depression scale	11.0 ± 6.0	11.3 ± 5.5	0.848
Nurse outcomes: (<i>n</i> = 16)			
Attitudes	28.8 ± 4.1	31.2 ± 2.5	0.007*
Knowledge	66.1 ± 10.9	78.2 ± 8.1	0.002*
Close relationship	66.7 ± 23.2	70.1 ± 17.3	0.657
Perceived ease of caregiving	42.9 ± 27.7	43.9 ± 32.0	0.894

SAQOL, stroke and aphasia quality of life.

**P* < 0.05, statistically significant.

Nursing staff outcomes

A comparison of the nurses' attitudes towards patients with communication impairment based on the total Communication Impairment Questionnaire (CIQ) scores at pre- and post-test showed that the communication attitudes of the nursing staff improved significantly after the PCCI ($t(11) = -3.33$, $P = 0.007$; see Table 4). Also, nurses' knowledge of aphasia increased significantly after the Training Workshop ($t(16) = -5.40$, $P = 0.002$). No statistically significant differences were found between the pre- and post-test on close relationship with patients and ease of caregiving as perceived by the nurses.

Discussion

This pilot study demonstrated feasibility as there were high response rates for nurses (70%) and patients (100%) and low attrition throughout the study period. During the two observation periods, nurses were found to implement the interactional strategies into their practice. Further, they clearly identified in the focus group sessions the utility of the strategies. In addition, following training, where staff learned tailored communication and interactional strategies for their patients, positive changes in nurse and patient outcomes were achieved. Perhaps an intervention that consists of a well described cognitive, behavioural and psychological component is useful.

Observations of staff and patient interactions demonstrated that staff were able to transfer their newly acquired skills and implement them in practice, providing evidence on

the utility of the plans. Our study corroborates the findings by Shelton and Shryock (2007) who found that upon completion of training, staff used several of the communication strategies they had been taught. During the second observation, there was a reduction by 9% of the number of strategies staff used in their practice. It would appear that to sustain the practice changes, continued feedback and support may be required. This finding is supported by the results of Wadensten *et al.* (2009). These researchers found that nursing staff require more supervision and training to develop new ways of encountering older people.

Specifically nursing staff main outcomes achieved in the pilot study included staffs' improved attitudes and knowledge related to care of patients with communication impairments. This finding is consistent with those of Bowles *et al.* (2001) and Bryan *et al.* (2002), who observed nurses comfort level with communication with their patients increase over the course of the intervention. The lack of effect of the intervention on perceived ease of caregiving over time was contrary to our original expectation. In the focus groups, staff reported that using the plans saved them time as they were able to meet their patients' needs in a more efficient way. They also found that it was easier to care for the patient based on the details provided in the communication plans. However, these focus group findings did not equate to a change in closer relationships or ease of caregiving from the perspective of the staff. This may be due to the limited reliability and validity testing of the ease of caregiving scale.

A statistically significant increase was observed in patients' perceptions of staffs' relational care, their ability to communicate with staff, and the closeness of their relationship with staff. This finding suggests that the PCCI improved the perceived closeness of the relationship between the patients and their nursing staff. No previous work has found changes in patients' self-report perceptions of care over time following an intervention aimed at enhancing interaction. One possible reason for our finding is that the selected patient outcomes were very specific, operationalizing the direct effects of the intervention. Previously evaluated patient outcomes were generic (McGilton *et al.*, 2006), involving observations of patients' level of agitation and behavioural disturbances (Burgio *et al.*, 2002; Dijkstra *et al.*, 2002). These outcomes may vary with time and may not be captured at the specified time of observation. However, patients have demonstrated decreased anger and agitation postimplementation of a communication intervention (Tappen *et al.*, 2001; Burgio *et al.*, 2002). Staff in our focus groups corroborated the results of these previous research studies as they articulated that patients were less anxious and agitated when staff were able to identify their patients needs and meet them. Most

notably, staff also came to realize that a majority of their patients who they felt had cognitive impairment and could not express themselves, just needed help in being understood so that their needs could be met. The communication plans had provided nurses with strategies to help successfully address patients' behavioural responses. Finally, the observed lack of change in the patient's psychosocial quality of life and depression was contrary to our original expectation. Perhaps improvement in these outcomes may require a longer follow-up time.

The A-FROM framework by Kagan *et al.* (2008) and the findings emerging from the focus group sessions were useful in understanding how the intervention was effective for persons with communication impairments living in CCC. Enhancing the communication environment by targeting strategies to improve staff knowledge and skills provided more opportunities for patients' participation in genuine conversation and in their care. Staff found the education helped them refresh knowledge and acquire new skills and commented that the communication strategies were very useful. Meaningful conversations ensued when staff had the requisite knowledge, skills and attitudes to care for persons with a communication impairment. By teaching staff individualized communication strategies tailored to the person's communication impairments (i.e. pictures and gestures), patients were able to understand nursing staff and to be understood, despite various levels and types of impairment. Nurses spoke of the need to individualize the interventions and their approaches. Personal identity, attitudes and feelings of patients were influenced as patients felt closer to their nurses and had an improved perception of their quality of life. Qualitative results also pointed to the additional benefits of patients becoming less frustrated and agitated during discussions which made caregiving easier. These additional outcomes observed by the nurses provide information for new outcomes to examine in a larger study.

Some limitations of the study need to be noted which are often associated with pilot studies. This study design did not include a control group for testing this intervention, which may influence the internal validity of the findings. The sample size is small despite the majority of the full-time staff and all residents sampled agreeing to participate in the study. For purposes of a pilot study, the results of the study indicate that the intervention is feasible and potentially effective, despite the small sample size. Further, the study was conducted with registered nurses and registered practical nurses in CCC. The authors are aware that most of the staff delivering hands-on-care in these settings are personal support workers, and therefore, the next planned study will include this population in the sample.

Conclusion

The pilot study indicated the intervention is feasible. New outcomes, not anticipated by the researchers, were revealed by the nurse participants during the focus groups. We will use these results to further develop and test out PCCI intervention model. Further, the study demonstrated that a 1-day workshop, individualized tailored communication plans, and support of SLP that comprised the intervention, can have beneficial effects on patient and staff outcomes. A comprehensive intervention for persons with communication impairments resulted in an improvement of the patients' quality of life and satisfaction in care. Nursing staff demonstrated an enhancement in their skills and attitudes in caring for patients with communication impairment. Providing communication-enhancement education tailored to the needs of individual patients by enhancing the knowledge, skills and attitudes of staff may be necessary for changes in practice to occur.

Implications for practice

- Nurses partnering with SLP to provide comprehensive cognitive and linguistic assessments of patients is essential when developing tailored communication plans.
- Teaching staff about specific communication strategies of patients may require mentoring at the bedside by credible staff.
- The approach to education of staff should include acknowledging their expertise, engaging them in interactive learning and offering opportunities to practice their skills.
- Providing a 1-day workshop for the staff is beneficial, as staff from various shifts can attend and learn from each other, which leads to consistency in implementing the communication plan and eventually continuity of care.

References

- Algate D.L., Beck C., Kolanowski A., Whall A., Berent S., Richards K. & Beattie E. (1996) Need-driven dementia-compromised behavior: an alternative view of disruptive behavior. *American Journal of Alzheimer's Disease* 11, 10–19.
- Bourgeois M.S., Dijkstra K. & Hickey E.M. (2005) Impact of communication interaction on measuring self-and proxy-rated depression in dementia. *Journal of Medical Speech-Language Pathology* 13, 37–50.

- Bowles N., Mackintosh C. & Torn A. (2001) Nurses' communication skills: an evaluation of the impact of solution-focused communication training. *Journal of Advanced Nursing* 36, 347-354.
- Bowman C., Whistler J. & Ellergy M. (2004) A national census of care home residents. *Age and Ageing* 33, 561-566.
- Bryan K., Axelrod L., Maxim J., Bell L. & Jordan L. (2002) Working with older people with communication difficulties: an evaluation of care worker training. *Aging Health* 6, 248-254.
- Burgio L.D., Allen-Burge R., Roth D.L., Bourgeois M.S., Dijkstra K., Gerstle J., Jackson E. & Bankester L. (2000) Come talk with me: improving communication between nursing assistants and nursing home patients during care routines. *Gerontologist* 41, 449-460.
- Burgio L.D., Stevens A., Burgio K.L., Roth D.L., Paul P. & Gerstle J. (2002) Teaching and maintaining behavior management skills in the nursing home. *Gerontology* 42, 487-496.
- Burke W.J., Roccaforte W.H. & Wengel S.P. (1991) The short form of the Geriatric Depression Scale: a comparison with the 30-item form. *Journal of Geriatric Psychiatry and Neurology* 4, 173-178.
- Cameron J., Cheung A., Streiner D., Coyte P., Singh M. & Stewart D. (2008) Factor structure and reliability of the brain impairment behaviour scale. *Journal of Neuroscience Nursing* 40, 40-47.
- Caris-Verhallen W., Kerkstra A., Bensing J.M. & Grypdonck M. (2000) Effects of video interaction analysis training on nurse-patient communication in the care of the elderly. *Patient Education and Counseling* 39, 91-103.
- Csokasy J.A. (1997) Building perioperative nursing research teams - part I. *Association of Perioperative Registered Nurses Journal* 65, 396-398.
- Dawson P., Wells D.L. & Kline K. (1993) *Enhancing the Abilities of Persons with Alzheimer's and Related Dementias: A Nursing Perspective*. Springer Publishing Co., New York.
- Dijkstra K., Bourgeois M., Burgio L. & Allen R. (2002) Effects of a communication intervention on the discourse of nursing home patients with dementia and their nursing assistants. *Journal of Medical Speech-Language Pathology* 10, 143-157.
- Genereux S., Julien M., Larfeuil C., Lavoie V., Soucy O. & Le Dorze G. (2004) Using communication plans to facilitate interactions with communication-impaired persons residing in long-term care institutions. *Aphasiology* 12, 1161-1175.
- Hakim A.M., Silver F. & Hodgson C. (1998) Organized stroke care: a new era in stroke prevention and treatment. *Canadian Medical Association* 159(6 Suppl.), p. S1 (Heart and Stroke Foundation, 2007).
- Hilari K., Byng S., Lamping D.L. & Smith S.C. (2003) Stroke and Aphasia Quality of life Scale-39 (SAQOL-39). Evaluation of acceptability, reliability, and validity. *Stroke* 34, 1944-1950.
- Hilari K., Owen S. & Farrelly S.J. (2007) Proxy and self-report agreement on the Stroke and Aphasia Quality of Life Scale-39. *Journal of Neurology, Neurosurgery and Psychiatry* 78, 1072-1075.
- Kagan A. (1998) Supported conversation for adults with aphasia: methods and resources for training conversation partners. *Aphasiology* 12, 816-830.
- Kagan A., Simmons-Mackie N., Rowland A., Huijbregts M., Shumay E., McEwen S., Threats T. & Sharp S. (2008) Counting what counts: a framework for capturing real-life outcomes of aphasia intervention. *Aphasiology* 22, 258-280.
- Kitwood T. (1997) The experience of dementia. *Aging and Mental Health* 1, 13-22.
- Kovach C.R., Taneli Y., Dohearty P., Schlidt A.M., Cashier S. & Silva-Smith A.L. (2004) Effect of the BASE intervention on agitation of people with dementia. *Gerontologist* 44, 797-806.
- Kovach C.R., Kelber S.T., Simpson M. & Wells T. (2006) Behaviors of nursing home patients with dementia: examining nurse responses. *Journal of Gerontology* 32, 13-21.
- Lawton M.P. (1970) Assessment, integration and environments for older people. *Gerontologist* 10, 38-46.
- Le Dorze G., Julien M., Genereux S., Navenne C., Laporte D. & Champagne C. (2000) The development of a procedure for the evaluation of communication occurring between patients in long-term care and their caregivers. *Aphasiology* 14, 17-51.
- Leeds L., Bangor R.J. & Hobson J.P. (2004) The utility of the Stroke Aphasia Depression Questionnaire (SADQ) in a stroke rehabilitation unit. *Clinical Rehabilitation* 18, 228-231.
- Long-Term Care Facility Resident Assessment Instrument (RAI) User's Manual, Minimum Data Set Version 2.0. (1999) Eliot Press, Natick, MA.
- Mayo N.E. (1998) Epidemiology and recovery of stroke. *Physical Medicine and Rehabilitation: State of the Art Reviews* 12, 355-366.
- McCallion P., Toseland R.W., Lacey D. & Banks S. (1999) Educating nursing assistants to communicate more effectively with nursing home patients with dementia. *Gerontologist* 39, 546-558.
- McGilton K.S. (2004) Relating well to persons with dementia: a variable influencing staffing and quality of care outcomes. *Alzheimer Care Quarterly* 5, 63-72.
- McGilton K.S., O'Brien-Pallas L.L., Darlington G., Evans M., Wynn F. & Pringle D.M. (2003) Effects of a relationship-enhancing program of care on outcomes. *Journal of Nursing Scholarship* 35, 151-156.
- McGilton K.S., Fox M. & Sidani S. (2005a) A theory driven approach to evaluating a communication intervention. *Canadian Journal of Program Evaluation* 20, 27-47.
- McGilton K.S., O'Brien-Pallas L.L., Pringle D., Wynn F. & Streiner D. (2005b) Development and psychometric testing of a relational care measure. *Journal for Nursing Measures* 1, 51-64.
- McGilton K.S., Irwin-Robinson H., Boscart V. & Spanjevic L. (2006) Communication enhancement: nurse and patient satisfaction outcomes in complex continuing care facility. *Journal of Advanced Nursing* 54, 35-44.
- McGilton K., Lever J., Mowat J., Parnell L., Perivolaris A. & Biscardi M. (2007) Guideline recommendations to improve dementia care. *Alzheimer's Care Quarterly* 8, 109-115.
- McGilton K., Boscart V., Fox M., Sidani S., Rochon E. & Sorin-Peters R. (2009) A systematic review of the effectiveness of communication interventions for health care providers caring for patients in residential care settings. *Worldviews on Evidence-Based Nursing* 6, 1-11.
- Morse J.M. & Field P.A. (1995) *Qualitative Research Methods for Health Professions*, 2nd edn. Sage, Thousand Oaks.
- Perry J., Galloway S., Bottorff J.L. & Nixon S. (2005) Nurse-patient communication in dementia: improving the odds. *Journal of Gerontological Nursing* 31, 43-52.
- Quilliam B.J., Lapane L.K. & Leibson C. (2001) Clinical correlated and drug treatment of residents with stroke in long-term care. *Stroke* 32, 1385-1393.

- Roth D.L., Stevens A.B., Burgio L.D. & Burgio K.L. (2002) Timed-event sequential analysis of agitation in nursing home patients during personal care interactions with nursing assistants. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences* 5, 461.
- Schnelle J.F., Osterweil D. & Simmons S.F. (2005) Improving the quality of nursing home care and medical-record accuracy with direct observational technologies. *Gerontologist* 45, 576–582.
- Shelton C. & Shryock M. (2007) Effectiveness of communication/interaction strategies with patients who have neurological injuries in a rehabilitation setting. *Brain Injury* 21, 1259–1266.
- Sidani S., LeClerc C. & Streiner D. (2009) Implementation of the abilities-focused approach to morning care of people with dementia by nursing staff. *International Journal of Older People Nursing* 4, 48–56.
- Tappen R.M., Williams C.L., Berry C. & DiSesa D. (2001) Conversation intervention with Alzheimer's patients: increasing the relevance of communication. *Clinical Gerontologist* 24, 63–75.
- Tu J.V. & Porter J. (1999) *Stroke Care in Ontario: Hospital Survey Results*. Heart and Stroke Foundation of Ontario, Toronto.
- Wadensten B., Engholm R., Fägerstrom G. & Hägglund D. (2009) Nursing staff's description of a good encounter in nursing homes. *International Journal of Older People's Nursing* 4, 203–210.
- Wells D.L., Dawson P.G., Sidani S., Craig D. & Pringle D.M. (2000) Effects of an abilities-focused program of morning care on patients who have dementia and on caregivers. *Journal of the American Geriatrics Society* 48, 442–449.
- Williams K., Kemper S. & Hummert M.L. (2003) Practice concepts. Improving nursing home communication: an intervention to reduce elderspeak. *Gerontologist* 43, 247.
- World Health Organization (2001) *International Classification of Functioning, Disability, and Health (ICF)*. World Health Organization, Geneva.
- Zorga S. (2002) Supervision: the process of life-long learning in social and educational professions. *Journal of Interprofessional Care* 16, 265–276.