A story about…

what one LTC Home did to implement
the Best Practice Guideline:
'Stroke Assessment Across the Continuum of Care'
(RNAO, 2005)

Central East BPG Initiative
January 2008

January 2008

Dear LTC colleagues:

Implementing a Best Practice Guideline (BPG) is clearly recognized to promote quality resident care outcomes. But, how to go about implementing a BPG is sometimes not as clear.

The following story describes how one long-term care home implemented some of the practice recommendations from the 2005 RNAO BPG 'Stroke Assessment Across the Continuum of Care'– and highlights how implementing the BPG recommendations made a difference in the care of one of their residents.

Sharing this story will hopefully assist other homes similarly engaged in BPG implementation – and provide some direction for 'how to do it'.

Mary Dupuis, BPG Coordinator / Central East, BPG Initiative in LTC

The following colleagues are thanked for their support in development & review:

Hazelynn Kinney, Trillium Health Centre (previous BPG Coordinator, Central East)

Jennifer Wong, Yee Hong Centre for Geriatric Care

Christina Wong, Yee Hong Centre for Geriatric Care

Teresa Ku, Yee Hong Centre for Geriatric Care

Amy Go, Yee Hong Centre for Geriatric Care

Bernice Miller, Community and LTC Specialist, Central East Stroke Network

Kay Morrison, Regional Stroke Rehabilitation Coordinator

Please note: The entire RNAO BPG 'Stroke Assessment across the Continuum of Care' can be downloaded at: http://www.rnao.org/Storage/12/652_BPG_Stroke_Assessment.pdf .

How did they do it?

Last month, Mr. Mango, a 92 year old bachelor, was admitted to Little Valley LTC home.

After receiving a warm welcome from the staff, Mr. Mango's nurse completed a nursing admission assessment, which included a section entitled 'Stroke Risk Factors' (see box below).

Section E. Stroke Risk Factors:	
(i) Health History:	**(ii) Lifestyle Factors:**
❑ previous stroke, TIA or MI	❑ high fat diet
❑ diabetes	❑ smoking
❑ hypertension	❑ obesity
❑ lipidemia	❑ lack of physical activity
❑ heart disease	❑ excessive alcohol intake
❑ family history	

Recommendation 1.0

Later that day, the nurse reviewed Mr. Mango's stroke risk factors with his physician.

Two months later, Mr. Mango was happily settled in at Little Valley - enjoying meals in the dining room, daily tai-chi, and a standing date for afternoon tea with his sister, Miss Emma. He was also busy organizing (and usually winning) poker games with three other residents.

While his blood pressure continued to be slightly elevated, Mr. Mango's diabetes and osteoarthritis were well managed.

BPG Recommendation 1.0: Nurses in all practice settings should screen clients for risk factors related to stroke in order to facilitate appropriate secondary prevention. Clients with identified risk factors should be referred to trained healthcare professionals for further management (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 27).

One morning after breakfast, a Little Valley nurse witnessed Mr. Mango suddenly slump over in his dining room chair. When approached, he responded very slowly and his speech was slurred.

As Mr. Mango explained, his right arm and leg suddenly 'stopped working'.

Recommendation 3.0

His nurse conducted a quick neurological assessment, confirming her concern that Mr. Mango had suffered a stroke.

The nurse called '911' – knowing that there was no time to spare if Mr. Mango was going to be considered for time-dependent stroke therapy.

Before the ambulance arrived, Mr. Mango's nurse completed Little Valley's 'Stroke Transfer Form', a one-page document that provided Emergency Department staff with essential stroke related information, including Mr. Mango's stroke symptoms and the exact time he was last seen 'normal'.

On Mr. Mango's Stroke Transfer Form, his nurse included the following observations from her neurological assessment:

Recommendation 2.0

"At 0830, resident witnessed to 'slump over' in chair in dining room – but suffered no injury. Motor response: follows simple commands. Motor strength: decreased sensation in left arm and leg, unable to lift. Speech: slurred but understandable. Verbal Response: appropriate to simple questions, but slow and disoriented to place and time. Denies any vision changes. Glascow Coma Scale: 13 BP: 180/102, HR 88. Blood Glucose: 6mmol/l (a.m. insulin given as per accompanying MAR sheet.)

BPG Recommendation 2.0: Nurses in all practice settings should recognize the new onset of the signs and symptoms of stroke as a medical emergency to expedite access to time dependent stroke therapy, as *"time is brain"* (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 28).

BPG Recommendation 3.0: Nurses in all practice settings should conduct a neurological assessment on admission, and when there is a change in client status. This neurological assessment, facilitated with a validated tool (such as the Canadian Neurological Scale, National Institutes of Health Stroke Scale or Glasgow Coma Scale), should include at minimum: Level of consciousness; Orientation; Motor (strength, pronator drift, balance and coordination); Pupils; Speech/Language; Vital signs (TPR, BP, SpO_2); and Blood glucose (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 29).

Thanks to the nurse's knowledge and assessment skills, Mr. Mango was transported quickly to the acute care hospital with all required information.

In the ambulance, Mr. Mango's stroke symptoms began to dissipate. By the time he arrived at the Emergency Department, he was moving all limbs and responding appropriately to questioning. Following a thorough neurological examination and CAT-scan, Mr. Mango was diagnosed as having experienced a Transient Ischemic Attack (TIA). Given his stroke risk factors, and a significantly elevated blood pressure, Mr. Mango was admitted.

Two days later, Mr. Mango was transferred back to Little Valley. On greeting the staff, he told them "Don't go doing a lot of fussing... I'm just like my old self." But, after convincing him that a re-admission assessment was absolutely necessary, his nurse did identify that Mr. Mango was noticeably more lethargic and that his vision was blurry.

Mr. Mango's nurse completed a quick neurological assessment, suspicious that Mr. Mango may be having another stroke or complications related to his diabetes.

Further assessment identified that Mr. Mango's blood glucose level was 18 mmol/L – and, when treated, his symptoms subsided.

BPG Recommendation 3.1: Nurses in all practice settings should recognize that signs of decline in neurological status may be related to neurological or secondary medical complications. Clients with identified signs and symptoms of these complications should be referred to a trained healthcare professional for further assessment and management (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 34).

Recommendations 4.0 & 4.1

The nurse's re-admission assessment included using standardized tools to assess Mr. Mango's skin integrity and his risk of falling.

A week passed uneventfully. Then, one morning at 0700, a Little Valley PSW found Mr. Mango unresponsive in bed. The PSW immediately called for the nurse, who conducted a quick neurological assessment, called '911', and completed the Stroke Transfer Form. Mr. Mango was again transferred to acute care.

At the emergency department, Mr. Mango was diagnosed as having suffered a right-sided, middle cerebral artery, ischemic stroke. Given that the time his stroke occurred was not known, he was not eligible for time-dependent stroke therapy and was admitted to the acute care stroke unit.

After a week, Mr. Mango had made little recovery. With his left arm and leg significantly impaired, he required major assistance in transferring, self-care, grooming and feeding. He was also experiencing swallowing difficulties and urinary incontinence. Although encouraged by hospital staff, Mr. Mango refused to consider transfer to a rehabilitation centre – and insisted that he just wanted to go home to Little Valley LTC home.

Recommendation 4.0: Nurses in all practice settings should assess the client's risk for pressure ulcer development, which is determined by the combination of clinical judgment and the use of a reliable risk assessment tool. The use of a tool that has been tested for validity and reliability (such as the Braden Scale for Predicting Pressure Sore Risk) is recommended (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 36).

Recommendation 4.1: Nurses in all practice settings should assess the stroke client's fall risk on admission and after a fall using a validated tool (such as the STRATIFY or timed 'Up and Go') (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 36).

Two weeks later, Mr. Mango was back at Little Valley – but had made little recovery. In addition to completing the routine re-admission assessments, the nurses also initiated use of flow sheets to document Mr. Mango's blood sugars and the effectiveness of prn analgesics for his osteoarthritis. The nurses also initiated Little Valley's "14 day Post-Stroke Flow Sheet" (see box below) – to systematically assess for common complications experienced post-stroke.

Little Valley Long-Term Care Home - 14 Day Post-Stroke Flow Sheet

Instructions: For a resident admitted post-acute stroke, assess for each of the following complications, each shift x 14 days. Document any post-stroke complications in progress notes.

Key: Present = P Not Present = NP	Week 1						
	Date:	Date:	Date:	Date:	Date:	Date:	Date:
1. painful hemiparetic shoulder							
2. spasticity/contractures							
3. deep vein thrombosis							
4. difficulty swallowing							
5. pneumonia							
6. urinary incontinence							
7. urinary retention							
8. urinary tract infection							
9. constipation							
10. fecal incontinence							
11. falls							
12. symptoms of post-stroke depression							

Recommendations 4.2, 5.0, 10.0, 10.1 & 15.0

BPG Recommendation 4.2: Nurses in all practice settings should assess stroke clients for the following stroke complications: painful hemiparetic shoulder, spasticity/contractures, and deep vein thrombosis in order to facilitate appropriate prevention and management strategies (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 36).

BPG Recommendation 5.0: Nurses in all practice settings should assess clients for pain using a validated tool (such as the Numeric Rating Scale, the Verbal Analogue Scale or the Verbal Rating Scale) (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 39).

BPG Recommendation 10.0: Nurses in all practice settings should assess clients for fecal incontinence and constipation (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 50).

BPG Recommendation 10.1: Nurses in all practice settings should assess clients for urinary incontinence and retention (with or without overflow) (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 51).

BPG Recommendation 15.0: Nurses in all practice settings should document comprehensive information regarding assessment and/or screening of stroke clients. All data should be documented at the time of assessment and reassessment (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 60).

A month went by. Mr. Mango had made little functional improvement – and he made it very clear to Miss Emma, his sister, and to his nurses and physician that he did not want to be transferred back to acute care.

A week later, Mr. Mango suffered another major stroke. Miss Emma was by his side and, while distraught, supported his decision to stay at Little Valley. In accordance with Mr. Mango's wishes, the team developed a care plan keep him comfortable and manage this latest, and even more devastating, stroke.

As part of Mr. Mango's care, he remained NPO for the first 24 hours.

In accordance with Little Valley policy,

Recommendation 6.0

and as per physician order, the nurses initiated hypodermoclysis and a record of fluid intake.

Recommendation 6.1

24 hours later, and with Mr. Mango more alert, his nurse administered a swallowing screen – and confirmed that he was still unable to tolerate fluids by mouth.

BPG Recommendation 6.0: Nurses should maintain all clients with stroke NPO (including oral medications) until a swallowing screen is administered and interpreted, within 24 hours of the client being awake and alert (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 40).

Recommendation 6.1: Nurses in all practice settings, who have appropriate training, should administer and interpret a dysphagia screen within 24 hours of the stroke client becoming awake and alert. This screen should also be completed with any changes in neurological or medical condition, or in swallowing status. This screening should include: Assessment of the client's alertness and ability to participate; Direct observation of signs of oropharyngeal swallowing difficulties (choking, coughing, wet voice); Assessment of tongue protrusion; Assessment of pharyngeal sensation; Administration of a 50 ml water test; and Assessment of voice quality. In situations where impairments are identified, clients should be referred to a trained healthcare professional for further assessment and management. (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 40).

Mr. Mango continued to refuse to return to acute care.

Recommendations 8.0 & 11.0

Some of his nurses were uncomfortable with his decision and questioned if the stroke had diminished his capacity for making an informed decision.

But, with input from all team members and Miss Emma, it was evident that Mr. Mango (despite his stroke) was still capable of making an informed decision about his care wishes. Although some situations warrant more formal assessment of a resident's cognitive functioning, the team decided this was not appropriate for Mr. Mango at this time.

But as the week progressed, team members also noted that Mr. Mango rarely smiled or engaged in conversation -- and Mr. Mango had readily shared: "I'm just waiting to die…I've had a good life …and I really am ready to just go."

While Little Valley nurses often used a standardized assessment tool to screen for depression, the team agreed with continuing to provide end-of-life care, comfort and support, rather than conducting further assessment.

BPG Recommendation 8.0: Nurses in all practice settings should screen clients for alterations in cognitive, perception/ perceptual and language function that may impair safety, using validated tools (such as the Modified Mini-Mental Status Examination and the Line Bisection Test). This screening should be completed as follows, within 48 hours of regaining consciousness: Arousal, alertness and orientation; Language (comprehensive and expressive deficits); and Visual neglect. In addition, when planning for discharge: Attention; Memory (immediate and delayed recall); Abstraction; Spatial orientation; and Apraxia. In situations where impairments are identified, clients should be referred to a trained healthcare professional for further assessment and management (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 44).

Recommendation 11.0: Nurses in all practice settings should screen clients for evidence of depression, using a validated tool (such as the Stroke Aphasia Depression Questionnaire, Geriatric Depression Scale, Hospital Anxiety and Depression Scale or the Cornell Scale for Depression in Dementia) prior to discharge throughout the continuum of care. In situations where evidence of depression is identified, clients should be referred to a trained healthcare professional for further assessment and management (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 52).

But the team was concerned about Miss Emma. Since her brother's most recent stroke, Miss Emma had spent many hours every day sitting by his bedside, reading aloud from their favorite books, or just quietly holding his hand.

The nurses asked the Little Valley social worker to visit - and ensured that a comfortable lounge chair was always close to Mr. Mango's bed and that Miss Emma was always offered a meal tray .

Recommendation 12.0 & 14.0

The nurses also spent time explaining to Miss Emma about Mr. Mango's stroke – and its effect upon his functioning and care needs. They did such a good job that Miss Emma became quite proficient in making sure Mr. Mango was properly positioned and reminding staff to assess his skin integrity with each position change.

Three days later, Mr. Mango suffered a final stroke and died peacefully with Miss Emma and several Little Valley staff is at his side. Staff were all saddened by the loss of Mr. Mango – but also comforted in knowing that he died, as he wished, at his new home and that he received the best care.

A few days later, Miss Emma and a large gathering of Mr. Mango's friends and Little Valley LTC Home staff attended a memorial service to celebrate his life.

BPG Recommendation 12.0: Nurses in all practice settings should assess/screen caregiver burden, using a validated tool (such as the Caregiver Strain Index or the Self Related Burden Index). In situations where concerns are identified, clients should be referred to a trained healthcare professional for further assessment and management. (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 56)

BPG Recommendation 14.0: Nurses in all practice settings should assess the stroke client and their caregivers' learning needs, abilities, learning preferences and readiness to learn. This assessment should be ongoing as the client moves through the continuum of care and as education is provided. (RNAO, 2005, Stroke Assessment Across the Continuum of Care, p 58)

Conclusion…and some final insights on 'how did they do it?'

As evident in the care received by Mr. Mango, Little Valley LTC Home did a great job of implementing some of the recommendations in the BPG 'Stroke Assessment Across the Continuum of Care'. On reflection, staff identified the following four activities as critical to their success:

(1) working together as an interdisciplinary team, the '**BPG Working Group'** included the Director of Care, Nurse Educator, Physician, Physiotherapist, Pharmacist, a PSW, and staff nurse.

(2) sending some of the BPG Working Group members to a **RNAO Best Practice Champion Workshop,** which enhanced their understanding of BPGs and the BPG implementation process.

(3) following the steps outlined in the **RNAO Toolkit for BPG Implementation** and

(4) building-upon the staff education and policy development that **the home had already done** related to assessing and managing pain, preventing falls, and promoting skin integrity.

Also, and a great strategy for keeping their work 'on-track', the BPG Working Group developed a '**Check-list for BPG Implementation'** (see next page) - that clearly identified the work required in **3 specific areas**: (i) policy development, (ii) staff education and (iii) documentation forms.

We hope that this story provides some insight into BPG implementation - and many thanks to Little Valley staff for sharing 'how they did it'!

Comments? Questions?

e-mail mary.dupuis@yeehong.com

Little Valley's 'Check-List' for implementing clinical recommendations in the RNAO BPG 'Stroke Assessment Across the Continuum of Care' (2005)

	1. Develop a 'Stroke Program' policy that explains:
❑	the nurse's role in facilitating residents' access to time-dependent stroke therapy
❑	use of the following nursing assessment / screening tools: • 'stroke nursing risk assessment' • 'neurological nursing assessment' • 'post-stroke nursing assessment' • standardized 'skin integrity assessment' • standardized 'falls risk assessment tool' • standardized 'pain assessment tool' • dysphagia screening tool • nutrition and hydration screening tool
❑	the team's role in cognition, perception, and language screening
❑	the team's role in screening and referral for depression and suicidal ideation, caregiver burden, and resident and family's sexual concerns
❑	availability of referral when identifying post-stroke problems, such as dysphagia, depression, or caregiver burden

	2. Develop / identify the following forms to assist nursing documentation:
❑	a 'stroke risk assessment form'
❑	a 'post-stroke nursing assessment form'
❑	a standardized, reliable, and valid 'falls risk assessment form'
❑	a dysphagia screening form

	3. Develop a series of 'Stroke Program' in-services for staff that includes information about:
❑	time-dependent stroke therapy and how to facilitate residents' access
❑	risk factors for stroke
❑	a review of a quick 'neuro nursing assessment' and 'post-stroke nursing assessment'
❑	how to screen for dysphagia, caregiver burden, depression and suicidal ideation, sexual concerns