Revised 2011 Supplement Enclosed

Revised March 2005

Nursing Best Practice Guideline
Shaping the future of Nursing

Promoting Continence Using Prompted Voiding

RNAO
Registered Nurses' Association of Ontario
L'Association des infirmières et infirmiers autorisés de l'Ontario
NURSING BEST PRACTICE GUIDELINES PROGRAM

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NURSING BEST PRACTICE GUIDELINES PROGRAM

Greetings from Doris Grinspun
Executive Director
Registered Nurses' Association of Ontario

It is with great excitement that the Registered Nurses' Association of Ontario disseminates this **revised** nursing best practice guideline to you. Evidence-based practice supports the excellence in service that nurses are committed to deliver in our day-to-day practice. The RNAO is committed to ensuring that the evidence supporting guideline recommendations is the best available, and this guideline has been recently reviewed and revised to reflect the current state of knowledge.

We offer our endless thanks to the many institutions and individuals that are making RNAO's vision for Nursing Best Practice Guidelines (NBPG) a reality. The Government of Ontario recognized RNAO's ability to lead this program and is providing multi-year funding. Tazim Virani – NBPG program director – with her fearless determination and skills, is moving the program forward faster and stronger than ever imagined. The nursing community, with its commitment and passion for excellence in nursing care, is providing the knowledge and countless hours essential to the creation, evaluation and revision of each guideline. Employers have responded enthusiastically by getting involved in nominating best practice champions, implementing and evaluating the NBPG and working towards an evidence-based practice culture.

Now comes the true test in this phenomenal journey: will nurses utilize the guidelines in their day-to-day practice?

Successful uptake of these NBPG requires a concerted effort of four groups: nurses themselves, other healthcare colleagues, nurse educators in academic and practice settings, and employers. After lodging these guidelines into their minds and hearts, knowledgeable and skillful nurses and nursing students need healthy and supportive work environments to help bring these guidelines to life.

We ask that you share this NBPG, and others, with members of the interdisciplinary team. There is much to learn from one another. Together, we can ensure that Ontarians receive the best possible care every time they come in contact with us. Let's make them the real winners of this important effort!

RNAO will continue to work hard at developing, evaluating and ensuring current evidence for all future guidelines. We wish you the best for a successful implementation!

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Promoting Continence Using Prompted Voiding

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The RNAO also wishes to acknowledge Dawn Kingston, RN, BSc, MSc *for her work as a Research Assistant in conducting the quality appraisal of the literature and preparation of evidence tables for the revision of this guideline.*

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Acknowledgement

The Registered Nurses' Association of Ontario wishes to acknowledge the following individuals and/or groups for their contribution in reviewing this nursing best practice guideline and providing valuable feedback during the initial development of this document (2000-2002):

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RNAO also wishes to acknowledge the following organizations in London, Ontario, for their role in pilot testing the original guideline:

Chateau Gardens Queens

Chelsea Park Retirement Community

Extendicare, London

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RNAO sincerely acknowledges the leadership and dedication of the nurse researchers who directed the evaluation phase of this Nursing Best Practice Guideline in 2000.

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Promoting Continence Using Prompted Voiding

Disclaimer

These best practice guidelines are related only to nursing practice and not intended to take into account fiscal efficiencies. These guidelines are not binding for nurses and their use should be flexible to accommodate client/family wishes and local circumstances. They neither constitute a liability or discharge from liability. While every effort has been made to ensure the accuracy of the contents at the time of publication, neither the authors nor the Registered Nurses' Association of Ontario (RNAO) give any guarantee as to the accuracy of the information contained in them nor accept any liability, with respect to loss, damage, injury or expense arising from any such errors or omission in the contents of this work. Any reference throughout the document to specific pharmaceutical products as examples does not imply endorsement of any of these products.

How to Use this Document

This nursing best practice guideline is a comprehensive document providing resources necessary for the support of evidence-based nursing practice. The document needs to be reviewed and applied, based on the specific needs of the organization or practice setting/environment, as well as the needs and wishes of the client. Guidelines should not be applied in a "cookbook" fashion but used as a tool to assist in decision making for individualized client care, as well as ensuring that appropriate structures and supports are in place to provide the best possible care.

Nurses, other healthcare professionals and administrators who are leading and facilitating practice changes will find this document valuable for the development of policies, procedures, protocols, educational programs, assessments and documentation tools. It is recommended that the nursing best practice guidelines be used as a resource tool. Nurses providing direct client care will benefit from reviewing the recommendations, the evidence in support of the recommendations and the process that was used to develop the guidelines. However, it is highly recommended that practice settings/environments adapt these guidelines in formats that would be user-friendly for daily use. This guideline has some suggested formats for such local adaptation and tailoring.

Organizations wishing to use the guideline may decide to do so in a number of ways:

- Assess current nursing and healthcare practices using the recommendations in the guideline.
- Identify recommendations that will address identified needs or gaps in services.
- Systematically develop a plan to implement the recommendations using associated tools and resources.

RNAO is interested in hearing how you have implemented this guideline. Please contact us to share your story. Implementation resources will be made available through the RNAO website at www.rnao.org/bestpractices to assist individuals and organizations to implement best practice guidelines.

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Summary of Recommendations

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	2.0 Gather information on: ■ The amount, type and time of daily fluid intake, paying particular attention to the intake amount of caffeine and alcohol. ■ The frequency, nature and consistency of bowel movements. ■ Any relevant medical or surgical history which may be related to the incontinence problem, such as but not limited to diabetes, stroke, Parkinson's disease, heart failure, recurrent urinary tract infections or previous bladder surgery.	IV
	3.0 Review the client's medications to identify those which may have an impact on the incontinence.	IV
	4.0 Identify the client's functional and cognitive ability.	III
	5.0 Identify attitudinal and environmental barriers to successful toileting. Barriers include: ■ Proximity and availability of the nearest bathroom; ■ Accessibility of commode; ■ Satisfactory lighting; ■ Use of restraints; ■ Staff expectation that incontinence is an inevitable consequence of aging; and ■ Staff belief that few interventions exist to promote continence.	III
	6.0 Check urine to determine if infection is present.	IV
	7.0 Determine how the client perceives their urinary incontinence and if they will benefit from prompted voiding. Before initiating prompted voiding, identify the client's pattern of incontinence using a 3-day voiding record.	III
	8.0 Ensure that constipation and fecal impaction are addressed.	IV
	9.0 Ensure an adequate level of fluid intake (1500 - 2000 ml per day), and minimize the use of caffeinated and alcoholic beverages where possible.	III
	10.0 Initiate an individualized prompted voiding schedule based on the client's toileting needs, and as determined by a 3-day voiding record.	Ia
	11.0 Initiate a 3-day voiding record, a minimum of 3 weeks and a maximum of 8 weeks, after the prompted voiding schedule.	IV

*See page 11 for details regarding "Interpretation of Evidence".

Summary of Recommendations

	RECOMMENDATION	*LEVEL OF EVIDENCE
Education Recommendations	**12.0** Implement an educational program on promoting continence using prompted voiding. The program should be structured, organized, and directed at all levels of healthcare providers, clients, family and caregivers. The educational program should identify a nurse with an interest in an/or advanced preparation in continence care (e.g., nurse continence advisor, nurse clinician, or clinical nurse specialist) to be responsible for providing the educational program. The program should be updated on a regular basis to incorporate any new information. The program should include information on: ■ Myths related to incontinence and aging; ■ Definition of continence and incontinence; ■ Continence assessment; ■ Prompted voiding; ■ Individualized toileting; ■ The impact of cognitive impairment on ability to be continent and strategies to manage aggressive behaviours; ■ Relation of bowel hygiene care to healthy bladder functioning; and ■ Use of a voiding record with individualized toileting.	IV
	13.0 Nurses should be knowledgeable about community resources for professional development, referral and ongoing assistance.	IV
Organization & Policy Recommendations	**14.0** Successful implementation of prompted voiding requires: ■ Management support; ■ Opportunities for education and training; ■ Active involvement of key clinical staff; ■ Gradual implementation of the prompted voiding schedule; ■ Collection of baseline information about clients, resources and existing knowledge; ■ Interpretation of this data and identification of problems; ■ Development of implementation strategy; and ■ Monitoring of the program.	IV
	15.0 Organizations are encouraged to establish an interdisciplinary team approach to continence care.	IV
	16.0 Nursing best practice guidelines can be effectively implemented only where there are adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation of the change process by skilled facilitators. The implementation of the guideline must take into account local circumstances and should be disseminated through an active educational and training program. In this regard, RNAO (through a panel of nurses, researchers and administrators) has developed the *Toolkit: Implementation of Clinical Practice Guidelines*, based on available evidence, theoretical perspectives and consensus. The *Toolkit* is recommended for guiding the implementation of the RNAO Nursing Best Practice Guideline *Promoting Continence Using Prompted Voiding*.	IV

Interpretation of Evidence

Levels of Evidence

Ia	Evidence obtained from meta-analysis or systematic review of randomized controlled trials.
Ib	Evidence obtained from at least one randomized controlled trial.
IIa	Evidence obtained from at least one well-designed controlled study without randomization.
IIb	Evidence obtained from at least one other type of well-designed quasi- experimental study, without randomization.
III	Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.
IV	Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

Responsibility for Guideline Development

The Registered Nurses' Association of Ontario (RNAO), with funding from the Government of Ontario, has embarked on a multi-year program of nursing best practice guideline development, pilot implementation, evaluation and dissemination. One of the areas of emphasis is on promoting continence using prompted voiding. This guideline was originally developed in 2002 and subsequently revised in 2005 by a panel of nurses and researchers convened by the RNAO and conducting its work independent of any bias or influence from the Government of Ontario.

Preventing and reducing constipation is viewed to be a key intervention in the prevention and management of urinary incontinence. For this reason, this guideline has been revised in conjunction with the nursing best practice guideline *Prevention of Constipation in the Older Adult Population* (RNAO, 2005). This guideline is available to download from the RNAO website (www.rnao.org/bestpractices), or can be purchased from the RNAO.

The Nursing Best Practice Guideline: Prevention of Constipation in the Older Adult Population is available on the RNAO website at www.rnao.org/bestpractices.

Purpose & Scope

Best practice guidelines are systematically developed statements to assist decision-making by healthcare practitioners and clients about appropriate healthcare. The purpose of this guideline is to provide information on implementing a treatment program of prompted voiding for older adults with urinary incontinence. The goals of prompted voiding are to:

- Reduce the frequency and severity of urinary incontinence episodes;
- Prevent the complications associated with urinary incontinence; and
- Improve quality of life.

This guideline has relevance to all areas of clinical practice including acute care, community care and long-term care.

This guideline focuses its recommendations on four areas: (1) Practice Recommendations to support the nurse and nursing practice; (2) Educational Recommendations to support the competencies required for nursing practice; (3) Organization and Policy Recommendations directed at practice settings and the environment to facilitate nursing practice; and (4) Evaluation and monitoring indicators..

This best practice guideline contains recommendations for Registered Nurses (RNs) and Registered Practical Nurses (RPNs). It is acknowledged that effective client care depends on a coordinated interdisciplinary approach incorporating ongoing communication between clients, families, physicians, pharmacists, activation and dietary staff, and other members of the healthcare team, ever mindful of the personal preferences and unique needs of each individual client. The recommendations made are not binding for nurses and should accommodate client/family wishes and local circumstances.

Original Guideline Development Process – 2000

In January 2000, a panel of nurses with expertise in practice and research related to prompted voiding and urinary incontinence and constipation was established by the RNAO.

A search of the literature for systematic reviews, clinical practice guidelines, relevant articles and websites was conducted. A further search for unpublished work, locally known and "in progress" guidelines, was undertaken by the panel members. The panel identified one published best practice guideline on prompted voiding for persons with urinary incontinence. The guideline was evaluated using the *Appraisal Instrument for Canadian Clinical Practice Guidelines,* an adapted tool from Cluzeau, Littlejohns, Grimshaw, Feder, & Moran (1997). The panel identified the following guideline to adapt and modify:

Lyons, S. S. & Pringle Specht, J. K. P. (1999). *Prompted voiding for persons with urinary incontinence evidence-based protocol.* In M. G. Titler (Series Ed.), *Series on Evidence-Based Practice for Older Adults*. Iowa City, IA: The University of Iowa College of Nursing Gerontological Nursing Interventions Research Centre, Research Translation and Dissemination Core.

A systematic review of pertinent literature was conducted to update the evidence related to prompted voiding. Through a process of consensus, the guideline was developed. Various stakeholder groups including consumers, staff nurses, physicians, dietitians, and healthcare administrators reviewed the draft guideline, and a list of those stakeholders is included in the front of the guideline. This guideline was further refined after a six month pilot implementation phase in selected practice settings, which were identified through a "request for proposal" process.

Revision Process – 2005

The Registered Nurses' Association of Ontario (RNAO) has made a commitment to ensure that this best practice guideline is based on the best available evidence. In order to meet this commitment, a monitoring and revision process has been established for each published guideline.

Guideline development staff have reviewed abstracts published in key databases on the topic of prompted voiding and continence, focusing on systematic reviews, randomized controlled trials(RCTs) and recently published clinical practice guidelines on a quarterly basis since the guideline, *Promoting Continence Using Prompted Voiding*, was originally published. The purpose of this review was to identify evidence that may have impacted on the recommendations, requiring a full review prior to the three-year schedule. No evidence of this nature was identified during this ongoing monitoring, and this guideline was reviewed/revised as originally scheduled.

In September of 2004, a panel of nurses with expertise in continence care from a range of practice settings (including institutional, community and academic sectors) was convened by the RNAO. This group was invited to participate as a review panel to revise the *Promoting Continence Using Prompted Voiding* guideline that was originally published in January 2002. This panel was comprised of members of the original development panel, as well as other recommended specialists.

The panel members were given the mandate to review the guideline, focusing on the currency of the recommendations and evidence, keeping to the original scope of the document. This work was conducted as follows:

Planning:

- Clinical questions were identified to structure the literature search.
- Search terms were generated with input from the panel team leader for each recommendation in the guideline.
- Literature search was conducted by a health sciences librarian.

Quality Appraisal:

- Search results were reviewed by a Research Assistant assigned to the panel for inclusion/exclusion, related to the clinical questions. See *Appendix A* for a detailed description of the search strategy.
- Studies/guidelines that met the inclusion/exclusion criteria were retrieved. Quality appraisal and data extraction was conducted by the Research Assistant. These results were summarized and distributed to the panel.

Panel Review:

- Panel members reviewed the data extraction tables, systematic reviews, and where appropriate, original studies and clinical guidelines.
- Recommendations for additional search strategies were identified, as required.
- Through a process of discussion and consensus, recommendations for revision to the guideline were identified.
- The revision panel found that there was no significant new evidence. However, the original recommendations and the discussion of evidence have been updated.
- The original interpretation of evidence (Strength of Evidence A-C) has been modified to reflect the Levels of Evidence (Level Ia-IV) currently utilized by the RNAO.
- Additional appendices are included and may be used as tools to increase uptake of guideline implementation.

Definition of Terms

Clinical Practice Guidelines or Best Practice Guidelines

Systematically developed statements (based on best available evidence) to assist practitioner and client decisions about appropriate healthcare for specific clinical (practice) circumstances (Field & Lohr, 1990).

Consensus

A process for making policy decisions, not a scientific method for creating new knowledge. At its best, consensus development merely makes the best use of available information, be that of scientific data or the collective wisdom of the participants (Black et al., 1999).

Definition of Multidisciplinary versus Interdisciplinary

Multidisciplinary and interdisciplinary are terms that have been used interchangeably. However, when one examines the definitions more closely there are subtle differences. Garner's definition of ***multidisciplinary*** describes the concept of the 'gatekeeper' where one determines which other disciplines are invited to participate in an independent, discipline-specific team that conducts separate assessment, planning and provision of service with little coordination. This process involves independent decision-making rather than coordination of information (Garner, 1995).

Interdisciplinary team processes establish collaborative team goals and produce a collaborative service plan where team members are involved in problem solving beyond the confines of their discipline (Dyer, 2003).

According to the American Heritage Dictionary (2000), multidisciplinary is defined as of, relating to, or making use of several disciplines at once: a multidisciplinary approach to teaching where as it defines interdisciplinary as of, relating to, or involving two or more academic disciplines that are usually considered distinct.

It is not necessary for every member of a multidisciplinary team to assess each client. However, the collective knowledge, skills, and clinical experiences of the professional staff should reflect the multidisciplinary expertise necessary to achieve the desired program and client goals.

For this guideline, the term interdisciplinary will be used.

Education Recommendations

Statements of educational requirements and educational approaches/strategies for the introduction, implementation and sustainability of the best practice guideline.

Evidence

"An observation, fact or organized body of information offered to support or justify inferences or beliefs in the demonstration of some proposition or matter at issue" (Madjar & Walton, 2001, p. 28).

Facilitation

It is a technique by which one person makes things easier for others. Facilitators have a key role to play in helping individuals and teams to understand what they need to change and how they need to change it in order to apply evidence to practice (Rycroft-Malone, Kitson, Harvey, McCormack, Seers, Titchen, et al., 2002).

Family

Whomever the person defines as being family. Family members can include: parents, children, siblings, neighbours, and/or significant others.

Informal Support

Support and resources provided by persons associated with the individual receiving care. Persons providing informal support can include: family, friends, members of a spiritual community, neighbours, etc.

Meta-analysis

The use of statistical methods to summarize the results of independent studies, thus providing more precise estimates of the effects of healthcare than those derived from the individual studies included in a review (Alderson, Green & Higgins, 2004).

Organization & Policy Recommendations

Statements of conditions required for a practice setting that enable the successful implementation of the best practice guideline. The conditions for success are largely the responsibility of the organization, although they may have implications for policy at a broader government or societal level.

Practice Recommendations

Statements of best practice directed at the practice of healthcare professionals that are evidence based.

Prompted voiding

A behavioural technique using verbal and physical cues to assist the individual to use the toilet or appropriate receptacle. Prompted voiding is a first-line intervention for some types of urinary incontinence (urge, stress, mixed and functional).

Randomized Controlled Trial

For the purpose of this guideline, a study in which subjects are assigned to conditions on the basis of chance, and where at least one of the conditions is a control or comparison condition.

Stakeholder

A stakeholder is an individual, group, or organization with a vested interest in the decisions and actions of organizations who may attempt to influence decisions and actions (Baker et al., 1999). Stakeholders include all individuals or groups who will be directly or indirectly affected by the change or solution to the problem. Stakeholders can be of various types, and can be divided into opponents, supporters, and neutrals (Ontario Public Health Association, 1996).

Systematic Review

Application of a rigorous scientific approach to the preparation of a review article (National Health and Medical Research Council, 1998). Systematic reviews establish where the effects of healthcare are consistent and research results can be applied across populations, settings, and differences in treatment (e.g., dose); and where effects may vary significantly. The use of explicit, systematic methods in reviews limits bias (systematic errors) and reduces chance effects, thus providing more reliable results upon which to draw conclusions and make decisions (Alderson et al., 2004).

Toileting

The process of encouraging the client to use some type of containment device in which to void or defecate. The containment device may be the toilet, commode, urinal, bedpan, or some other type of receptacle, but does not include briefs. Toileting is for the purpose of voiding and not for just changing of briefs.

Urinary incontinence is the involuntary loss of urine that is sufficient to be a problem, and may present as any of the following types:

Transient incontinence is urine loss resulting from causes outside of or affecting the urinary system such as acute confusion, infection, atrophic urethritis or vaginitis, medications, psychological conditions, restricted mobility or stool impaction.

Urge incontinence is the involuntary passage of urine occurring soon after a strong sense of urgency to void.

Stress incontinence is a loss of urine with coughing and or sneezing resulting in increased abdominal pressure.

Mixed incontinence is urine loss having features of both stress and urge.

Functional incontinence is urinary leakage associated with inability to access the toilet because of impairment of cognitive and/or physical functioning or an environmental barrier.

Overflow incontinence is the involuntary loss of urine associated with bladder over-distention. Total incontinence is a continuous and unpredictable loss of urine.

Total incontinence is a continuous and unpredictable loss of urine.

Background Context

Urinary incontinence has been estimated to affect over 1.5 million Canadians in community and institutional settings (Canadian Continence Foundation, 1998). It can touch individuals at any stage of life but is more common in the elderly, and several studies confirm that over one-half of all nursing home residents are incontinent of urine (Eustice, Paterson & Roe, 1999; Lyons & Pringle Specht, 1999; Ouslander, Schnelle, Uman, Fingold, Nigam, Tuico & Jensen, 1995; Schnelle, 1990). Family care providers of incontinent individuals report continence maintenance as burdensome, and urinary incontinence plays an important role in the decision to institutionalize elderly family members. While more elderly women are incontinent, it may be the elderly male who is at greatest risk to develop urinary incontinence (Lyons & Pringle Specht, 1999). Despite its prevalence, and estimated annual cost of more than $15 billion (U.S.), most incontinent people suffer in silence and do not seek help. It is expected that urinary incontinence will continue to be a significant healthcare problem in the elderly, and will increase as the aging population continues to grow. As direct care providers, nurses are in a unique position to have an impact on the problem of incontinence in the community, acute-care, long-term care and chronic care settings. A behavioural intervention known as "prompted voiding" has been shown to decrease the number of incontinent episodes per day and increase the number of continent voids. This intervention can be used with persons who have physical or mental impairments or little ability to determine how best to meet their needs. The identification of individual voiding patterns (individualized toileting) rather than routine toileting (e.g., every 2 hours) can promote the highest level of success with toileting and is supported by the highest level of evidence.

This guideline does not apply to those clients with medical conditions for whom a restricted fluid intake is prescribed.

Practice Recommendations

Recommendation 1.0

Obtain a history of the client's incontinence. *(Level of Evidence = IV)*

Discussion of Evidence

The importance of assessment prior to determining specific interventions for urinary incontinence is consistently stressed in the literature, although there is limited guidance available. Assessment should include first identifying the type of urinary incontinence (see *Definition of Terms* for a list of the types of urinary incontinence), and must take into consideration the individual's unique response to the condition (Lyons & Pringle Specht, 1999). Findings from several studies indicate that a complete history and physical examination by a clinician will predict the actual diagnosis of incontinence with reasonable accuracy. In many cases, the clinician will then refer the individual to appropriate healthcare providers, such as nurses, to initiate the interventions for urinary incontinence (Lyons & Pringle Specht, 1999). Zembruski (1997) adds that the challenge of interpreting assessment data requires an interdisciplinary approach, including healthcare providers, the client and the family caregivers. The history, obtained from the client and/or the care provider, should include the onset and symptoms of the incontinence, as well as the use of containment products.

Assessment for a history of incontinence includes the following:

- Frequency and pattern of incontinence.
- Client's awareness of the urge to void, and behaviours exhibited when needing to void.
- Motivation to be continent.
- Fluid intake.
- Frequency of bowel movement.
- Medical/surgical history.
- Medications.
- Functional ability.
- Environmental barriers.
- Presence of urinary tract infection.
- History of urinary tract infection.
- Identification of client goals/motivation.

See *Appendix B* for an algorithm on *Promoting Continence Using Prompted Voiding.*

Recommendation 2.0

Gather information on:

- **The amount, type and time of daily fluid intake, paying particular attention to the intake amount of caffeine and alcohol.**
- **The frequency, nature and consistency of bowel movements.**
- **Any relevant medical or surgical history which may be related to the incontinence problem, such as but not limited to diabetes, stroke, Parkinson's disease, heart failure, recurrent urinary tract infections or previous bladder surgery.**

(Level of Evidence = IV)

Discussion of Evidence

Proper hydration of the elderly is a concern cited in numerous studies, and it is widely believed that as people age, they experience a decrease in thirst. Thirst is normally experienced when the body's water loss equals 2% of an individual's body weight. There are several examples of situations that trigger a need for additional assessment of dehydration problems, as these individuals are thought to be more susceptible to urinary tract infections, pneumonia, pressure ulcers, confusion, and disorientation (Chidester & Spangler, 1997). In a randomized controlled study, Gaspar (1988) found substantial evidence to support the contention that water intake among nursing home residents is inadequate; it was also noted that individuals with a higher functional ability have a higher percentage of water intake adequacy. The diuretic and irritative effects of caffeine and alcohol are also well documented in the literature. Eliminating these effects will reduce the client's symptoms of urgency and frequency and reduce the need for toileting (Skelly, Eyles, Boblin-Cummings & Davis, 1998). Constipation directly affects urinary incontinence, and during the assessment phase, fecal impaction must be removed (Peet, Castleden, McGrother & Duffin, 1996). Refer to the RNAO Nursing Best Practice Guideline *Prevention of Constipation in the Older Adult Population* (2005).

Walters & Realini (1992), among others, stress the importance of a thorough medical and surgical history to determine the presence of other medical conditions (e.g., diabetes, stroke, multiple sclerosis) that may be a direct cause of urinary incontinence.

Recommendation 3.0

Review the client's medications to identify those which may have an impact on the incontinence.
(Level of Evidence = IV)

Discussion of Evidence

Medications most often cited in the literature that has an impact on incontinence are:

- Diuretics;
- Sedatives;
- Hypnotics;
- Anticholinergics;
- Amitriptyline; and
- Opioid analgesics.

Several studies conclude that medications have side effects that can be harmful to the elderly person. For the person with incontinence, recognizing and reducing the side effects of medications that can have a direct or indirect impact on bladder function is an important step in treatment (Lyons & Pringle Specht, 1999). Some pharmacological treatments have anticholinergic properties including:

- Dry skin;
- Blurred vision;
- Nausea;
- Constipation;
- Xerostomia (dry mouth);
- Dizziness;
- Postural hypotension;
- Weakness;
- Fatigue;
- Urinary retention; and
- Insomnia (Lyons & Pringle Specht, 1999; McCormick, Burgio, Engel, Scheve & Leahy, 1992; Schnelle, 1990).

There is further evidence that diuretics contribute to urgency and frequency, and sedatives and hypnotics can reduce the awareness of the urge to void (Skelly et al., 1998).

Recommendation 4.0

Identify the client's functional and cognitive ability. *(Level of Evidence = III)*

Discussion of Evidence

There is strong evidence that those persons most likely to develop urinary incontinence have mobility or cognitive impairments (Lyons & Pringle Specht, 1999; Ouslander et al., 1995; Schnelle, 1990). It is often stated, however, that cognitive impairment should not be considered a barrier to using prompted voiding. In a prospective controlled exploratory study, Engberg, Sereika, McDowell, Weber & Brodak (2002) found that homebound cognitively impaired elders responded to prompted voiding and this intervention can be readily adapted in practice. The client's ability to be toileted is highly dependent on his/her level of self-care, ability to understand, ability to process information, and ability to respond accordingly (Lyons & Pringle Specht, 1999).

Tools to assist with assessing function and cognitive ability can be found in the RNAO guideline on *Screening for Delirium, Dementia and Depression in Older Adults* (2003) and the functional ability can be found in *Appendix M* of the guideline, *Caregiving Strategies for Older Adults with Delirium, Dementia and Depression* (2004). Both guidelines are available to download from the RNAO website at www.rnao.org/bestpractices.

Recommendation 5.0

Identify attitudinal and environmental barriers to successful toileting.

Barriers include:

- **Proximity and availability of the nearest bathroom;**
- **Accessibility of commode;**
- **Satisfactory lighting;**
- **Use of restraints;**
- **Staff expectation that incontinence is an inevitable consequence of aging; and**
- **Staff belief that few interventions exist to promote continence.**

(Level of evidence = III)

Discussion of Evidence

Wyman (2003) in a review of the literature on urinary incontinence found that staff attitudes toward urinary incontinence were a barrier to the treatment of urinary incontinence. Attitudes of staff have also been identified as a factor in promoting continence (Northwood, 2004).

There is limited research on the impact of environmental barriers on successful toileting, although expert opinion strongly supports this recommendation. Hutchinson, Leger-Krall, & Skodol Wilson (1996), however, noted that the number and size of bathrooms affected the ease of toileting, and clients in wheelchairs presented yet another challenge. The use of restraints appears to have a significant impact on the success of toileting, but many studies are inconclusive in their findings. In a randomized controlled study, Schnelle, MacCrae, Ouslander & Sui (1995) noted that 63% of the nursing home residents in the study were physically restrained for some part of the day, and almost all of those residents were also incontinent. Schnelle et al. (1995) also noted that almost all of those residents were cognitively impaired. One obvious barrier cited in

the literature is the time and availability of nurses and care providers to assist with the toileting. Lyons & Pringle Specht (1999) note that it takes more time to assist a person to the toilet than it does to change a urine-soaked pad. Staff compliance will be discussed further under the Education and Organizational & Policy Recommendations.

Recommendation 6.0

Check urine to determine if infection is present. *(Level of Evidence = IV)*

Discussion of Evidence

Most studies rarely addressed this assessment procedure, but McCormick et al. (1992) concluded that a baseline assessment for urinary incontinence should include testing for a urinary tract infection. The revision panel reached consensus to support this recommendation.

This procedure should be done according to facility policy and procedure. If a urinary tract infection is present, the nurse should refer to the appropriate clinician for treatment.

Recommendation 7.0

Determine how the client perceives their urinary incontinence and if they will benefit from prompted voiding. Before initiating prompted voiding, identify the client's pattern of incontinence using a 3-day voiding record. *(Level of Evidence = III)*

Discussion of Evidence

In a cohort study designed to examine predictors of success among incontinent nursing home residents, Ouslander et al. (1995) found evidence to support that home residents who respond well to prompted voiding can be identified during a 3-day trial intervention. Similarly, Lyons & Pringle Specht (1999) found from several randomized controlled trials that the best predictor of an individual's response to prompted voiding is his or her success to a therapeutic trial of prompted voiding. A voiding record or bladder record is essential when trying to establish the client's voiding and fluid intake patterns, and to help determine whether the individual is likely to succeed after the intervention (Lyons & Pringle Specht, 1999). Schnelle (1990) promotes an assessment that allows care providers to identify those clients who can most benefit from prompted voiding management. See *Appendix C* to determine who will benefit from prompted voiding.

Description of the Prompted Voiding Intervention

Prompted voiding is a behavioural intervention used in the treatment of urinary incontinence. Behavioural interventions for urinary incontinence seek to change the way a person reacts to urine loss (Lyons & Pringle Specht, 1999). Other examples of behavioural responses to urinary incontinence include:

- The application of an incontinence product to collect and store urine until a time at which the urine can conveniently be disposed.
- Emptying of the bladder prior to urine loss.

Prompted voiding differs from the examples above, in that it is the care provider's, rather than the incontinent individual's, response to urinary incontinence that is changed. Rather than relying on an incontinence aid or clothing, the caregiver will intervene prior to the undesired bladder voiding. An individualized prompted voiding schedule is determined using a 3-day voiding record that is based on the person's normal pattern of voiding and/or incontinence. Prompted voiding is used for the treatment of urinary incontinence in persons with physical and/or cognitive deficits, requiring timely reminders to toilet from caregivers. This intervention has been used successfully to treat urinary incontinence in acute and long-term care, as well as in home care settings (Lyons & Pringle Specht, 1999). Each time prompted voiding is initiated, the care provider uses three primary behaviours:

Monitoring: This involves asking the incontinent individual, at regular intervals, if he or she needs to use the toilet. The care provider may look for behaviours that the client needs to be toileted (e.g., restlessness, agitation, disrobing), and take the client to the toilet at regular intervals specific to their schedule, rather than routinely every two hours.

Prompting: This process includes prompting the person to use the toilet at regular intervals, and encourages the maintenance of bladder control between prompted voiding sessions.

Praising: This important step is the positive reinforcement of dryness and appropriate toileting, and is the response from the care provider to the individual's success with maintaining bladder control.

Adapted from Lyons & Pringle Specht, 1999. See *Appendix C* for suggested communication techniques with prompted voiding.

Recommendation 8.0

Ensure that constipation and fecal impaction are addressed. *(Level of Evidence = IV)*

Discussion of Evidence

As stated earlier, during the assessment phase, studies reveal the importance of ensuring that fecal impaction is removed (McCormick et al., 1992; Peet et al., 1996). Preventing and reducing constipation is viewed to be a key intervention in the prevention and management of urinary incontinence. For this reason, this guideline is recommended to be used in conjunction with the RNAO nursing best practice guideline *Prevention of Constipation in the Older Adult Population* (2005).

Recommendation 9.0

Ensure an adequate level of fluid intake (1500-2000 ml per day), and minimize the use of caffeinated and alcoholic beverages where possible. *(Level of Evidence = III)*

Discussion of Evidence

Literature supports the contention that water intake among nursing home residents is inadequate (Gaspar, 1988). Sansevero (1997) concludes that the consequences of dehydration clearly affect cognition, impairment, and functional decline. Proper hydration of the elderly is a concern often expressed by care providers, but often overlooked in nursing practice. There is some evidence, although inconclusive, that nurses are more likely to initiate interventions for fluid intake when individuals are dependent in care, than when dealing with those who are less dependent (Chidester & Spangler, 1997; Zembrzuski, 1997).

Recommendation 10.0

Initiate an individualized prompted voiding schedule based on the client's toileting needs, and as determined by a 3-day voiding record. *(Level of Evidence = Ia)*

Discussion of Evidence

The identification of an individual voiding pattern can promote the highest level of continence for the individual while reducing the time required to toilet, including the time of the care provider (Lyons & Pringle Specht, 1999). There is strong evidence that prompted voiding reduces the frequency of incontinence in individuals who can initiate voiding when prompted (Eustice, Roe, & Paterson, 2004; Holroyd-Leduc & Strauss, 2004; Schnelle,1990). See *Appendix C* to determine who is likely to benefit from this intervention.

Literature also suggests that although prompted voiding does not require expensive equipment to implement, the consistent availability of a care provider or staff to provide the prompted cues is a factor in the success of prompted voiding (Lyons & Pringle Specht, 1999). Several studies conclude that prompted voiding is easy to learn, but requires personal dedication and consistent application of the protocol (Lyons & Pringle Specht, 1999, McCormick et al,1992, Schnelle, Traughber, Sowell, Newman, Petrill & Ory, 1989).

Recommendation 11.0

Initiate a 3-day voiding record, a minimum of 3 weeks and a maximum of 8 weeks, after the prompted voiding schedule. *(Level of Evidence = IV)*

Discussion of Evidence

There is some evidence to suggest that individuals unable to maintain urinary continence with at least an every 2-hour toileting schedule after a thorough trial (4 to 7 weeks) of prompted voiding, are not likely to respond. If an individual needs to be toileted more often than every 2-hours, nurses are advised not to proceed with prompted voiding (Lyons & Pringle Specht, 1999).

See *Appendix D* for a sample of a voiding record.

Education Recommendations

Recommendation 12.0

Implement an educational program on promoting continence using prompted voiding. The program should be structured, organized, and directed at all levels of healthcare providers, clients, family and caregivers. The educational program should identify a nurse with an interest in an/or advanced preparation in continence care (e.g., nurse continence advisor, nurse clinician, or clinical nurse specialist) to be responsible for providing the educational program. The program should be updated on a regular basis to incorporate any new information.

The program should include information on:

- **Myths related to incontinence and aging;**
- **Definition of continence and incontinence;**
- **Continence assessment;**
- **Prompted voiding;**
- **Individualized toileting;**
- **The impact of cognitive impairment on ability to be continent and strategies to manage aggressive behaviours;**
- **Relation of bowel hygiene care to healthy bladder functioning; and**
- **Use of a voiding record with individualized toileting.**

(Level of Evidence = IV)

Discussion of Evidence

Various research surveys have been conducted on nurses' educational preparation and knowledge concerning continence care (Cheater, 1992, Palmer, 1995). Both studies concluded that there is a lack of sufficient knowledge about incontinence. Palmer (1995) asserts the importance of developing a staff continence educational program to enhance nursing practice and quality of continence care. Such programs should include standards of continence care, staff assessment skills, and staff sensitivity to continence training in all educational programs as suggested by Peet et al (1996). Other research suggests the importance of education on the myths of incontinence and aging, definition of continence and incontinence, and strategies to manage aggressive behaviours in promoting continence (Northwood, 2004; Sui, Schindel Martin, Skelly & Northwood, 2001). Lyons & Pringle Specht (1999) emphasize that staff management is a crucial factor for the success of prompted voiding. Barriers perceived by staff include:

- Inadequate staff supervision and support;
- Insufficient monitoring techniques;
- Inadequate number of staff;
- Failure to select residents most likely to benefit from prompted voiding;
- Failure to complete regular re-assessments of individuals using prompted voiding;
- Inadequate initial education; and
- Lack of ongoing in-service education about the program.

Recommendation 13.0

Nurses should be knowledgeable about community resources for professional development, referral and ongoing assistance. *(Level of Evidence = IV)*

Discussion of Evidence

The RNAO revision panel supports the need for nurses to be familiar with and maintain knowledge about, available community resources in order to support clients in their practice.

See *Appendix E* for a list of community resources and useful websites.

Organization & Policy Recommendations

Recommendation 14.0

Successful implementation of prompted voiding requires:

- **Management support;**
- **Opportunities for education and training;**
- **Active involvement of key clinical staff;**
- **Gradual implementation of the prompted voiding schedule;**
- **Collection of baseline information about clients, resources and existing knowledge;**
- **Interpretation of this data and identification of problems;**
- **Development of implementation strategy; and**
- **Monitoring of the program.**

(Level of Evidence = IV)

Discussion of Evidence

The RNAO panel supports the theory that the successful implementation of this guideline is best done through a gradual implementation, recommending that only one or two clients at a time be chosen to participate. The panel also recommends choosing a client with relatively good comprehension, the ability to cooperate, and an interest in addressing the issue of incontinence.

Recommendation 15.0

Organizations are encouraged to establish an interdisciplinary team approach to continence care. *(Level of Evidence = IV)*

Discussion of Evidence

The interdisciplinary care approach to incontinence is needed to deal with this health issue. The members of the team may include: nurses, physiotherapists, occupational therapists, clinical pharmacists, registered dietitians, unregulated care providers, social workers, attending physicians and specialists. Recognizing overlap in some roles, it is important that the team work together to help each client maintain the highest level of continence possible while promoting independence and self-esteem.

Physiotherapists assess mobility, transfers, balance and strength. Occupational therapists assess physical and social environments, including each client's ability to perform the activities of daily living, such as managing clothing and toileting. Clinical pharmacists will assist with the medication review to identify medications that may be contributing to incontinence. Registered dietitians will advise regarding dietary modifications to fluid intake, caffeine intake and fibre intake. Social workers may address the emotional aspects of incontinence which include: assisting with financial planning for supplies and services.

Unregulated care providers help with toileting, hygiene and managing incontinence. They are often the first ones to identify problems with incontinence. Registered nurses may do initial assessments and develop behavioural treatment plans. Nurse Continence Advisors may do comprehensive second level assessments and develop behavioural treatment plans. Attending physicians may refer to any of the above allied health professionals with assistance in managing incontinence. They need to be informed of each client's conservative treatment status after referral. Once an assessment has been completed, clients may require further assessment and medical or surgical treatment by specialists such as urologists and gynaecologists. Communication between health professionals is essential to identify and manage this health issue.

Recommendation 16.0

Nursing best practice guidelines can be effectively implemented only where there are adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation of the change process by skilled facilitators. The implementation of the guideline must take into account local circumstances and should be disseminated through an active educational and training program. In this regard, RNAO (through a panel of nurses, researchers and administrators) has developed the *Toolkit: Implementation of Clinical Practice Guidelines*, based on available evidence, theoretical perspectives and consensus. The *Toolkit* is recommended for guiding the implementation of the RNAO Nursing Best Practice Guideline *Promoting Continence Using Prompted Voiding.* *(Level of Evidence = IV)*

Discussion of Evidence

The Registered Nurses' Association of Ontario (through a panel of nurses, researchers and administrators) has developed the *Toolkit: Implementation of Clinical Practice Guidelines* (RNAO, 2002), based on available evidence, theoretical perspectives and consensus. The *Toolkit* is recommended for guiding the implementation of the RNAO guideline *Promoting Continence Using Prompted Voiding.* Successful implementation of best practice guidelines requires the use of a structured, systematic planning process and strong leadership from nurses who are able to transform the evidence-based recommendations into policies and procedures that impact on practice within the organization. This conceptual framework is further supported by Rycroft-Malone and colleagues (2002) who proposed that successful implementation of evidence into practice require the interplay of three key elements: (1) evidence; (2) environmental context; and (3) facilitation.

The RNAO *Toolkit* (2002) provides a structured model for implementing practice change. Please refer to *Appendix F* for a description of the *Toolkit.*

Research Gaps & Future Implications

The revision panel, in reviewing the evidence for the update of this guideline, has identified several gaps in the research literature related to prompted voiding. In considering these gaps, the panel have identified the following priority research areas:

- The supports required for successful implementation of prompted voiding.
- The role of the healthcare team in continence care.
- The effect of incontinence in the older adult's quality of life.
- The need for refinement of assessment tools for prompted voiding in daily practice.

The above list, although in no way exhaustive, is an attempt to identify and prioritize the enormous amount of research that is needed in this area. Some of the recommendations in the guideline are based on evidence gained from experimental research. Other recommendations are based on consensus or expert opinion. Further substantive research is required to validate expert opinion. Increasing the research can impact knowledge that will lead to improved practice and outcomes for clients with urinary incontinence.

Evaluation & Monitoring of Guideline

Organizations implementing the recommendations in this nursing best practice guideline are encouraged to consider how the implementation and its impact will be monitored and evaluated. The following table, based on a framework outlined in the RNAO *Toolkit: Implementation of Clinical Practice Guidelines* (2002) illustrates some indicators for monitoring and evaluation.

Level of Indicator	Structure	Process	Outcome
Objectives	To evaluate the supports available in the organization that allow for nurses to implement the prompted voiding interventions. To evaluate the supports available in the organization that allow for care providers to implement the guideline.	To evaluate the changes in practice that lead towards implementation of the prompted voiding interventions.	To evaluate the impact of implementation of this guideline.
Organization/ Unit	Presence of relevant policies and procedures. Number and type of learning opportunities. Availability of client education resources that are consistent with best practice recommendations. Identification and provision of appropriate funds/ personnel to support implementation and maintenance of practice change. Continued investment in staff training to provide enhanced high quality care for older adults with incontinence. Provision of accessible resource people for nurses to consult for ongoing support after the initial implementation period. Availability of forms to assist with documentation of assessment, intervention, evaluation of nursing interventions related to prompted voiding.	Modification to policies and/or procedures consistent with best practice recommendations. Development of forms or documentation systems that support documentation of clinical assessment of continence and concrete procedures for making referrals when nurses are doing the assessments. Participation rates in learning opportunities and committees.	Policies and procedures related to use of prompted voiding interventions are consistent with the guideline. Orientation program includes content related to continence management. Referrals internally and externally. Staff satisfaction with the process/support provided.

Level of Indicator	Structure	Process	Outcome
Nurse	Percentage of full-time, part-time and casual nurses attending the best practice guideline education sessions on prompted voiding.	Nurses self-assessed knowledge of: ■ Risk factors for urinary incontinence. ■ Continence assessment. ■ Prompted voiding. ■ Individualized toileting. ■ The impact of cognitive impairment on ability to be continent. ■ Relation of bowel hygiene care to healthy bladder functioning. ■ Using a voiding record with individualized toileting. Percentage of nurses self-reporting adequate knowledge of continence management strategies and referral sources for clients requiring further investigations. Appropriate documentation of nursing interventions and client responses. Teaching rates for eligible clients. Awareness of, and adherence with relevant policies and procedures.	Evidence of documentation in the client's record consistent with guideline recommendations: a) Continence Assessment b) Voiding Record c) Plan of Care To have a current continence plan in place for all clients who are incontinent. Evidence of high risk screening and detailed assessment of continence capacity consistent with best practice. Changes in nurses' knowledge related to prompted voiding. Changes in nurses' attitudes and beliefs about their role related to continence care. Proportion of nurses engaged in client teaching.
Client/ Family	Percentage of clients with any level of urinary incontinence.	Percentage of clients and/ or families who received education sessions and support for continence management.	Reduction in skin breakdown associated with incontinence. Reduction in numbers of clients identified to have a problem with continence with no identified plan of care. Enhanced quality of life for clients. Reduction and severity of urinary tract infections. Reduction in the number of incontinent episodes per day and a corresponding increase in the number of continent voids. Enhanced client satisfaction with care.

Level of Indicator	Structure	Process	Outcome
Financial Costs	Provision of adequate financial and human resources for guideline implementation.	Cost related to implementing the guideline: ■ Education and access to workplace supports. ■ New documentation tools. ■ Support systems. ■ Evaluation costs. Costs of attendance at follow-up, continuing education (direct and indirect).	Overall resource utilization. Reduction in costs of continence products. Costs of client education materials (development, production, acquisition). Costs of initial education and ongoing support. Costs of monitoring practice.

Implementation Strategies

The Registered Nurses' Association of Ontario and the guideline revision panel have compiled a list of implementation strategies to assist healthcare organizations or healthcare disciplines who are interested in implementing this guideline. A summary of these strategies follows:

- Have at least one dedicated person such as a clinical resource nurse who will provide support, clinical expertise and leadership. The individual should also have good interpersonal, facilitation and project management skills.

- Conduct an organizational needs assessment related to promotion of continence using prompted voiding to identify current knowledge base and further educational requirements.

- Initial needs assessment may include an analysis approach, survey and questionnaire, group format approaches (e.g., focus groups), and critical incidents.

- Establish a steering committee comprised of key stakeholders and interdisciplinary members committed to lead the change initiative. Identify short term and long term goals. Keep a work plan to track activities, responsibilities and timelines.

- Create a vision to help direct the change effort and develop strategies for achieving and sustaining the vision.

- Program design should include:
  - Target population;
  - Goals and objectives;
  - Outcome measures;
  - Required resources (human resources, facilities, equipment); and
  - Evaluation activities.

- Provide educational sessions and ongoing support for implementation, a core education session ranging from 2.0 to 3.5 hours in length which reviews the problem of incontinence and the role of prompted voiding. The education session should draw on the recommendation contained in this guideline. The education sessions may consist of presentations, facilitator's guide, handouts, and case studies. Binders, posters and pocket cards may be used as ongoing reminders of the training. Plan education sessions that are interactive, include problem solving, address issues of immediate concern and offer opportunities to practice new skills (Davies & Edwards, 2004).

- Provide organizational support such as having the structures in place to facilitate the implementation. For example, hiring replacement staff so participants will not be distracted by concerns about work and having an organizational philosophy that reflects the value of best practices through policies and procedures. Develop new assessment and documentation tools (Davies & Edwards, 2004).

- Implement this guideline with one or two clients at a time.

- Identify and support designated best practice champions on each unit to promote and support implementation. Celebrate milestones and achievements, acknowledging work well done (Davies & Edwards, 2004).

- Organizations implementing this guideline should adopt a range of self-learning, group learning, mentorship and reinforcement strategies that will, over time, build the knowledge and confidence of nurses in implementing this guideline.

- Teamwork, collaborative assessment and treatment planning with the client and family and through interdisciplinary work are beneficial. It is essential to be cognizant of and to tap the resources that are available in the community. An example would be linking and developing partnerships with regional geriatric programs for referral process.

- The RNAO's Advanced/Clinical Practice Fellowship (ACPF) Project is another resource where registered nurses in Ontario may apply for a fellowship and have an opportunity to work with a mentor who has clinical expertise in continence. With the ACPF, the nurse fellow will also have the opportunity to learn more about new resources.

In addition to the strategies mentioned above, the RNAO has developed resources that are available on the website. A *Toolkit* for implementing guidelines can be helpful if used appropriately. A brief description about this *Toolkit* can be found in *Appendix F*. A full version of the document in pdf format is also available at the RNAO website, www.rnao.org/bestpractices.

Process for Update/Review of Guideline

The Registered Nurses' Association of Ontario proposes to update this nursing best practice guideline as follows:

1. Each nursing best practice guideline will be reviewed by a team of specialists (Review Team) in the topic area every three years following the last set of revisions.
2. During the three-year period between development and revision, RNAO Nursing Best Practice Guidelines program staff will regularly monitor for relevant literature in the field.
3. Based on the results of the monitor, program staff may recommend an earlier revision period. Appropriate consultation with a team of members comprised of original panel members and other specialists in the field will help inform the decision to review and revise the guideline earlier than the three year milestone.
4. Three months prior to the three year review milestone, program staff will commence the planning of the review process by:

    a. Inviting specialists in the field to participate in the Review Team. The Review Team will be comprised of members from the original panel as well as other recommended specialists.
    b. Compiling of feedback received, questions encountered during the dissemination phase as well as other comments and experiences of implementation sites.
    c. Compiling of new clinical practice guidelines in the field, systematic reviews, meta-analysis papers, technical reviews and randomized controlled trial research, and other relevant literature.
    d. Developing detailed work plan with target dates for deliverables.

The revised guideline will undergo dissemination based on established structures and processes.

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Appendix A: Search Strategy for Existing Evidence

The search strategy utilized during the revision of this guideline focused on two key areas. One was the identification of new guidelines published on the topic of continence since the original guideline was published in 2002, and the second was to identify systematic reviews, and primary studies published in this area from 2001 to 2004.

STEP 1 – DATABASE Search

A database search for existing evidence related to continence was conducted by a university health sciences library. An initial search of the Medline, Embase and CINAHL databases for guidelines and studies published from 2001 to 2004 was conducted in August 2004. This search was structured to answer the following clinical questions:

- What are the contributing factors or predictors of successful prompted voiding in the elderly population?
- What is the evidence for prompted voiding intervention?
- Who can benefit from prompted voiding intervention?
- What concurrent/adjunctive strategies can influence the success of prompted voiding interventions?
- How can nurses and other healthcare providers be educated about prompted voiding? What should the educational program entail?
- What supports are needed to allow for successful prompted voiding?
- What are the factors for a successful implementation program of prompted voiding?

Detailed search strings developed to address these questions are available on the RNAO website at www.rnao.org/bestpractices.

STEP 2 – Structured Website Search

One individual searched an established list of websites for content related to the topic area in July 2004. This list of sites, reviewed and updated in May 2004, was compiled based on existing knowledge of evidence-based practice websites, known guideline developers, and recommendations from the literature. Presence or absence of guidelines was noted for each site searched as well as date searched. The websites at times did not house a guideline but directed to another website or source for guideline retrieval. Guidelines were either downloaded if full versions were available or were ordered by phone/e-mail.

- Agency for Healthcare Research and Quality**:** http://www.ahcpr.gov
- Alberta Heritage Foundation for Medical Research – Health Technology Assessment: http://www.ahfmr.ab.ca//hta
- Alberta Medical Association – Clinical Practice Guidelines: http://www.albertadoctors.org
- American College of Chest Physicians: http://www.chestnet.org/guidelines
- American Medical Association: http://www.ama-assn.org
- Bandolier Journal: http://www.jr2.ox.ac.uk/bandolier
- British Columbia Council on Clinical Practice Guidelines: http://www.hlth.gov.bc.ca/msp/protoguides/index.html
- British Medical Journal – Clinical Evidence: http://www.clinicalevidence.com/ceweb/conditions/index.jsp

- Canadian Centre for Health Evidence: http://www.cche.net/che/home.asp
- Canadian Cochrane Network and Centre: http://cochrane.mcmaster.ca
- Canadian Coordinating Office for Health Technology Assessment: http://www.ccohta.ca
- Canadian Institute of Health Information: http://www.cihi.ca
- Canadian Task Force on Preventive Health Care: http://www.ctfphc.org
- Centers for Disease Control and Prevention: http://www.cdc.gov
- Centre for Evidence-Based Mental Health: http://cebmh.com
- Centre for Evidence-Based Nursing: http://www.york.ac.uk/healthsciences/centres/evidence/cebn.htm
- Centre for Evidence-Based Pharmacotherapy: http://www.aston.ac.uk/lhs/teaching/pharmacy/cebp
- Centre for Health Evidence: http://www.cche.net/che/home.asp
- Centre for Health Services and Policy Research: http://www.chspr.ubc.ca
- Clinical Resource Efficiency Support Team (CREST): http://www.crestni.org.uk
- CMA Infobase: Clinical Practice Guidelines**:** http://mdm.ca/cpgsnew/cpgs/index.asp
- Cochrane Database of Systematic Reviews: http://www.update-software.com/cochrane
- Database of Abstracts of Reviews of Effectiveness (DARE): http://www.york.ac.uk/inst/crd/darehp.htm
- Evidence-based On-Call: http://www.eboncall.org
- Guidelines Advisory Committee: http://gacguidelines.ca
- Institute for Clinical Evaluative Sciences: http://www.ices.on.ca
- Institute for Clinical Systems Improvement: http://www.icsi.org/index.asp
- Institute of Child Health: http://www.ich.ucl.ac.uk/ich
- Joanna Briggs Institute: http://www.joannabriggs.edu.au
- Medic8.com: http://www.medic8.com/ClinicalGuidelines.htm
- Medscape Women's Health: http://www.medscape.com/womenshealthhome
- Monash University Centre for Clinical Effectiveness: http://www.med.monash.edu.au/healthservices/cce/evidence
- National Guideline Clearinghouse**:** http://www.guidelines.gov
- National Institute for Clinical Excellence (NICE): http://www.nice.org.uk
- National Library of Medicine Health Services/Technology Assessment Test (HSTAT): http://hstat.nlm.nih.gov/hq/Hquest/screen/HquestHome/s/64139
- Netting the Evidence: A ScHARR Introduction to Evidence-Based Practice on the Internet: http://www.shef.ac.uk/scharr/ir/netting
- New Zealand Guidelines Group: http://www.nzgg.org.nz
- NHS Centre for Reviews and Dissemination: http://www.york.ac.uk/inst/crd
- NHS Nursing & Midwifery Practice Dev. Unit: http://www.nmpdu.org
- NHS R & D Health Technology Assessment Programme: http://www.hta.nhsweb.nhs.uk/htapubs.htm
- NIH Consensus Development Program: http://consensus.nih.gov/about/about.htm
- PEDro: The Physiotherapy Evidence Database: http://www.pedro.fhs.usyd.edu.au/index.html
- Queen's University at Kingston: http://post.queensu.ca/~bhc/gim/cpgs.html
- Royal College of General Practitioners: http://www.rcgp.org.uk
- Royal College of Nursing: http://www.rcn.org.uk/index.php
- Royal College of Physicians: http://www.rcplondon.ac.uk
- Sarah Cole Hirsh Institute – Online Journal of Issues in Nursing: http://fpb.cwru.edu/HirshInstitute
- Scottish Intercollegiate Guidelines Network: http://www.sign.ac.uk
- Society of Obstetricians and Gynecologists of Canada Clinical Practice Guidelines: http://www.sogc.medical.org/sogcnet/index_e.shtml
- SUMSearch: http://sumsearch.uthscsa.edu

- The Qualitative Report: http://www.nova.edu/ssss/QR
- Trent Research Information Access Gateway: http://www.shef.ac.uk/scharr/triage/TRIAGEindex.htm
- TRIP Database: http://www.tripdatabase.com
- U.S. Preventive Service Task Force: http://www.ahrq.gov/clinic/uspstfix.htm
- University of California, San Francisco: http://medicine.ucsf.edu/resources/guidelines/index.html
- University of Laval – Directory of Clinical Information Websites: http://132.203.128.28/medecine

STEP 3 – Search Engine Web Search

A website search for existing practice guidelines on promoting continence using prompted voiding was conducted via the search engine "Google", using key search terms. One individual conducted this search, noting the results of the search, the websites reviewed, date and a summary of the results. The search results were further reviewed by a second individual who identified guidelines and literature not previously retrieved.

STEP 4 – Hand Search/Panel Contributions

Additionally, panel members were asked to review personal archives to identify guidelines not previously found through the above search strategy. Results of this strategy revealed no additional clinical practice guidelines.

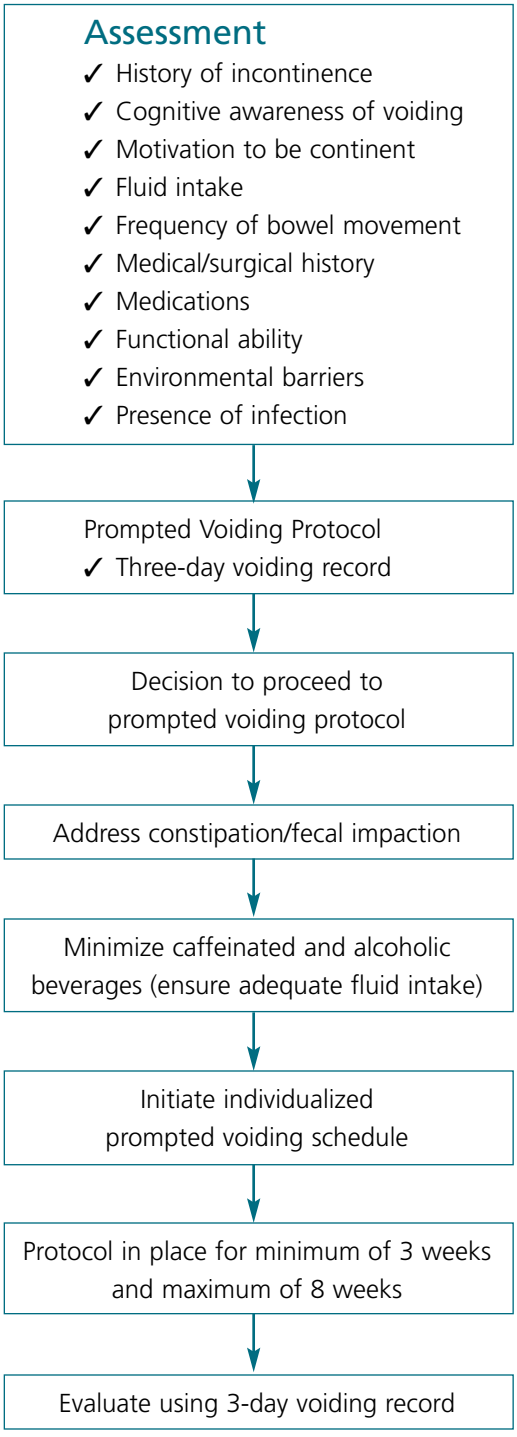
SEARCH RESULTS:

The search strategy described above resulted in the retrieval of 140 abstracts on the topic of continence. These abstracts were then screened by a Research Assistant related to inclusion/exclusion criteria. A total of 31 abstracts were identified for article retrieval and quality appraisal. The quality appraisal was conducted by a Masters prepared nurse with expertise in critical appraisal. The tool used to conduct this work was one developed by the Effective Public Health Practice Project (EPHPP) for appraising quantitative studies.

In addition, one recently published clinical practice guideline was identified for review. This guideline included:

- Salsbury Lyons, S. & Pringle Specht, J. K. (2001). Evidence-based protocol: Prompted voiding for persons with urinary incontinence. In M. G. Titler (Series Ed.), *Series on Evidence-Based Practice for Older Adults.* Iowa City, IA: The University of Iowa Nursing College of Nursing Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core.

Appendix B: Promoting Continence Using Prompted Voiding Algorithm



Appendix C: Individuals likely to Benefit from Prompted Voiding

The following factors can relate to an individual's responsiveness to prompted voiding:

- Recognizing the need to void;
- Higher number of self-initiated requests to toilet;
- Ability to void successfully when given toileting assistance;
- Ability to ambulate independently;
- More cognitively intact; and
- Higher completion of assigned prompted voiding sessions by care provider.

The best predictor of an individual's response to prompted voiding is his or her success during a trial of prompted voiding (Lyons & Pringle Specht, 1999).

Communication Techniques for use with Prompted Voiding Protocol

Approach person at prescribed time.	Establishes trusting relationship. Reinforces desired toileting behaviour.
Greet individual by name, introduce self, and state purpose of interaction.	"Hello, Mr. Roberts. I am Jane, your nurse. I am here to help you get to the bathroom".
Provide information.	"It's 2:00 – the time we agreed to meet so I could help you. I am here to help you get to the toilet".
Determine how the person informs others of the need to toilet.	"Your call light is on – do you need to use the toilet?"
Provide visual cues in the environment to promote desired toileting behaviour.	■ Use a picture of toilet on bathroom door rather than abstract symbols. ■ Leave bathroom door ajar when not in use. ■ Use clocks with large numbers near restrooms to remind staff of toileting schedules. ■ Post toileting schedules where staff will see it to remind them of the need to maintain assigned prompted voiding schedules.

Promoting Continence Using Prompted Voiding

Provide for privacy.	"Let's go into the bathroom to check your clothing. I will wait outside the restroom while you empty your bladder".
Ask for permission prior to performing continence check.	■ "Can I help you find out if your clothing is still dry?" ■ "I want to check your underclothes to see if they are wet - is that okay with you?" ■ "Sometimes it's hard to remember or realize that you have passed urine. Do you mind if I check to see if you're still dry?"
Determine person's awareness of continence status.	"Can you tell me if you feel wet or dry right now?"
Ask if person feels the need to void.	Encourages the individual to re-learn bladder sensations. "Does your bladder feel full?" "Do you feel pressure in your lower abdomen?"
Prompt person to use toilet. Repeat prompt up to 3 times.	"It's time for you to use the bathroom." "Please use the toilet to empty your bladder."
Use familiar language for toileting behaviour. Be consistent with language.	"Do you need to empty your bladder/urinate/pee/make water/use the toilet/etc?"
Offer toileting assistance.	"Can I help you on to the toilet/bedpan? I will leave the urinal with you so you can empty your bladder. Can I help you clean up/adjust your clothing?"

Give positive feedback at an adult level.	"Yes, you are dry. You're doing a good job with this new plan." "Thanks for reminding me when to help you in the bathroom." "You stayed dry all day. It must feel great to be accomplishing your goals".
Refrain from using negative feedback or treating the individual like a child.	Promotes self-esteem. Builds trusting relationship.
Provide frequent reminders about desired behaviours.	"If you feel the urge to go to the toilet, let me know and I will help you." "Try to hold your urine until our appointment at 4:00." "I will help you to the toilet at 4:00." "If you need to use the toilet, please do so. I will help if you need it."
Inform individual of next scheduled prompted voiding session.	"I would like you to hold your urine until 4:00." "That is 2 hours from now. I will help you use the toilet at 4:00."

Reprinted with permission:

Lyons, S. S. & Specht, J. K. P. (1999). Prompted voiding for persons with urinary incontinence evidence-based protocol. In M. G. Titler (Series Ed.), *Series on Evidence-Based Practice for Older Adults*, Iowa City, IA: The University of Iowa College of Nursing Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core.

Appendix D: Voiding Record

Void: Write in the amount each time you pass urine in the toilet.
Drink: Write in the amount each time you have a drink.
Wet event: Teach time you are wet.

Time	Void	Drink	Wet Event	Time	Void	Drink	Wet Event
6:00 am				6:00 pm			
6:30 am				6:30 pm			
7:00 am				7:00 pm			
7:30 am				7:30 pm			
8:00 am				8:00 pm			
8:30 am				8:30 pm			
9:00 am				9:00 pm			
9:30 am				9:30 pm			
10:00 am				10:00 pm			
10:30 am				10:30 pm			
11:00 am				11:00 pm			
11:30 am				11:30 pm			
12:00 noon				12:00 night			
12:30 pm				12:30 am			
1:00 pm				1:00 am			
1:30 pm				1:30 am			
2:00 pm				2:00 am			
2:30 pm				2:30 am			
3:00 pm				3:00 am			
3:30 pm				3:30 am			
4:00 pm				4:00 am			
4:30 pm				4:30 am			
5:00 pm				5:00 am			
5:30 pm				5:30 am			

Collaborative Continence Program, St. Joseph's Community Health Centre
Reprinted with permission: Jennifer Skelly, RN, PhD, Associate Professor, McMaster University School of Nursing, Director, Continence Program, St. Joseph's Healthcare, Hamilton, Ontario.

Appendix E: List of Resources and Websites

Resource	Program
The Canadian Continence Foundation 1-800-265-9575 www.continence-fdn.ca/content.htm	■ A non-profit organization dedicated to helping people with incontinence. ■ Public and professional education, advocacy, and research. ■ Clinical practice guidelines for adults. ■ Models of continence care. ■ Consumer guide. ■ Resources (books, newsletters, videos). ■ Links to other sites.
Agency for Health Care Research and Quality www.ahcpr.gov/clinic	■ Clinical practice guideline on urinary incontinence in adults.
Canadian Gerontological Nursing Association www.cgna.net/education.htm	■ The Canadian Gerontological Nursing. Association (CGNA) is an organization that represents gerontological nurses and promotes gerontological nursing across Canada. ■ The CGNA's mission is to address the health concerns of older Canadians and the nurses who participate with them in healthcare. ■ Access to listserv to connect with other practitioners interested in and working in the field of continence care for older persons.
Canadian Nurse Continence Adviser Association www.cnca.ca	■ Links to other useful websites. ■ Contact information for nurse specialists.
Canadian Association for Enterostomal Therapy (CAET) www.caet.ca	■ A specialty area of nursing that provides preventive, acute, and rehabilitative care for people with select disorders of the gastrointestinal, genitourinary, and integumentary systems.
Continence Worldwide www.continenceworldwide.org	■ Website for Continence Promotion Committee of the International Continence Society. ■ Links to other useful websites.
Registered Nurses Association of Ontario www.rnao.org/bestpractices	■ Nursing best practice guideline *Prevention of Constipation in the Older Adult Population.*
The University of Iowa College of Nursing Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core.	■ Evidence-based protocol on *Prompted voiding for persons with urinary incontinence* ■ To order the protocol, access www.nursing.uiowa.edu/centers/gnirc/disseminatecore.htm or email at research-dissemination-core@uiowa.edu

Appendix F: Description of the Toolkit

Toolkit: Implementation of Clinical Practice Guidelines

Best practice guidelines can only be successfully implemented if there are: adequate planning, resources, organizational and administrative support as well as appropriate facilitation. RNAO, through a panel of nurses, researchers and administrators has developed the *Toolkit: Implementation of Clinical Practice Guidelines* based on available evidence, theoretical perspectives and consensus. The *Toolkit* is recommended for guiding the implementation of any clinical practice guideline in a healthcare organization.

The *Toolkit* provides step-by-step directions to individuals and groups involved in planning, coordinating, and facilitating the guideline implementation. Specifically, the *Toolkit* addresses the following key steps in implementing a guideline:

1. Identifying a well-developed, evidence-based clinical practice guideline
2. Identification, assessment and engagement of stakeholders
3. Assessment of environmental readiness for guideline implementation
4. Identifying and planning evidence-based implementation strategies
5. Planning and implementing evaluation
6. Identifying and securing required resources for implementation

Implementing guidelines in practice that result in successful practice changes and positive clinical impact is a complex undertaking. The *Toolkit* is one key resource for managing this process.

The *Toolkit* is available through the Registered Nurses' Association of Ontario. The document is available in a bound format for a nominal fee, and is also available free of charge from the RNAO website. For more information, an order form or to download the *Toolkit*, please visit the RNAO website at www.rnao.org/bestpractices.

Notes:

Notes:

Best Practice Guideline

PROMOTING CONTINENCE USING PROMPTED VOIDING

Guideline Supplement

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Supplement Integration

This supplement to the nursing best practice guideline *Promoting Continence Using Prompted Voiding* is the result of a scheduled revision of the guideline. Additional material has been provided in an attempt to provide the reader with current evidence to support practice. Similar to the original guideline publication, this document needs to be reviewed and applied, based on the specific needs of the organization or practice setting/environment, as well as the needs and wishes of the client. This supplement should be used in conjunction with the guideline as a tool to assist in decision making for individualized client care, as well as ensuring that appropriate structures and supports are in place to provide the best possible care.

Background

In 1999, prompted voiding was chosen as a strategy to manage urinary incontinence because it had the potential to be used by care providers in a broad range of settings from the community to long-term care. When the original guideline was developed, there was sufficient evidence to support the recommendations but much of it was based on expert opinion. Now twelve years later, the body of evidence supporting this practice has grown and it continues to be the most effective strategy for use in clients with cognitive impairments. The guideline has been used in several large quality improvement initiatives that demonstrated a reduction of incontinence using prompted voiding (see Appendix G and H). A review of the literature published since 2005 has not meant dramatic changes to the recommendations within this guideline, but rather refinements and stronger evidence supporting this approach.

RNAO Registered Nurses' Association of Ontario
L'Association des infirmières et infirmiers autorisés de l'Ontario

Revision Process

The Registered Nurses' Association of Ontario (RNAO) has made a commitment to ensure that this practice guideline is based on the best available evidence. In order to meet this commitment, a regular monitoring and revision process has been established for each guideline.

A panel of nurses was assembled for this review, comprised of members from the original development panel as well as other recommended individuals with particular expertise in this practice area. The revision panel members were given a mandate to review the guideline focusing on the recommendations and the original scope of the guideline.

A structured evidence review based on the scope of the original guideline was conducted to capture the relevant literature and other guidelines published since the last update of this document (2005). The results of the evidence review were circulated to the review panel. In March 2011, the review panel was convened to reach consensus on the need to revise the existing recommendations in light of the new literature.

Review of Existing Guidelines

One individual searched an established list of websites for guidelines and other relevant content. The website list was compiled based on existing knowledge of evidence-based practice websites and recommendations from the literature.

While the search yielded many results, no guidelines met the inclusion criteria. Therefore, no guidelines were included as part of this evidence review.

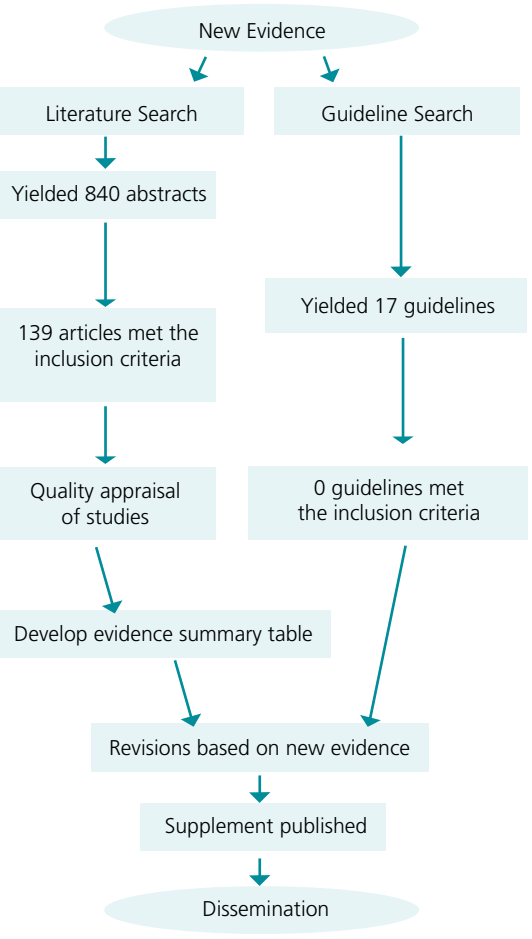
Literature Review

Concurrent to the guideline review, a search for recent literature relevant to the scope of the guideline was completed. The search of electronic databases (CINAHL, Medline, and EMBASE) was conducted by a health sciences librarian. A Research Assistant (Master's prepared nurse) completed the inclusion/exclusion review, quality appraisal and data extraction of the included articles, and prepared a summary of the literature findings. The comprehensive data tables and reference lists were provided to all review panel members.

Review Findings

A review of the most recent literature since the publication of the last revision of the guideline does not support changes to the original recommendations, but rather suggests stronger evidence for our approach to promoting continence using prompted voiding. The revision panel members have also updated and added appendices to support guideline implementation.

Review Process Flow Chart



Summary of Evidence

The following content reflects the changes made to the revised publication (2005) based on the consensus of the review panel. The literature review does not support dramatic changes to the recommendations, but rather suggests some refinements and stronger evidence for the approach.

✓ unchanged
✎ changed
\+ additional information
NEW new recommendation

Practice Recommendations

Recommendation 1 Obtain a history of the client's incontinence. Level of Evidence: IV	✓
The following paragraph has been added to the first paragraph of the discussion of evidence on pg 17 of the guideline: **Discussion of Evidence** In addition, two qualitative studies (Jansen et al., 2006 and Gnanadesigan et al., 2004) sought to evaluate the quality of care and assessment tools for the management of urinary incontinence. The use of reliable and valid assessment tools help to ensure that adequate information is gathered from the client that can facilitate the success of prompted voiding. Examples of valid and reliable assessment tools may be found in Skelly (2007).	+
Recommendation 2 Gather information on: • The amount, type and time of daily fluid intake, paying particular attention to the intake amount of caffeine and alcohol. • The frequency, nature and consistency of bowel movements. • Any relevant medical or surgical history which may be related to the incontinence problem, such as but not limited to diabetes, stroke, Parkinson's disease, heart failure, recurrent urinary tract infections or previous bladder surgery. Level of Evidence: IV	✓
Additional Literature: Dumoulin, C., Korner-Bitensky, N., & Tannenbaum, C. (2005). Gnanadesigan, N., et al. (2004). Jumadilova, Z., Zyczynski, T., Paul, B., & Narayanan, S. (2005).	+

Recommendation 3

Review the client's medications to identify those which may have an impact on the incontinence.

Level of Evidence: III

✓

The following class of medication has been added to the list of medications on page 19 of the guideline:

- cholinesterase inhibitors

+

Additional Literature:
Finklestein, M. M. (2002).
Gill, S.S., et al. (2005).
Skelly, J. (2007).
Starr, J. M. (2007).

Recommendation 4

Identify the client's functional and cognitive ability.

Level of Evidence: III

✓

The paragraphs in the discussion of evidence on pg 20 have been edited to reflect additional literature support:

Discussion of Evidence

There is strong evidence that persons most likely to develop urinary incontinence have mobility and/or cognitive impairments (Jumadilova et al., 2005; Lyons & Pringle Specht,1999; Ouslander et al., 1995; Schnelle, 1990; Sorbye et al., 2007). Cognitive impairment should not be considered a barrier to using prompted voiding. In a prospective controlled exploratory study, Engberg et al. (2002) found that older adults that were housebound and cognitively impaired responded positively to prompted voiding. The client's ability to be toileted is highly dependent on: level of self-care; ability to understand; ability to process information; and ability to respond accordingly (Lyons & Pringle Specht 1999; Dumoulin et al., 2005).

The clinician can use a variety of tools to assist with assessing functional and cognitive ability. The RNAO guideline on *Screening for Delirium, Dementia and Depression in Older Adults* (2010) and the functional ability can be found in Appendix M of the guideline *Caregiving Strategies for Older Adults with Delirium, Dementia and Depression* (2010). The RNAO guideline on *Prevention of Falls and Fall Injuries in the Older Adult* (2011) can assist the clinician to identify risk factors for falls, decrease the incidence of falls, and decrease the incidence of injurious falls. These guidelines are available for download from the RNAO website at www.rnao.org/bestpractices. The Montreal Cognitive Assessment (MoCA) is available for download at http://www.mocatest.org/. Functional assessment tools that measure ability to perform activities of daily living (ADL) (Katz Index) and instrumental activities of daily living (IADL) (Barthel Index), mobility and balance (Timed Up and Go-TUG, Berg Balance score) and safety (Falls Risk Assessment Tool-FRAT) are available in the literature.

+

Recommendation 5

Identify attitudinal and environmental barriers to successful toileting.

Barriers include:

- Proximity and availability of the nearest bathroom;
- Accessibility of commode;
- Satisfactory lighting;
- Use of restraints;
- Staff expectation that incontinence is an inevitable consequence of aging; and
- Staff belief that few interventions exist to promote continence.

Level of Evidence: III

✓

The following paragraph from the discussion of evidence on pg 20 has been revised to reflect additional literature support:

Discussion of Evidence

Wyman (2003), in a review of the literature on urinary incontinence, found that negative staff attitudes toward urinary continence were a barrier to the treatment of urinary incontinence. Attitudes of staff have also been identified as a factor in promoting continence (Dingwall & Mclafferty, 2006; Northwood, 2004). Another qualitative study (Dingwall & Mclafferty, 2006) revealed these additional barriers in promoting continence with older adults: low expectations for cure by nurses; ability of clients to stand; difficulty with speech or indicating need to use the toilet; patient's lack of continence education; inconsistency of approaches to promoting continence; and lack of knowledge.

+

The following paragraph as been added to the discussion of evidence on pg 21:

One model proposed in the literature was the development of ward-based continence resource nurses (WBCRN) (Ostasztiewicz et al., 2004). As a component of evaluation, 15 WBCRN were surveyed about their perceptions of barriers to implement optimal continence care. The barriers reported included: lack of dedicated time; insufficient resources; environmental factors, such as the need to share toilet facilities; lack of educational opportunities; inconsistent completion of relevant documentation; and inconsistency in patient care because of staff turnover.

Recommendation 6 Check urine to determine if infection is present. Level of Evidence: III	**LOE changed (IV→III)**
The following paragraphs from the discussion of evidence on pg 21 have been revised to reflect additional literature support: **Discussion of Evidence** A baseline assessment for urinary incontinence routinely includes testing for a urinary tract infection as there is an association between the presence of infection and increase likelihood of incontinence (Sorbye, 2009). However, recent research on optimizing antimicrobial use for suspected urinary tract infections in residents of long-term care homes recommends a more targeted approach to screening (Loeb et al., 2005). As part of the assessment of clients for prompting voiding, a urine culture would be indicated if the client had one or more of the following symptoms in the presence of fever (defined as>37.9°C or 1.5°C increase above baseline on at least two occasions over last 12 hours): dysuria; urgency; flank pain; shaking chills; urinary incontinence; frequency; gross hematuria; suprapubic pain (Loeb et al, 2005). This testing should be done according to the organizational policy and procedure. If a urinary tract infection is present, the nurse should refer to the appropriate clinician for treatment.	+
Recommendation 7 Determine how the client perceives their urinary incontinence and if they will benefit from prompted voiding. Before initiating prompted voiding, identify the client's pattern of incontinence using a 3-day voiding record. Level of Evidence: III	✓
The following paragraph has been added to the discussion of evidence on pg 21: **Discussion of Evidence** A recent exploratory study suggests that nurses continue to contain urinary incontinence rather than promoting continence in older adults (Dingwall & McLafferty, 2006). Nursing staff need to be aware of the negative impact of untreated incontinence on older persons. Views of the older person should be sought regarding their attitudes towards urinary incontinence.	+

Recommendation 8

Ensure that constipation and fecal impaction are addressed.

Level of Evidence: IV

✓

The discussion of evidence on pg 22 has been revised to reflect the following additional literature supports:

Discussion of Evidence

As indicated previously, studies reveal the importance of ensuring that fecal impaction is removed during the assessment phase (McCormick et al., 1992; Peet et al., 1996). Preventing and reducing constipation is a key intervention in the prevention and management of urinary incontinence (Burgio, 2004; Ostaskiewicz, 2006; Skelly, 2007). For this reason, this guideline is recommended to be used in conjunction with the RNAO nursing best practice guideline *Prevention of Constipation in the Older Adult Population* (2011).

Regulating bowel function to avoid constipation and straining during a bowel movement is one of the key components to lifestyle modification that can be incorporated into the overall urinary incontinence treatment program (Burgio, 2004).

For individuals experiencing constipation or fecal impaction, a comprehensive monitoring tool and the Bristol Stool Form Chart are recommended. Completion of a seven-day Bowel Elimination Record will give a clear picture of the bowel movements over a one-week period, while the Bristol Stool Form Chart will aid the monitoring of quality of bowel movements (Cassel, 2007).

\+

Recommendation 9

Ensure an adequate level of fluid intake (1500 - 2000 ml per day), and minimize the use of caffeinated and alcoholic beverages where possible.

Level of Evidence: III

✓

The following paragraph has been added to the discussion of evidence on pg 23:

Discussion of Evidence

Palmer & Newman (2004) report on a qualitative study using focus group methodology. The results of this study identified that older adults lack knowledge of the impact of fluid intake on urinary incontinence, as well as, the amount and type of healthy fluids recommended to optimize continence care.

\+

Recommendation 10

Initiate an individualized prompted voiding schedule based on the client's toileting needs, and as determined by a 3-day voiding record.

Level of Evidence: Ia

✓

Additional Literature:
Ostaszkiewicz, J., Chestney, T., & Roe, B. (2004).
Roe, B., Ostaszkiewicz, J., Milne, J., & Wallace, S. (2006).

\+

Recommendation 11

Initiate a 3-day voiding record, a minimum of 3 weeks and a maximum of 8 weeks, after the prompted voiding schedule.

Level of Evidence: IV

✓

Education Recommendations

Recommendation 12

Implement an educational program on promoting continence using prompted voiding. The program should be structured, organized, and directed at all levels of healthcare providers, clients, family and caregivers. The educational program should identify a nurse with an interest in and/or advanced preparation in continence care (e.g., nurse continence advisor, nurse clinician, or clinical nurse specialist) to be responsible for providing the educational program. The program should be updated on a regular basis to incorporate **current evidence**.

The program should include information on:

- Myths related to incontinence and aging;
- Definition of continence and incontinence;
- Continence assessment;
- Prompted voiding;
- Individualized toileting;
- The impact of cognitive impairment on ability to be continent and strategies to manage aggressive behaviours;
- Relation of bowel hygiene care to healthy bladder functioning;
- Use of a voiding record with individualized toileting;
- **Education about conservative management strategies; and**
- **Rationale for conservative management strategies**

Level of Evidence: IV

+

The following paragraph on pg 24 of the guideline has been edited to reflect current literature:

Discussion of Evidence

Research studies have consistently shown that many health care professionals lack sufficient knowledge about continence care and that treatment options are multi-factorial (Lawhorne et al., 2008; Resnick et al., 2006). Taunton and colleagues (2005) describe staff attitudes in providing incontinence care, concluding the focus is primarily on containment rather than treatment. Various research surveys have been conducted on the educational preparation of nurses and their knowledge concerning continence care, concluding there is a lack of sufficient knowledge about incontinence (Cheater, 1992; Palmer, 1995). Palmer (1995) asserts the importance of developing a staff continence educational program to enhance nursing practice and quality of continence care. Such programs should include: standards of continence care; assessment skills; and sensitivity to incontinence training (Peet et al. 1996). Other research identifies the importance of education on: myths of incontinence and aging; definitions of continence and incontinence; and strategies to manage aggressive behaviours in prompted voiding (Northwood, 2004; Sui, Schindel-Martin, Skelly & Northwood, 2001). Staff support is also a crucial factor for the success of prompted voiding (Lyons & Pringle Specht, 1999).

+

Additional Literature:

Roe, B., Milne, J., Ostaszkiewicz, J., & Wallace, S. (2006).

Recommendation 13 Nurses should be knowledgeable about community resources for professional development, referral and ongoing assistance. Level of Evidence: IV	✓

Organization and Policy Recommendations

Recommendation 14 Successful implementation of prompted voiding requires: • Management support; • Opportunities for education and training; • Active involvement of key clinical staff; • Gradual implementation of the prompted voiding schedule; • Collection of baseline information about clients, resources and existing knowledge; • Interpretation of this data and identification of problems; • Development of implementation strategy; and • Monitoring of the program. Level of Evidence: IIb	**LOE changed (IV→IIb)**
The following paragraphs have been added to the discussion of evidence on pg 25 of the guideline: **Discussion of Evidence** In order for staff to find ways to improve continence care in their current environment, the management team must make continence promotion a priority and hold staff accountable (Resnick et al., 2006). In long-term care homes where person-centred care is valued rather than task-based care, continence promotion is given a higher priority, underscoring the importance of management support (Wright et al., 2006). Additionally, the active involvement of key clinical staff is essential, as lack of communication between staff and between shifts results in poor adherence to toileting schedules (Resnick et al., 2006). Staff also need to be knowledgeable and skilled in assessing and treating urinary incontinence to ensure a prompted voiding program has beneficial client outcomes (DuMoulin et al., 2005).	+

The RNAO panel, supported by evidence from qualitative studies of staff attitudes and practices related to continence promotion, recommends a gradual implementation of this guideline (Resnick et al., 2006; Tauton et al., 2005). Successful implementation of this guideline is best achieved by starting with one or two clients. Managing the competing demands of clients requiring toileting assistance has been cited as a barrier to implementation of prompted voiding by nursing staff (Resnick et al., 2006; Tauton et al., 2005). Refer to Appendices G and H for information on projects focusing on improving continence care in complex continuing care.

Recommendation 15

Organizations are encouraged to establish an **interprofessional** team approach to continence care.

Level of Evidence: IV

The discussion of evidence found on pg 25 and 26 of the guideline has been revised to reflect wording change and additional literature supports:

Discussion of Evidence

An **interprofessional** team approach to continence care is crucial to implementing optimal continence care (Ostaskiewicz, 2006; Resnick et al., 2006; Taunton et al., 2005). The members of the team may include: nurses, physiotherapists, occupational therapists, clinical pharmacists, registered dietitians, unregulated care providers, social workers, attending physicians and specialists. Recognizing overlap in some roles, it is important that the team work together to help each client maintain the highest level of continence possible while promoting clients' independence and self-esteem.

Nurses work collaboratively with an **interprofessional** team for rehabilitative and restorative care. Physiotherapists assess mobility, transfers, balance and strength. Occupational therapists assess physical and social environments, including ability to perform ADLs, such as managing clothing and toileting. Together, the physiotherapists, occupational therapists and nurses carry out the rehabilitative/restorative/maintenance balance and mobility treatment plan (Rodriguez et al., 2007). Clinical pharmacists can assist with the medication review to identify medications that may be contributing to incontinence. Registered dieticians can support decisions regarding dietary modifications to fluid intake, caffeine intake and fibre intake. Social workers may address the emotional aspects of incontinence, which may include assisting with financial planning for supplies and services.

+

As an example of an **interprofessional** team approach to continence care, in 2006, stakeholders from various long-term care homes in Ontario and representatives of the Toronto Best Practice Implementation Steering Committee developed a resource in the form of a policy and procedure to deal with this important concern. The roles and responsibilities of each health professional team member are clearly outlined in the document (Toronto Best Practice in LTC Initiative, 2006).

Recommendation 16

Nursing best practice guidelines can be effectively implemented only where there are adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation of the change process by skilled facilitators. The implementation of the guideline must take into account local circumstances and should be disseminated through an active educational and training program. In this regard, RNAO (through a panel of nurses, researchers and administrators) has developed the *Toolkit: Implementation of Clinical Practice Guidelines*, based on available evidence, theoretical perspectives and consensus. The Toolkit is recommended for guiding the implementation of the RNAO guideline *Promoting Continence Using Prompted Voiding*.

Level of Evidence: IV

✓

Appendices

The following appendices have been revised to reflect the most current literature.

Appendix C: Individuals Likely to Benefit from Prompted Voiding

The following paragraphs have been added following the list of factors found on page 41 of the guideline:

The best predictor of an individual's responsiveness to prompted voiding is his or her success during a trial of prompted voiding. Many people that respond to prompted voiding show a clinically significant increase in appropriate toileting behaviour and continence levels during a three-day trial, though maximal response to the treatment may not be realized until after several weeks of prompted voiding (Lyons & Pringle Specht, 1999).

Although three days is ideal, two days is an acceptable minimum. A third day of prompted voiding can be offered to residents who fall short of appropriately toileting two-thirds of the time but who show behavioural and verbal evidence that they are motivated to stay dry (Borun Center for Gerontological Research, 2008).

Prompted voiding has been shown to decrease the number of incontinent episodes per day and increase the number of continent voids. It can be used with persons who have physical or mental/cognitive impairments or little ability to determine how best to meet their needs (Dumoulin et al., 2005; Fink et al., 2008).

+

The following chart has been added, to follow the "Communication Technique" chart on page 41:

Steps of Prompted Voiding Technique and Caregiver Behaviours

Prompted Voiding Technique	Caregiver Behaviours
Approach person at scheduled prompted voiding time (15 minutes before or after assignment is acceptable)	Monitor
Greet individual	Prompt
Wait 5 seconds for individual to self-initiate request to toilet	Prompt
Ask person if he or she is wet or dry	Prompt
Physically check person to determine continence status.	Monitor
Give social feedback. Praise, if dry. No comment, if wet.	Praise
Prompt individual to toilet (regardless of continence status).	Prompt
Offer person assistance with toileting.	Prompt
Give social feedback. Praise desired toileting behaviour.	Praise
Inform individual of the time of next scheduled prompted voiding session.	Prompt
Encourage individual to hold urine in bladder until next	Prompt
scheduled prompted voiding session.	Prompt
Encourage individual to ask for toileting assistance, as needed	Prompt
Record results of prompted voiding session on urinary continence monitoring form.	Monitor

Reprinted with permission from SLACK Incorporated: Lyons, S.S., Pringle Specht, J.K. (2000). Prompted voiding protocol for individuals with urinary incontinence. *The Journal of Gerontological Nursing*, *26*(6), 5-13.

Appendix E: List of Resources and Websites:

The following items have been added to the list on page 45 of the guideline:

Resource	Program
Borun Center for Gerontological Research UCLA Division of Geriatrics www.geronet.ucla.edu/centers/borun	Incontinence Management
• Registered Nurses' Association of Ontario http://ltctoolkit.rnao.ca/	Continence/Constipation Workshop for RNs in Long-Term Care. (Cassel, 2007)

Additional Appendices

The following appendices have been added:

Appendix G: IC5 Collaborative Project The IC 5 Collaborative Project (IC 5: *Improving Continence Care in Complex Continuing Care*) was the first multi-hospital quality improvement project led by the Hospital Report Research Collaborative (HRRC) aimed at the complex continuing care sector. The project was sponsored by the Ontario Women's Health Council (OWHC). The collaborative was based on an internationally applied model for achieving breakthrough improvement, pioneered by the Institute for Healthcare Improvement. The project included 12 hospitals who worked together to improve continence care processes, practices and patient outcomes within their organizations. The Plan-Do-Study-Act (PDSA) improvement cycles support a gradual approach to change - one resident at a time – which is a major success factor in changing practice. Visit the www.hospitalreport.ca web page to review the IC5 evaluation reports.	**NEW**
Appendix H: IC3—Improving Continence Care Collaborative IC3 is an offshoot of the IC5 project. With funding from the Senior's Health Research Transfer Network (SHRTN), ten long-term care home teams in eastern Ontario came together in 2006 to form a Community of Practice to improve continence care. Using a quality improvement approach, six long-term care homes completed the full-year commitment. Many of those teams are still working to improve continence at their respective long-term care homes. The collaborative uses the Rapid Cycle Method of Improvement to enable participating teams to make small incremental changes in their practice to work toward improving the continence of their residents. Homes use PDSA cycles to plan and implement the changes. Simple measurement tools document their successes and early wins. Examples of these improvements are prompted voiding programs and toileting programs. Individualized approaches, like using pull-up continent products with appropriate residents during the day time, have helped to improve residents' dignity and allow them to attend activities of their choosing and not have to wear an incontinent brief. Many residents are now "high and dry" throughout the daytime hours because of these interventions. Homes have increased the urinary continence of their residents, while decreasing constipation, urinary tract infections and pressure ulcers. Initially, long-term care home teams met in person for four learning sessions. In between those learning sessions, there were action periods with the residents at the local level. Monthly teleconferences helped to keep the improvement teams on track and share successes, strategies and challenges. In the last two phases, the participating teams met virtually via Ontario Telemedicine Network (OTN) videoconferencing facilities. In Phase 4 (2010-11), 32 homes came on board with participants from across the province including Northwestern Ontario, the Greater Toronto area and Renfrew County. Several homes met together at OTN sites where they were joined by one of the coaches or co-leads of the project. In total over 50 long-term care homes have participated in IC3 since its inception.	**NEW**

Definition of Terms

The following term has been added to the definition of terms on page 14 of the guideline:

Habit Retraining Habit retraining is a form of toileting assistance given by a caregiver to adults with urinary incontinence. It involves the identification of an incontinent person's natural voiding pattern and the development of an individualized toileting schedule, which pre-empts involuntary bladder emptying (Ostaszkiewicz, Chestney, & Roe, 2004).	**NEW**

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Notes

Notes

Revised March 2005

Nursing Best Practice Guideline

Promoting Continence Using Prompted Voiding

This program is funded by the Government of Ontario

0-920166-55-5

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