Assessing the Health and Functional Status of Older Women with Breast Cancer Using the Minimum Data Set-Home Care (MDS-HC)

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Breast cancer threatens the well-being of adult women of all ages. According to the National Cancer Institute of Canada, breast cancer occurs more frequently than any other type of cancer for women, including lung cancer.¹ The probability of developing breast cancer however is much higher among older women, with probabilities of 0.4%, 3.8% and 9.3% in women aged 40, 60 and 80 years, respectively. Further, over 78% of new cases appear in women over 50 years and about 70% of breast cancer deaths occur in women over 60 years of age.² With population aging, this issue will become of greater concern, particularly since, until recently, breast cancer research has paid little attention to the older population.^{3,4} Beyond the comparatively larger size of the population of older women with breast cancer, this group also has needs distinct from other age groups. For example, the physical and psychosocial problems attributed with breast cancer may be compounded by comorbidity, obstacles to transportation, decreased support, and (potentially) physician bias.^{3,5} These factors may aggravate diagnosis, treatment, adjustment and recovery. Careful attention should be given therefore to health status and issues that threaten health and recovery of older women with breast cancer.

Minimum Data Set-Home Care Assessments (MDS-HC)

The Resident Assessment Instrument-Home Care (RAI-HC) is a comprehensive and standardized assessment used to evaluate the needs and ability levels of older adults and other home care clients. The RAI-HC consists of two core elements: the Minimum Data Set for Home Care (MDS-HC) and the Clinical Assessment Protocols (CAPs). The MDS-HC is the screening portion of the instrument, covering key domains like service use, function, health and social support (Table I). In addition, the MDS-HC identifies individuals who may benefit from more extensive evaluation and care planning through 30 problem-oriented CAPs (see Table II).^{6,7}

The MDS-HC was developed by investigators from Canada, France, Italy, Japan, Netherlands, Switzerland, the United Kingdom and the United States. The reliability and validity of the instrument were established through a 5-country study that included Canada.⁷ Studies of the use of the MDS-HC for preventive home screening are currently underway in Canada and in 10 European countries. In addition, pilot implementation studies of the MDS-HC have been completed or initiated in Nova Scotia, Ontario, Manitoba, Alberta and British Columbia. The MDS-HC is of particular interest in the Canadian context for a number of reasons. First, it has been tested extensively and has been found to be appropriate for Canadian home care agencies.^{8,9} Second, several provinces have taken steps toward implementation of the MDS-HC as their standard provincial home care assessment. Third, the MDS-HC provides a comprehensive assessment of the full range of client needs and it directly supports the development of person-specific careplans.

TABLE I
Domain Areas Assessed
in the MDS-HC

Domain Areas of the MDS-HC
<ul style="list-style-type: none">• Demographics• Referral• Cognition• Communication• Vision• Mood and behaviour• Social functioning• Support• ADL and IADL• Continence• Disease diagnoses• Health conditions• Preventive health measures• Nutrition/hydration• Dental status• Skin condition• Environmental assessment• Service utilization• Medications

Purpose

The objective of the study was to identify the health status and potential health needs of older women with, or recovering from, breast cancer utilizing the MDS-HC.

METHODS

Older women with breast cancer were recruited from 3 southern Ontario cities via newspaper articles/advertisements and through cancer organizations. The 32 volunteers were assessed by registered nurses in person using the MDS-HC to obtain information concerning physical, social, psychological, and environmental needs. Additional information was collected concerning diagnosis date, treatment and status of the cancer. The MDS-HC data were analyzed to determine which CAPs were "triggered" indicating areas potentially requiring intervention. The nurses who completed the assessments were trained over a 2-day period and were given clinical support or advice by a masters prepared nurse with extensive MDS-HC training

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experience. MDS-HC assessments are designed to allow clinicians the use of all sources of information available in conducting the assessment, including direct observation, interviews with the client, caregiver or other professionals, and consultation of clinical records.

RESULTS

Of the women sampled, 94% had been diagnosed within the past 5 years, with 34% of the women still undergoing active treatment (i.e., chemotherapy, tamoxifen). Participants had undergone the following treatments: modified radical mastectomies (59%), lumpectomies (41%), chemotherapy and/or tamoxifen (59%). Eight of the women were between 55 and 59 years of age (see Table III), while the remainder were 59 years of age or older. The majority were either married (50%) or widowed (28%), and 41% lived alone.

The MDS-HC assessments indicated that the sample was generally healthy. For example, the majority reported no problems with memory (97%), hearing (97%), or vision (91%), and 91% were not depressed, anxious or sad. In addition, only 2 participants reported requiring assistance with Instrumental Activities of Daily Living (IADLs) or Activities of Daily Living (ADLs). However, the participants frequently had concurrent chronic conditions or ailments such as hypertension, arthritis, osteoarthritis, emphysema, thyroid disease, incontinence, cataracts, falls and pain. With respect to medication use, 22%, 28%, and 16% were taking 2 to 4 medications, 5 or 6 medications, or 7 or 8 medications, respectively. An additional 16% were taking 9 or more medications, with 1 woman using 18 medications (Table III). Given the high drug utilization rate, it was surprising that within the previous 180 days, 28% of the women had not had their medication reviewed by a physician.

Further, derivation of clinical assessment protocols for the various key domains revealed that all of the women triggered 2 or more CAPs, indicating they were all at risk for functional decline or the development of further health problems. Over one third of the participants triggered 6 or more CAPs (Table IV). The most com-

TABLE II
Clinical Assessment Protocols (CAPs) Triggered by the MDS-HC

Functional Performance	
• ADL rehabilitation potential	• IADLs
• Health promotion	• Institutional risk
Sensory Performance	
• Communication disorders	
• Visual function	
Health Problems/Syndromes	
• Cardio-respiratory	• Dehydration
• Falls	• Nutrition
• Oral health	• Pressure ulcers
• Skin and foot conditions	• Pain
Continence	
• Bowel management	
• Urinary incontinence and indwelling catheters	
Service Oversight	
• Adherence	• Brittle support system
• Medication management	• Palliative care
• Preventive health care measures	• Psychotropic drugs
• Reduction in formal services	• Environmental assessment
Mental Health	
• Alcohol abuse and hazardous drinking	• Cognition
• Behaviour	• Depression and anxiety
• Elder abuse	• Social function

TABLE III
Socio-demographic Characteristics, Chronic Conditions, Other Health Ailments, Pain Management, and Medication Use, by Number and Percentage of Women

Age (years)	
55-59	8 (25.0)
60-69	16 (50.0)
70-79	7 (21.9)
80+	1 (3.1)
Marital Status	
Married	16 (50.0)
Widowed	9 (28.0)
Divorced	4 (12.5)
Never married	3 (9.4)
Education	
Completed up to grade 11	6 (19.0)
Completed high school	12 (37.5)
Some college or completed technical school	10 (31.3)
Bachelors degree	3 (9.4)
Graduate degree	1 (3.1)
Living Arrangements	
Lived alone	13 (40.6)
Lived with spouse	14 (43.8)
Lived with other individuals & spouse	3 (9.4)
Lived with other individuals	2 (6.3)
Chronic Conditions	
Hypertension	8 (25.0)
Arthritis	15 (47.0)
Osteoarthritis	4 (12.5)
Emphysema	4 (12.5)
Thyroid disease	5 (15.6)
Other Health Ailments/Issues	
Incontinence	5 (15.0)
Cataracts	3 (9.4)
Falls/multiple falls	10 (31.0)
Issues with Pain	
Daily	9 (28.1)
Intense and disrupted activity	7 (21.9)
Multiple sites	4 (12.5)
Medication Use	
2-4 medications	7 (22.0)
5-6 medications	9 (28.0)
7-8 medications	5 (15.6)
9+ medications	5 (15.6)

monly triggered CAPs were pain (59%), falls (56%), skin and foot problems (56%), social function (50%), medication man-

agement (50%), lack of prevention practices (41%), and cardiorespiratory problems (34%) (Table V).

TABLE IV
Number of Clinical Assessment
Protocols Triggered, by Number
(and %) of Participants

Number of CAPS	Number (%) of Women
0	0
1	0
2	2 (6.3)
3	5 (15.6)
4	9 (28.1)
5	4 (12.5)
6+	12 (37.5)

TABLE V
Number (and %) of Participants
Triggering Specific Clinical
Assessment Protocols (CAPS)

CAPS	% of Women
Pain	19 (59.4)
Skin & foot	18 (56.3)
Falls	18 (56.3)
Medication management	16 (50.0)
Social function	16 (50.0)
Prevention	13 (40.6)
Cardio-respiratory	11 (34.4)
Dehydration	9 (28.1)
Health promotion	8 (25.0)
Oral health	6 (18.8)
IADLs	5 (15.6)
Psychotropics	5 (15.6)
Reduction in formal services	5 (15.6)
Bowel management	4 (12.5)
Nutrition	4 (12.5)
Cognition	4 (12.5)
Communication	4 (12.5)
Visual function	4 (12.5)
Depression	2 (6.3)
Urinary incontinence & indwelling catheters	2 (6.3)
Pressure ulcer	1 (3.1)
Adherence	1 (3.1)
Environmental assessment	0 (0)
Institutional risk	0 (0)
Behaviour	0 (0)
Alcohol abuse	0 (0)
Elder abuse	0 (0)
ADL rehabilitation	0 (0)
Palliative	0 (0)
Brittle support system	0 (0)

DISCUSSION AND CONCLUDING REMARKS

The women studied here were relatively healthy with respect to scores on disability measures, compared with other studies using the MDS-HC with home care clients.¹⁰ However, many participants experienced conditions/ailments that have the potential to interfere with recovery and quality of life. Two of the more important areas triggered were falls (56%) and medication management (50%). Falling may

lead to restricted activity, soft-tissue injuries, fractures or hospitalization.¹¹⁻¹⁴

A particularly disconcerting finding was that 50% of the sample did not have their medication reviewed in the last half year by their physicians, despite the heavy doses and numbers of medications they were prescribed for breast cancer and other co-morbid conditions. Age-related physiological changes alter the response to certain medications, and render older individuals at greater risk for drug interactions and adverse drug reactions.¹⁵ The tenuous conditions of these women warrant careful monitoring by health care professionals, given that the majority of the women were less than 5 years from a diagnosis of breast cancer. The lack of a thorough medication review represents a significant paucity in the care these women were receiving.

Despite the small sample contained within this pilot study, these results suggest that older women with breast cancer could benefit from additional assessment and health education, beyond what is currently provided in standard practice. An important limitation of this study is the reliance on volunteer participants, which makes it difficult to generalize findings to all older women with breast cancer.

An instrument such as the MDS-HC is of practical benefit to older women with breast cancer, since it may detect health concerns and potential problems that are not necessarily being monitored by the medical profession. The MDS-HC should be of particular interest to home care agencies that provide care to elderly women with breast cancer. Specifically, preventing further health problems is of utmost importance in order to enhance the recovery process and maximize wellness. As the MDS-HC gets adopted more broadly in Canadian home care, it will become feasible to study very large samples of older women with various types of cancer using this instrument.

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REFERENCES

1. National Cancer Institute of Canada. Canadian Cancer Statistics 2000. Toronto, ON, 2000.
2. National Cancer Institute of Canada. Canadian Cancer Statistics 1997. Toronto, ON, 1997.
3. Muss HB. Breast cancer in older women. *Semin Oncol* 1996;23(1):82-88.
4. Masetti R, Antinori A, Terribile D, Marra A, Granone P, Magistrelli P, et al. Breast cancer in women 70 years of age or older. *J Am Geriatr Soc* 1996;44(4):390-93.
5. Goodwin JS, Samet JM, Hunt WC. Determinants of survival in older cancer patients. *J Natl Cancer Inst* 1996;88(15):1031-38.
6. Morris JN, Bernabei R, Ikegami N, Gilgen R, Frijters D, Hirdes JP, et al. RAI-Home Care (RAI-HC) Assessment Manual. Washington, interRAI Corporation, 1999.
7. Morris JN, Fries BE, Steel K, Ikegami N, Bernabei R, Carpenter GI, et al. Comprehensive clinical assessment in community settings: Applicability of the MDS-HC. *J Am Geriatr Soc* 1997;45:1017-24.
8. Black C, Mitchell L, Finlayson M, Peterson S. Enhancing capacity to study and evaluate home care: An evaluation of the potential to use routinely collected data in Manitoba. Manitoba Centre for Health Policy and Evaluation, 2000.
9. Coyte PC, Baranek PM. Identification of outcome indicators for home care services financed by Ontario Community Care Access Centres (CCACs). Report prepared under grant 02709 from the Ministry of Health and Long-Term Care in Ontario to the University of Toronto, December 2000.
10. Hirdes JP, Fries BE, Morris JN, Bernabei R. Society's Adaptation to Its Own Aging: A New Challenge for Community-based Health Care. A Global Challenge for the 21st Century. Proceedings of a WHO Symposium. Kobe. 1998 (10-13 November):205-12.
11. Baker SP, Harvey AH. Fall injuries in the elderly. *Clin Geriatr Med* 1985;3:501-12.
12. Lilley JM, Arie T, Chilvers CED. Accidents involving older people: A review of the literature. *Age and Ageing* 1995;24:346-65.
13. Tinetti ME. Factors associated with serious injury during falls by ambulatory nursing home residents. *J Am Geriatr Soc* 1987;35(7):644-48.
14. Tinetti ME, Liu WL, Claus EB. Predictors of inability to get up after falls among elderly persons. *JAMA* 1993;269(1):65-70.
15. Campbell AJ. Drug treatment as a cause of falls in old age: A review of the offending agents. *Drugs & Aging* 1991;1(4):289-302.

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