

Modification of Assessment and Atypical Presentation in
Older Adults with Complex Illness

Deanna Gray-Miceli, DNSc, RN, GNP-BC, FAANP
Project Director
The John A. Hartford Foundation Institute for Geriatric Nursing
New York University College of Nursing
246 Green Street
New York, NY

This module is:



Reviewed and endorsed by
The National Gerontological Nursing Association (NGNA),
May 2007. <http://www.ngna.org>

Introduction

Nursing care of older adults in any practice setting requires a recognition that the assessment of acute, chronic and/or complex illness may present atypically. Therefore, a subtle but integral aspect of the nursing assessment is the ability of the nurse to discern if, and under what circumstances, an older adult is displaying an atypical presentation. Early recognition can improve plans of care by nursing so that older adults will ultimately experience positive health outcomes such as prompt diagnosis, a reduced risk of fatality and/or prolonged hospitalization, and reduced rates of comorbidity from treatable geriatric syndromes.

One geriatric syndrome, delirium, is often a part of an atypical presentation of disease associated with adverse health outcomes. One study found that over 60 percent of frail hospitalized older adults with atypical presentation experienced delirium (Jarrett, PG., Rockwood, K., Carver, D., Stoles, P., and Cosway, S. 1995 [Level III]). Because of overlap between symptoms of atypical presentation and geriatric syndromes, a gray area exists that can only be addressed through prospective case-controlled research. Information contained in this module helps nurses caring for older adults with complex illness to answer an important question: “how do you know it is an atypical presentation?”

Background: What constitutes atypical presentation?

No explicitly gold standard definition exists as to what characteristics constitute an atypical presentation for *every disease*. But, there is strong evidence from geriatrics experts as to what typically constitutes an atypical presentation for *any illness* affecting older adults. Geriatric experts look for a handful of signs or symptoms, which indicate “atypical” and occur outside of the normal rubric of traditional signs and symptoms constituting a particular disease. Expert practitioners are exquisitely knowledgeable about these signs and symptoms that classically present as the heralding sign or symptom for *any disease* among older adults. For example, these atypical signs or symptoms may occur in lieu of other more traditional symptoms associated with the disease. Table I illustrates some examples of signs and symptoms that are generally accepted by experts and represent a “working definition” of what we now consider “atypical presentation.”

Ham (2002) further categorizes atypical presentation of illness to include: a) vague presentation of illness; b) altered presentation of illness; and c) non-presentation of illness (for more information visit: <http://www.ConsultGeriRN.org> and select Evidence-based Geriatric Topics drop down menu: Atypical Presentation). Current knowledge on atypical presentation is drawn from case reports in the literature and, more recently from empirical research documenting varied presentations to traditional illnesses.

Examples of Case Reports of an Atypical Presentation of Disease in Older Adults

Case reports of atypical presentation of diseases among older adults, particularly those of advanced age are very common, spanning from diseases afflicting the central nervous system to the gastrointestinal, cardiovascular and integument systems. Pain is often an acute heralding feature associated with the onset of many diseases in younger adults, but the same cannot be said of pain presentation with diseases in older adults. For example, a gastrointestinal ulcer or reflux disease, myocardial infarction or a urinary

track infection almost always presents with pain among younger adults. These same diseases occurring among older adults do not, however, necessarily present with pain as a manifestation. The following case reports from the geriatric literature illustrate this point.

In case analysis of older adults with acid-related diseases of the gastrointestinal track due to medications, peptic ulcer disease or gastro-intestinal reflux disease [GERD], pain reported was subtle, atypical or absent (Greenwald, D.A., 2004 [Level V]). In another case of older adult women with coronary heart disease, atypical symptoms were present during the infarction, and a delay in diagnosis occurred (McSweeney, J.C., Lefler, L.L., and Crowder, B.F. 2005. [Level V]). Further, case reports of myocardial infarction in older adults, particularly those of advanced old age, can include vague and non-specific symptoms such as minimal or no chest pain, no shortness of breath or acute confusion (Bayer, A.J., Chadha, J.S., Farag, R.R. and Pathy, M.S. 1986 [Level III]; Qureshi, A.M., McDonald, L., & Primrose, W.R. 2000 [Level V]).

A variant presentation deviating from the classic presentation of myocardial infarction seen in younger adults (see Table 2) exists for older adults of advanced age. This variant or atypical presentation is vital *to detect* when a disease such as myocardial infarction occurs. Myocardial infarction affects a large number of older adults in the United States. Over 60 percent of myocardial infarctions occur in those sixty-five and over, and 30 percent occur in those over age seventy-five, making early detection a key intervention for *reducing mortality and morbidity* (Rich, M.W., 2006: [Level III]).

Besides pain, often *change of behavior or function* is an early marker of an underlying health problem or serious condition in an older adult. A case report of a seventy-three-year-old man with dementia and behavioral difficulty including anxiety and agitation wrongly attributed these symptoms to dementia. When treated with medications for this “behavioral” problem, it was revealed that the agitation was associated with physiological blood pressure change and surges of catecholamine, later diagnosed as a pheochromocytoma (Prokhorova, M., Fritz, S. 2002 [Level V]). In this case example, the behavioral agitation and anxiety of a new onset and duration was a symptom indicating a potential problem. The physical sign of escalation of blood pressure correlated with this symptom of behavioral agitation to further confirm the idea that something other than dementia was occurring.

Another prevalent condition plaguing acute-care hospitals and institutions caring for the older adult is infection. Recognizing that infection usually presents “atypically” among older adults, the American Geriatrics Society along with the Council of the Infectious Disease Society of America has developed evidenced-based Clinical Practice Guidelines (American Geriatrics Society, 2006 [Level VI]; see Table 3) that specify assessment and management protocol depending on the suspected type of infection. Increased antibiotic resistance is an important factor prompting accurate assessment of all of the systems involved in the variant clinical manifestations of infection in the older adult (Barakzai & Fraser, D., 2008, [Level VI]). Infection of the integument due to infestation of “scabies” may also present atypically among older nursing home residents, as found in a retrospective study at a long-term care facility (Wilson, Philpott and Breer, 2001 [Level VI]).

The importance of recognizing the presence of an atypical presentation and the range of possible symptoms cannot be over stated: it is an essential consideration when

caring for older adults, especially since incidences of chronic illness, comorbidities and geriatric syndromes escalate with age and therefore, increase risk for atypical presentation. In particular older adults over age eighty-five, especially those with multiple comorbidities and medications, and cognitive or functional impairment are at greatest risk for developing atypical presentation (www.ConsultGeriRN.org: Evidence-based Geriatric Topics drop down menu: Atypical Presentation).

Moreover, the consequence of not recognizing atypical presentation directly affects the delivery of quality health care to older adults across all practice settings. Because signs and symptoms of an atypical presentation are recognizable and have been linked to potentially modifiable diseases and/or geriatric syndromes, they must be identified in the nursing assessment of an older adult on a consistent basis. The following section discusses some measures by which nurses caring for older adults in practice can utilize the nursing process to recognize atypical presentation of disease.

Detection of Atypical Presentation

Detection of an atypical presentation is contingent upon several interrelated steps accomplished by a thorough nursing assessment. First, detection of an atypical presentation requires a comprehensive, but *problem-focused history*. Second, it requires a *focused physical examination*, and third, it requires critical analysis of this data into a *determination of whether or not an atypical presentation may exist*.

The Problem-focused History

In the history, detection of atypical presentations of disease require nurses to *first* modify their standard repertoire of questions asked to elicit a particular problem by thinking beyond the classic symptoms associated with a particular disease entity. This means the nurse will need to expand beyond the typical symptoms reviewed on the history—to also incorporate symptoms associated with an atypical presentation of disease (see Table 1). Because part of any atypical presentation may include alteration in level of consciousness and/or cognitive impairment, it is very important that history taking be performed by reliable caregivers or healthcare providers who can accurately report the older adults' recent history. If the older adult is unable to report an accurate history and caregivers are absent, review of the medical record or discussion with the primary care provider can provide accurate historical detail. It is particularly important to note the onset, duration, frequency and other associated factors of the symptom in question and to begin to critically analyze if this symptom might be a part of an atypical presentation. Information obtained is relayed to primary care providers for prompt intervention. In some clinical situations—such as the occurrence of silent myocardial infarction in the elderly—where symptoms and or overt physical findings such as electrocardiogram findings are absent, management by the primary care providers may rely on other measures such as cardiac enzyme assay (Qureshi et al., 2000 [Level V]) to establish a diagnosis.

The Focused Physical Examination

Next, the physical examination rests on observing or actively looking for certain “telltale signs” which may be part of an atypical presentation. This includes changes in behavior such as restlessness or agitation, anxiety and changes in cognition. All of these signs are readily observable on physical examination. The nurse should be astute to manifestations of pain such as facial grimacing or holding one's body. Because of the difficulties in communication afflicting patients with dementia, observations made by

nurses become important in the comprehensive assessment. Additional details of the physical examination of an altered presentation of illness in older adults are reviewed system by system in www.ConsultGeriRN.org and select Evidence-based Geriatric Topics drop down menu: Atypical Presentation. In this review, various physical examination techniques and areas of focus on the examination are presented.

Determining if an Atypical Presentation Exists

Based on the presenting symptoms and/or sign, the nurse caring for the older adult begins to formulate an impression of whether or not an atypical presentation exists or is likely. This requires ongoing dialogue with the primary care provider and usually more specific types of monitoring to validate the changes observed. For instance, vital signs may be taken more frequently. Instead of relying on an oral temperature, a core or rectal temperature may be more accurate and essential in determining the presence of conditions such as hypothermia related to bacteremia. Ruling out such conditions as dehydration may require daily intake and output of oral fluids along with other types of laboratory work-up, such as serum electrolytes, BUN and creatinine. It may also be necessary to monitor the older adult for specific types of behavioral problems.

Nursing interventions for validating signs of atypical presentation include general measures such as more frequent vital signs, daily intake and output, daily weights or observations for pain, function and behavior. Specific interventions to further assess for confusion, delirium, incontinence or function decline may be necessary and can be accomplished by administering select measurement tools (for more information visit www.ConsultGeriRN.org and select Evidence-based Geriatric Topics drop down menu: Function and/or Urinary Incontinence; select Resources, Try This: Confusion Assessment Method,).

Whenever an atypical presentation is suspected, clinical judgment will guide appropriate nursing intervention. Atypical presentation can actually be a medical emergency, as in the case of acute myocardial infarction; therefore time is of the essence in terms of selecting appropriate nursing intervention.

Having a protocol available at a facility can assist in the step-by-step approach to interventions, which is often helpful in managing certain conditions. Priority setting is also essential. Nursing care of the older adult will need to reflect immediate versus interim versus follow-up nursing interventions, whereby all interventions are prioritized according to the medical stability of the patient and nursing judgment. Clinical practice guidelines provide useful interventions for nurses when caring for an older adult believed to have an atypical presentation, provided that these guidelines address this issue.

Conclusion

When nurses caring for older adults routinely detect and act upon important signs and symptoms associated with atypical presentation, important health outcomes can be realized. In the long run, older adults can expect to experience fewer complications and risks, while also benefiting from early detection and prompt management of their condition.

Also included in this module is the condition urinary incontinence that serves as an exemplar of a classic disease presenting in the older adult either from a wide range of possible causes such as atypical presentation of disease or a geriatric syndrome.

Table 1 Classic Signs and Symptoms Often Part of an Atypical Presentation of Illness in Older Adults

Signs and Symptoms

Acute confusion (for example, “delirium”)

Failure to eat or drink (for example, anorexia)

Failure to develop a temperature or fever in light of leukocytosis

Lack of pain with a disease known to cause pain (such as gastric ulcer disease)

Functional decline

Reduced mobility

Generalized weakness

Falling

Fatigue

Urinary Incontinence

Reference: Adapted from Ham, R., Sloane, D., & Warshaw, G., (2002). *Primary Care Geriatrics: A Case Based Approach*. St. Louis, MO: Mosby.

Table 2 Classic and Variant Symptoms of an Acute Myocardial Infarction (MI)

<u>Classic Signs Observed with an MI</u>	<u>Atypical presentation of MI</u>
Sub-sternal chest pain	Mild or absent pain
Radiating pain to neck, jaw or arm	Acute confusion
Shortness of breath/dyspnea	Mild or absent dyspnea
Diaphoresis	
Electrocardiogram evidence of infarction	No electrocardiogram evidence or non-q wave infarction or silent myocardial infarction (no symptoms)

References

- : Bayer, A.J., Chadha, J.S., Farag, R.R. and Pathy, M.S., (1986). "Changing presentations of myocardial infarction with increasing old age." *Journal of the American Geriatrics Society* 34 (4), 263-266.
- de Bruyne, M.C., Mosterd, A., Hoes, A.W., Kors, J.A., Kruijssen, DA., van Bommel, JH., Hofman, A., Grobbee, DE., (1997). "Prevalence, determinants, and misclassifications of myocardial infarction in the elderly." *Epidemiology* 8(5): 495-500.
- Rich, M.W., (2006). "Epidemiology, clinical features, and prognosis of acute Myocardial infarction in the elderly." *American Journal of Geriatric Cardiology* 15 (1): 7-11.

Table 3 Clinical Manifestations of Infection in Residents of Long-term Care

Clinical Manifestations of Infections:

Pertains to infections of the urinary tract, respiratory, skin and soft tissue, gastrointestinal and/or bacteremia.

Typical Findings of Infection

Fever
Cough and yellow sputum (respiratory infection)
Heat, redness, purulence and skin breakdown (pressure sore infected)
Erythema and purulence of eye (conjunctivitis)

Atypical Findings of Infection

Change in mental status
Change in cognition function
Decline in physical function (for example, inability to perform activities of daily living or new onset of incontinence, falling or failure to cooperate in rehabilitation)
Afebrile (15 percent of bacteremic patients who are elderly are afebrile)
Tachypnea (respiratory rate greater than 25 breaths/minute)
Dehydration (clinical observation coupled with laboratory assays of elevated BUN, creatinine and serum sodium)

Reference: The American Geriatric Society Position Statement on Clinical Practice Guidelines on evaluation of fever and infection in long-term care facilities.
Available on the Internet at:
http://www.americangeriatrics.org/products/postionpapers/idsa_evaluation.shtml.

References

- American Geriatric Society Position Statement on Clinical Practice Guidelines on evaluation of fever and infection in long-term care facilities.
Available on the Internet at:
http://www.americangeriatrics.org/products/postionpapers/idsa_evaluation.shtml.
- de Bruyne, M.C., Mosterd, A., Hoes, A.W., Kors, J.A., Kruijssen, D.A., van Bommel, J.H., Hofman, A., Grobbee, D.E., (1997). "Prevalence, determinants, and misclassifications of myocardial infarction in the elderly." *Epidemiology* 8 (5): 495-500. Evidence Level III: Quasi-experimental Study.
- Barakzai, MD., Fraser D., (2008). Assessment of infection in older adults. Signs and symptoms in four body systems. *Journal of Gerontological Nursing* 34(1): 7-12. Evidence Level VI: Expert Opinion.
- Bayer, A.J., Chadha, J.S., Farag, R.R. and Pathy, M.S., (1986). "Changing presentations of myocardial infarction with increasing old age." *Journal of the American Geriatrics Society* 34 (4), 263-266. Evidence Level III: Quasi-experimental Study.
- Greenwald, D.A., (2004). "Aging, the gastrointestinal track, and risk of acid-related disease." *American Journal of Medicine* 117 (Suppl 5A), 8S-13S. Evidence Level V: Case Report.
- Ham, R., Sloane, D., & Warshaw, G., (2002). *Primary Care Geriatrics: A Case Based Approach*. St. Louis, MO: Mosby. Evidence Level VI: Expert Opinion.
- Jarrett, P.G., Rockwood, K., Carver, D., Stoles, P., and Cosway, S., (1995). "Illness presentation in elderly patients." *Archives of Internal Medicine* 155 (10):1060-4. Evidence Level III: Quasi-experimental Study.
- Kennes, B., (2001). "Chronic pain in geriatrics." *Revue Medicale De Bruxelles* 22 (3), 152-60. Evidence Level VI: Expert Opinion.
- McSweeney, J.C., Lefler, L.L., and Crowder, B.F., (2005). "What's wrong with me? Women's coronary heart disease diagnostic experiences." *Progress in Cardiovascular nursing* 20 (2), 48-57. Evidence Level V: Case Report.
- Prokhorova, M., Fritz, S., (2002). "Case of a 73-year-old man with dementia and a likely pheochromocytoma mistaken for anxiety disorder." *Psychosomatics: Journal of Consultation Liaison Psychiatry* 43 (1), 82. Evidence Level V : Case Report.
- Qureshi, A.M., McDonald, L., & Primrose, W.R. 2000. Management of myocardial infarction in the very elderly-impact of clinical effectiveness on practice. *Scottish Medical Journal* 45(6), 180-182. Evidence Level V: Case Report.

Rich, M.W., (2006). "Epidemiology, clinical features, and prognosis of acute myocardial infarction in the elderly." *American Journal of Geriatric Cardiology* 15 (1): 7-11. Evidence Level III: Quasi-experimental Study.

Wilson, Philpott and Breer, 2001. Atypical presentation of scabies among nursing home residents. *The Journals of Gerontology Series A*: M424-M427. Evidence Level VI: Expert Opinion.

Appendix A: Levels of Evidence Cited

Level III:

Bayer, Chadha, Farag, Pathy, 1986
de Bruyne., Mosterd, Hoes, Kors, Kruijssen, van Bommel, Hofman, Grobbee, 1997
Rich, 2005
Jarrett, Rockwood, Carver, Stoles, and Cosway, 1995

Level V:

Greenwald, 2004
McSweeney, 2005
Prokhorova and Fritz, 2002
Qureshi, McDonald, Primrose, 2000

Level VI:

American Geriatric Society Position Statement on Clinical Practice Guidelines, 2006
Barakzai, MD., Fraser D., 2008
Ham, 2002
Kennes, 2001
Wilson, Philpott and Breer, 2001

Appendix B: Web-based resources

For more information visit:

www.ConsultGeriRN.org and select Try This Series:

Assessing Pain in Persons with Dementia
Communication Difficulties
Confusion Assessment Method (CAM)

and select Evidence-based Geriatric Topics drop down menu

Atypical Presentation
Function
Urinary Incontinence

American Geriatric Society Position Papers

Available on the Internet at http://www.americangeriatrics.org/products/postionpapers/idsa_evaluation.shtml.

Appendix C: Examples of teaching pedagogies for atypical presentation of disease in an older adult

<u>Topic Area: Content</u>	<u>Example of Pedagogy</u>
Nursing assessment of atypical presentation: history taking	<ol style="list-style-type: none"> 1. Review a case study or video of an older adult displaying signs of a possible atypical presentation or altered illness presentation. Ask the student to: <ol style="list-style-type: none"> a. identify all possible symptoms b. outline questions that could further identify the onset, duration and frequency of this symptom c. identify the primary data source and if the data source is unavailable, where else could information be obtained? d. identify measures to validate this symptom (for instance, which measurement tool might be selected?) e. list all possible diseases, chronic conditions and geriatric syndromes in which the identified symptom might occur f. develop a plan of care to manage this symptom. g. determine how this symptom would be monitored h. determine how this symptom would be resolved