Aging, Pain, and Palliative Care

David I. Wollner, MD
Director of Palliative Care
Metropolitan Jewish Health System
Brooklyn, New York
Editorial Board Member,
Pain Medicine News

Christophe Trivalle, MD
Service de Gérontologie et de
Soins Palliatifs
Hôpital Paul Brousse
Villejuif, France

People are living longer, with life expectancies for American women and men currently estimated at 79.9 and 74.2 years, respectively, compared with 51.1 and 48.3 years in 1900. Women and men reaching the age of 65 years are expected to live an additional 17.0 and 16.1 years, respectively.[1]

France has one of the highest life expectancies, with 2004 estimates showing 83.8 and 76.7 years for women and men, respectively.[2] The life expectancy at 60 years in France is 26.5 years for women and 21.5 years for men.[2]

The population is aging worldwide, but particularly in more developed regions. As shown in Figure 1, nearly 20% of the population in more developed regions was aged 60 or older in 2000, and by 2050, approximately 33% in more developed regions will be aged 60 or older.[3] In the United States, there will be 20 million Americans aged 85 years and older by the year 2050—a 5-fold increase in less than 50 years.[1]

Currently, the oldest old (aged 80 years or older) make up 12% of the population aged 60 years or older. The oldest old are the fastest-growing segment of the older population, and by 2050, 19% of the older population will be aged 80 years or older. The number of centenarians (aged 100 years or older) is projected to increase 15-fold, from approximately 210,000 in 2002 to 3.2 million by 2050.[3]

In addition to the burden on caregivers and the economy, the aging of the population presents many challenges for healthcare providers because older patients may have a variety of comorbidities. For example, a study of 988 persons with a limited life expectancy who were living at home revealed that 71% had dyspnea, 50% had significant pain, and 35% were incontinent.[4] Symptoms increase in number and intensity as older persons age. Pain is the symptom that has received the most attention in the aging population.

Persistent Pain: A Constant Companion

Persistent pain is a common and at times constant in older adults. One quarter to one half of older people living in the community suffer from persistent pain.[5] Skeletal and joint disorders are among the most frequent causes of pain, as are other chronic conditions, such as diabetes and peripheral vascular disease. Persistent pain is often found among patients in long-term care settings, with a prevalence of 40% to 80%.[6] The burden of unrelieved pain is immense.

Cognitive impairment—a common finding in the oldest old—is a barrier to the accurate assessment of pain. This is especially true in the long-term care setting. Alzheimer's disease and vascular dementia are the most common causes of cognitive impairment in this population. Dementia affects 4% of people older than age 70 and 13% of those older than age 80. Behavioral pain assessment tools have been developed in recent years to aid in the evaluation of patients with pain.

For example, the American Geriatrics Society Panel on Persistent Pain in Older Persons has identified behavioral traits that indicate the presence of pain in the severely cognitively impaired older adult (Table).[5] To improve the assessment of pain in cognitively impaired persons, a group of French geriatricians constructed the Doloplus-2 Scale,[7] which systematically evaluates pain behaviors and assesses somatic complaints, facial expressions, protective body postures, behavioral problems, and changes in communication or social life. The scale can be downloaded at www.doloplus.com/versiongb/pdf/echelle.pdf.

Nonsteroidal anti-inflammatory drugs, opioids, and a vast array of adjuvant analgesics are the cornerstone of pain management. Analgesics must be used carefully because older adults are at greater risk for adverse drug reactions. Transdermal lidocaine (Lidoderm, Endo) is effective for managing postherpetic neuralgia and other focal pain symptoms. Massage and music therapy are just 2 of many nonpharmacologic therapies available. Weiner and colleagues have proposed a 5-tier algorithm to guide the prescribing of pain treatment for elderly patients with severe cognitive impairment (Figure 2).[8]

The Palliative Care Model

Palliative care is a model of healthcare delivery with diverse definitions.[9] It consists of the services of an interdisciplinary team of professionals, including a physician, advanced practice nurse or nurse practitioner, social

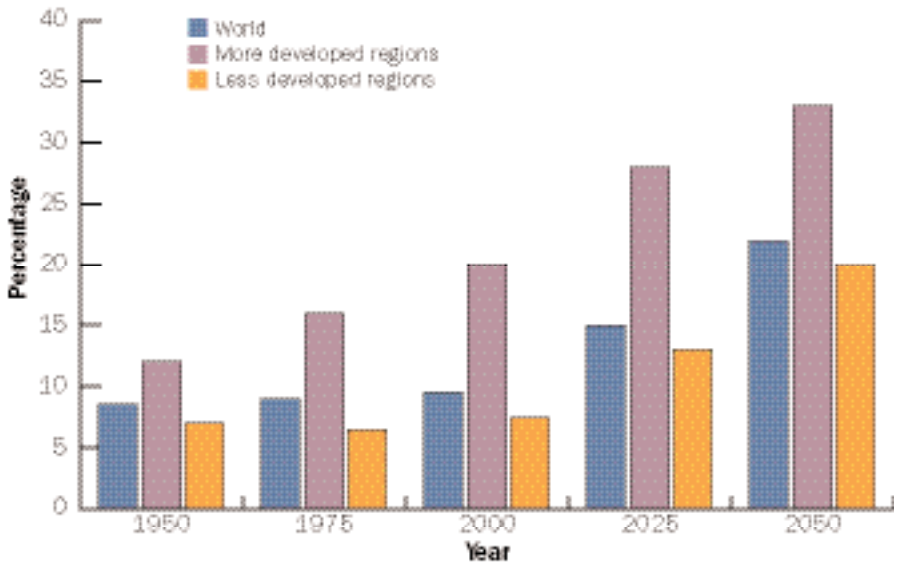

FIGURE 1. Proportion of population aged 60 or older: world and developed regions, 1950-2050.[3]

Reprinted with permission of the United Nations Department of Economic and Social Affairs from *World Population Ageing: 1950-2050*. New York, NY: United Nations; 2001. Populations Study No. 207.

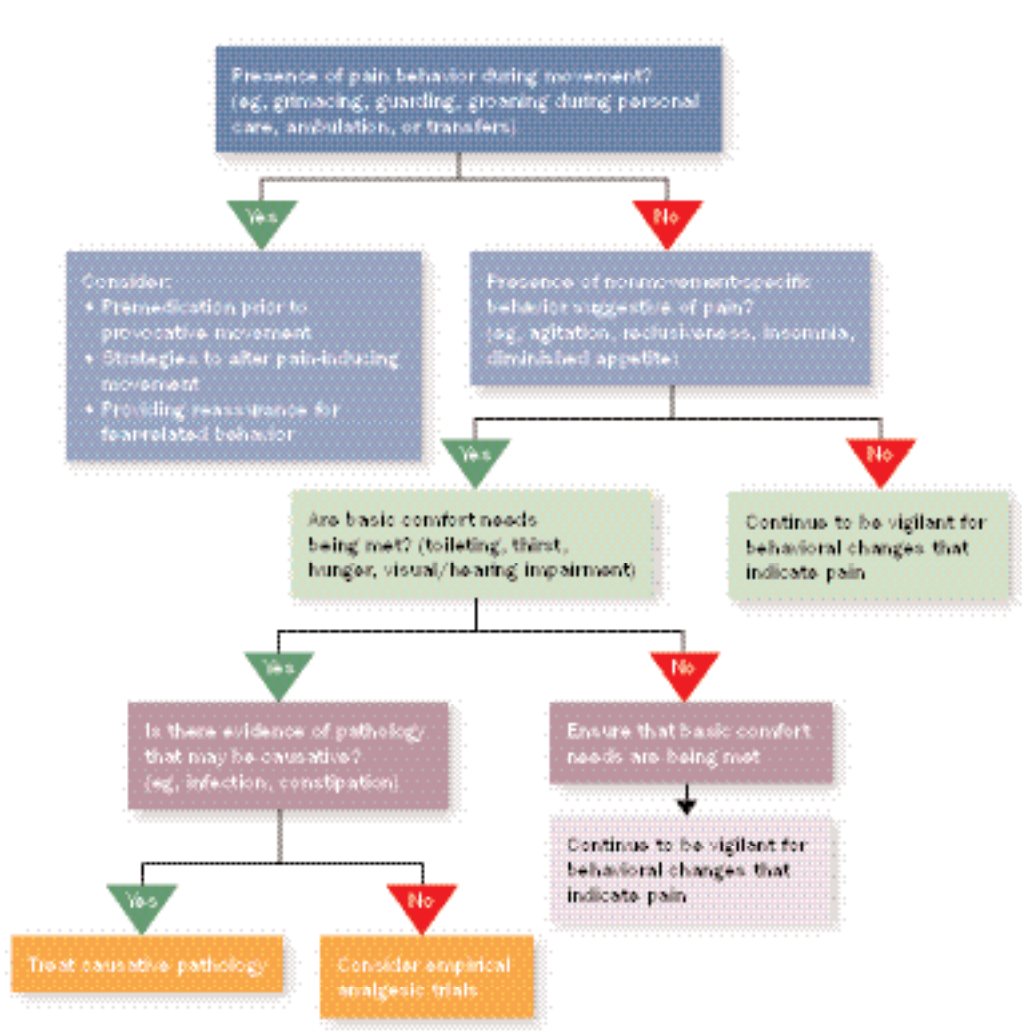

FIGURE 2. Algorithm for the assessment of pain in elderly patients with severe cognitive impairment.[5,8]

Reprinted with permission of the American Geriatrics Society Panel on Persistent Pain in Older Persons. The management of persistent pain in older persons. *J Am Geriatr Soc.* 2002;50(suppl 6):S205-S222. Available at www.americangeriatrics.org.

Adapted with permission from Weiner D, Herr K, Rudy T, eds. *Persistent Pain in Older Adults: An Interdisciplinary Guide for Treatment*. New York: Springer-Verlag; 2002.

worker, and chaplain, in addition to a variety of other clinical and ancillary services. Palliative care provides relief from pain and other distressing symptoms and integrates the psychological, practical, and spiritual aspects of patient care. It offers a support system to assist patients and their caregivers and commonly includes bereavement services. It enhances quality of life and is applicable early in the course of chronic illness along with other therapies that are considered to be life-prolonging. Palliative care is available as needs develop and before problems become unmanageable. This model is an integral part of care that takes place in any community or institutional setting.

Studies have shown the benefits of using palliative care clinical pathways.[10] Symptom management is improved, and many of the unintended consequences of continued therapies are avoided.

The relief of pain and other distressing symptoms is a crucial aspect of palliative care. Symptom assessment begins with a detailed clinical history and physical examination. Validated assessment tools are available and help coordinate care and develop a uniform language for clear communication across professional roles.[11] Morrison and Meier have provided a superb review of the scope and functions of palliative care.[12]

Long-term care settings are becoming the sites where older adults more frequently receive healthcare. One half of all current Medicare recipients will spend some time in a nursing home. Nursing homes are increasingly becoming the places where older adults die.[13] End-of-life care is inadequate because of chronic staff shortages, rapid staff turnover, poor reimbursement scales, and limited physician participation. Many current instruments for assessing patients lack the resolution to clarify palliative care needs. Sebag-Lanoë and colleagues, however, have proposed a 10-item questionnaire to assist decision making for palliative care for older adults.[14]

Hospice Support

Hospice is one model of palliative care that provides quality, compassionate care for people facing the end of life. Hospice care involves a team-oriented approach to expert medical care, pain management, and emotional and spiritual support designed to meet the patient's needs and wishes. Support is offered to the patient's loved ones as well. Care is provided at home and also in hospice facilities, hospitals, and nursing homes. Hospice is available to people of any age, religion, or race and is covered by Medicare Part A, Medicaid, most private insurance plans, health maintenance organizations, and other managed care organizations.

There are measurable benefits when hospice is used in nursing homes, including fewer emergency department transfers, less use of invasive therapies, improved pain control, and satisfaction of the decedent's family with prior care.[15] Barriers to improved outcomes of palliative care in the hospice model include limited hospice stays, difficulty in assessing limited prognoses for non-neoplastic diseases, and obstacles to interprofessional collaboration. The development of palliative care consultation teams in the nursing home is a practical and beneficial alternative to hospice.

TABLE. Common Pain Behaviors in Cognitively Impaired Elderly Patients[5]

Facial expressions
- Slight frown; sad, frightened face
- Grimacing, wrinkled forehead, closed or tightened eyes
- Any distorted expression
- Rapid blinking

Verbalizations, vocalizations
- Sighing, moaning, groaning,
- Grunting, chanting, calling out
- Noisy breathing
- Asking for help
- Verbally abusive

Body movements
- Rigid, tense body posture, guarding
- Fidgeting
- Increased pacing, rocking
- Restricted movement
- Gait or mobility changes

Changes in interpersonal interactions
- Aggressive, combative, resisting care
- Decreased social interactions
- Socially inappropriate, disruptive
- Withdrawn

Changes in activity patterns or routines
- Refusing food, appetite change
- Increase in rest periods
- Sleep, rest pattern changes
- Sudden cessation of common routines
- Increased wandering

Mental status changes
- Crying or tears
- Increased confusion
- Irritability or distress

Reprinted with permission of the American Geriatric Society Panel on Persistent Pain in Older Persons. The management of persistent pain in older persons. *J Am Geriatr Soc*. 2002; 50(suppl 6):S205-S222. Available at www.americangeriatrics.org.

Conclusion

The aging of the population is unprecedented, pervasive, and profound. As mortality and fertility decline, the accelerating trend to older populations is irreversible and affects every aspect of human life. An accumulation of comorbidities has changed the epidemiology of living and dying. Long-term facilities will become the predominant site for end-of-life care. Palliative care is a necessary model to relieve pain and suffering and to allow older adults and their caregivers a safe and attended death. It is incumbent on all societies to develop solutions to reach this ultimate goal.

References

1. Kinsella K, Velkoff VA. An Aging World: 2001. US Census Bureau Series P95/01-1. Available at: www.census.gov/prod/2001pubs/p95-01-1.pdf. Accessed December 13, 2005.
2. Institut National de la Statistique et des Études Économiques. France in Facts and Figures. Available at: www.insee.fr/en/ffc/pop_age.htm. Accessed December 13, 2005.
3. United Nations Department of Economic and Social Affairs. *World Population Ageing: 1950–2050*. New York, NY: United Nations; 2001. Populations Study No. 207.
4. Emanuel EJ, Fairclough DL, Slutsman J, Alpert H, Baldwin D, Emanuel LL. Assistance from family members, friends, paid care givers, and volunteers in the care of terminally ill patients. *N Engl J Med*. 1999;341:956-963.
5. American Geriatric Society Panel on Persistent Pain in Older Persons. The management of persistent pain in older persons. *J Am Geriatr Soc*. 2002;50(suppl 6):S205-S222.
6. Ferrell BA, Ferrell B, Osterweil D. Pain in the nursing home. *J Am Geriatr Soc*. 1990;38:409-414.
7. Lefebvre-Chapiro S. The Doloplus-2 Scale—evaluating pain in the elderly. *Eur J Palliative Care*. 2001;8:191-194. Available at: www.doloplus.com/versiongb/pdf/echelle.pdf. Accessed December 13, 2005.
8. Weiner D, Herr K, Rudy T, eds. *Persistent Pain in Older Adults: An Interdisciplinary Guide for Treatment*. New York, NY: Springer-Verlag; 2002.
9. Billings JA. What is palliative care? *J Palliat Med*. 1998;1:73-81.
10. Ellershaw J, Ward C. Care of the dying patient: the last hours of life. *BMJ*. 2003;326:30-34.
11. Center to Advance Palliative Care. Pain and Symptom Assessments. Available at: www.capc.org/tools-for-palliative-care-programs/clinical-tools/pain-symptom-assessment. Accessed December 12, 2005.
12. Morrison RS, Meier DE. Clinical practice. Palliative care. *N Engl J Med*. 2004;350:2582-2590.
13. Miller CS, Teno JM, Mor V. Hospice and palliative care in nursing homes. *Clin Geriatr Med*. 2004;20:717-734.
14. Sebag-Lanoë R, Lefebvre-Chapiro S, Fétéanu D, Trivalle C. Palliative care in a long-term care setting: a 25-year French experience. *J Palliat Care*. 2003;19:209-213.
15. Teno JM, Clarridge BR Casey V, et al. Family perspectives on end-of-life care at the last place of care. *JAMA*. 2004;291:88-93.

WARRIORS *continued from page 11*

head athletic trainer and several assistants.

This team approach provides each player with medical, physical and even mental health attention to help him play the best that he can. "I think it's really reduced injury," said Dr. Agee. "It is very hands-on; it's easy for players to get to a doctor and get medical access, so little things don't build up. It is important to talk to players individually so they know the long-term detriment if we diagnose something and they continue to play. It is very important to give the whole picture and scope of the injury."

An Athlete's Perspective

One player who has benefited from this team medical model is Ulish Booker, 26, who played for the NFL Europe's Amsterdam Admirals in the 2005 season. In a game against Hamburg, the 6-foot 6-inch athlete jammed his foot against the ground while being tackled, causing extreme pain in his toe. But as befits Dr. Agee's maxim about playing through the pain, Mr. Booker continued to compete for another two weeks, while icing his injury and taking an oral anti-inflammatory. It was not until two weeks later that an X-ray showed his toe was actually broken.

Dr. Agee then sat Mr. Booker down and they discussed his options. Using the team medical model, they came to the conclusion that Mr. Booker should go to Champion Sports Medicine, a sports rehabilitation facility in Birmingham, Ala., with which the NFL Europe is affiliated, to get rehabilitation before returning to training camp.

"Dr. Agee made me feel comfortable," said Mr. Booker. "Unlike other physicians, who don't specialize in sports medicine, Dr. Agee works with the player to find his own individual pain threshold." While other doctors might be much more cautious about sending their players back out on the field, Dr. Agee has "a better understanding of athletes and is willing to work with athletes," said Mr. Booker, which helps them best manage their pain while still supporting their career goals.

"A lot of these guys have only one or two chances to get into the big leagues," said Dr. Agee, exhibiting his compassion for making the athletes' dreams come true. "The team approach helps players get better quicker or keeps them off the field so they can heal. Consulting with players makes a huge difference in controlling and treating pain."

—Reeve Chace

*Based on interviews with **Robert Agee, MD,** and **Ulish Booker.***

DATA *continued from page 13*

given parecoxib and valdecoxib than in the group given placebo (2.0% vs. 0.5%; risk ratio, 3.7; 95% CI, 1.0-13.5). These findings speak to the idea that the increased cardiovascular risk associated with the COX-2 inhibitors is not limited to a particular agent—it is more than likely a class effect.

It perhaps goes without saying that with millions of people taking these medications, any small effect—even a change in absolute risk of 1% to 2%—could mean thousands of additional cardiovascular events. Still, without the actual data, any information on relative risk—such as "doubling"—does not tell you all that much. I will leave the withdrawals and approvals to the FDA, and the liability issues to the courts, but let the data speak for themselves.