The elderly population in New York City (NYC) is growing. One in 8 people (about 12%) in NYC are 65 years or older, and this proportion is expected to double by 2030.\(^1\) Patients in this age group have unique health concerns: many have multiple chronic conditions such as heart disease, cancer, diabetes, and arthritis (Figure 1). Among people aged 65 years and older, rates of disability due to urinary incontinence,\(^4,5\) difficulties with gait or balance, loss of mobility/impaired functional status, cognitive impairment/dementia, depression, and hearing and vision loss are high,\(^6\) and polypharmacy (the use of 5 or more medications) is common. All of these conditions can increase patients’ risk of falls, which are a leading cause of injury and death among the elderly.\(^7\)

National surveys show that 80% of older people want to “age in place” in their homes and communities, rather than in retirement communities.\(^8\) Office-based assessments for depression, cognitive status, and physical impairment can identify patients who may benefit from treatment or referral to community-based services that may help them remain independent. While there is a shortage of geriatric specialists, primary care providers (PCPs) can effectively manage many health issues faced by elderly patients.\(^1\) PCPs can consult with geriatric specialists if they have concerns or questions regarding patient management and refer patients with complex or challenging conditions to hospital-based geriatric centers. Providers can also improve their clinical skills in geriatrics through locally available training (Resources).
APPROACH TO EVALUATING ELDERLY PATIENTS

The medical evaluation of elderly patients should include a complete medical history and physical examination, with particular attention to risk of chronic illnesses such as cardiovascular disease, arthritis, diabetes, and cancer. Over several visits, assess for functional status, cognitive impairment, depression, polypharmacy, and risk of falls/injury, based on the person’s health needs and characteristics. Frequently summarize the most important points and be compassionate and understanding about the difficulties your elderly patients and their caregivers face. Elderly patients may have sensory or cognitive impairment that could affect communication. Face hearing-impaired patients directly and speak slowly and clearly.

POLYPHARMACY

Approximately 60% of adults aged 65 to 85 years use 5 or more prescription medications, over-the-counter (OTC) drugs, or dietary supplements. Nearly 1 in 25 older adults may be at risk for major drug-drug interactions. When your patients call to schedule an office visit, ask them to bring all their medications with them, including OTC drugs and supplements (“brown bag” test). Review all medications patients are taking, considering side effects, age-associated drug metabolism changes, and drug-drug interactions to determine which medications are necessary and appropriate.

Ask patients if there are any barriers to medication adherence and discuss possible solutions. Patients who have difficulty remembering to take their medication may benefit from simplified dosing and administration or the use of reminder tools such as pill boxes and medication logs. If cost is a barrier to medication adherence, prescribe generics when possible and refer patients to the Health Insurance Information Counseling and Assistance Program (HIICAP) for information on low-cost prescriptions. See “Improving Medication Adherence” for more information (www.nyc.gov/html/doh/downloads/pdf/chi/chi28-suppl4.pdf).

TABLE 1. ACTIVITIES OF DAILY LIVING (ADLs)

<table>
<thead>
<tr>
<th>PHYSICAL ADLs</th>
<th>INSTRUMENTAL ADLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathing</td>
<td>Using the telephone</td>
</tr>
<tr>
<td>Dressing</td>
<td>Shopping</td>
</tr>
<tr>
<td>Toileting</td>
<td>Food preparation</td>
</tr>
<tr>
<td>Transfers</td>
<td>Housekeeping</td>
</tr>
<tr>
<td>Continence</td>
<td>Laundry</td>
</tr>
<tr>
<td>Feeding</td>
<td>Transportation</td>
</tr>
<tr>
<td></td>
<td>Taking medicine</td>
</tr>
<tr>
<td></td>
<td>Managing money</td>
</tr>
</tbody>
</table>

Score 0 if patient cannot do independently and 1 if patient can do independently.

<table>
<thead>
<tr>
<th>ADL score: _____/6</th>
<th>IADL score: _____/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 = High (patient independent)</td>
<td>8 = High (patient independent)</td>
</tr>
<tr>
<td>0 = Low (patient very dependent)</td>
<td>0 = Low (patient very dependent)</td>
</tr>
</tbody>
</table>

FUNCTIONAL STATUS

Nearly 50% of adults 65 years or older report one or more geriatric conditions (eg, vision or hearing impairment, incontinence) that affect their ability to engage in activities of daily living (ADLs). Simple tests such as the Snellen wall chart and hearing tests (eg, brief hearing loss screener or whisper test) with ear exams will identify impairments in patients aged 65 years and older.9

Evaluate patients’ functional status by assessing physical ADLs, including bathing, dressing, eating, and toileting skills,9 and instrumental ADLs, such as using the telephone, shopping, and taking medicine (Table 1).14 Patients who have difficulty with ADLs should be referred to appropriate community-based support services (eg, home health agencies or meal delivery).

COGNITIVE IMPAIRMENT AND DEMENTIA

Cognitive impairment and dementia can interfere with a person’s capacity to manage their ADLs, personal affairs, medical problems, and ultimately affect their ability to live independently. Early recognition of these conditions allows doctors to make more appropriate treatment decisions and gives patients and caregivers the time to understand the condition and plan accordingly.15 Screen for cognitive impairment and dementia if reports from patients, family members, or caregivers, or direct observations suggest that a problem may exist.15

Validated screening tools for cognitive impairment include the Mini-Cog™ (Table 2) and the Mini-Mental Status Exam (Resources). A positive screen can be due to mild cognitive impairment, Alzheimer’s disease, or another form of dementia (eg, related to Parkinson’s disease or vascular disease). Consider referring patients with positive dementia screens for further evaluation. Geriatricians, psychologists, neurologists, and psychiatrists can perform a more extensive dementia evaluation. Patients with dementia also benefit from referral to community services and case management.

DEPRESSION

Depression is one of the most common disorders seen in primary care. As patients with depression are at a higher risk for suicide, diagnosis and treatment can be life-saving.16 Depression can also affect patients’ performance on screening tests for cognitive impairment and dementia, although dementia and depression can be comorbidities. Screen for depression annually using the Patient Health Questionnaire-2 (PHQ-2), which consists of 2 questions:

Patient Health Questionnaire-2 (PHQ-2)

Over the past 2 weeks, have you been bothered by:
• Little interest or pleasure in doing things?
• Feeling down, depressed, or hopeless?


PREVENTING FALLS

Unintentional falls are the leading cause of injury-related deaths in New York City among people aged 65 years and older.7 They are also the most common, and most costly, cause of nonfatal injuries and hospital admissions for trauma.17,18 Falls are also a major factor in older adults’ activity restriction, functional decline, and nursing home placement. The prevalence of all individual medical risk factors for falls (see box on page 68) increases after the age of 70.19

Evaluate patients’ risk of falls carefully and suggest appropriate interventions. Ask elderly patients about falls or any problems with gait or balance, and observe them as they walk and get in and out of a chair.20 Even if you do not observe any difficulties with gait or balance, recommend an exercise program that emphasizes balance and strength.

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**TABLE 2. MINI-COG™**

A. Ask the patient to listen to and repeat 3 standard words (eg, apple, watch, penny).

B. Ask the patient to draw a clock face with numbers, and draw the hands of the clock to read a specific time (eg, 11:10 or 8:20). Normal clock = 2 points. Abnormal clock = 0 points.

C. Ask the patient to repeat the 3 words. 1 point for each word.

Scoring: 0-2: positive screen for dementia; 3-5: negative screen for dementia.

Source: Adapted from GRECC Pocket Guide to Geriatric Assessment, 2007. 5th ed. Mini-Cog copyright by S. Borson and J. Scanlan. All rights reserved.
If patients report a fall or you observe balance or gait difficulties, assess predisposing and precipitating factors that increase risk for falls (see box). Recommend strength and balance training, and refer to a physical therapist, as appropriate. Refer patients who need an assistive device such as a cane, walker, or wheelchair to an occupational or physical therapist for advice on the most appropriate devices and detailed instructions in their use. Refer patients who are homebound and need skilled rehabilitation to a rehabilitation medicine team or home care agency, both of which are covered by Medicare. A Home Safety Questionnaire (Resources) can help identify potential modifications to address environmental risk factors for falls and other injuries.

**WEATHER-RELATED ILLNESS**

Extreme weather events are another major cause of illness in older adults. Heat-related illness, including heat cramps, heat syncope, heat exhaustion, and heat stroke, is a serious health concern in older adults and can be fatal. Heat exposure can also exacerbate underlying cardiovascular and respiratory conditions. In extreme hot and cold weather, older adults may not be able to compensate for the increased cardiac and respiratory requirements during even minor exertion.

Risk factors for heat-related illness include:

- Age ≥65 years
- Lack of air conditioning
- Limited mobility or confinement to bed
- Social isolation
- One or more chronic medical or mental health conditions.

Patients at risk for heat-related illness should use air conditioning or go to a cool place during hot weather; avoid physical activity; stay out of the sun; wear lightweight clothing and sunscreen; and drink plenty of fluids (but avoid caffeine, alcohol, and drinks with lots of sugar). Encourage family members, friends, and home visiting providers to check on these patients frequently during hot weather. During heat waves, refer patients without air conditioning to 311 for the nearest cooling center. The NYC Department for the Aging can provide free air conditioners to patients in need. For more information on heat-related illness, visit [www.nyc.gov/health/heat](http://www.nyc.gov/health/heat). Refer patients at risk who have difficulty paying electric bills to 311 for the Home Energy Assistance Program (HEAP).

In cold weather, elderly people are at increased risk for hypothermia, which can cause cardiac problems and even death. Symptoms of hypothermia include confusion or sleepiness, slowed, slurred speech and reactions, and persistent shivering and stiffness in limbs. If a patient’s temperature does not rise above 96°F, refer him or her to the emergency department. Advise patients who have problems paying heating bills to call 311 for assistance.

**RISK FACTORS FOR FALLS**

**Medical**
- Muscle weakness (most common)
- History of falls/fear of falling
- Lower body weakness or gait/balance problems
- Vision deficit
- Arthritis
- Depressive symptoms
- Orthostasis (postural hypotension)
- Cognitive impairment
- Use of 4 or more medications
- Advancing age (>80 years)
- Osteoporosis
- Cardiovascular conditions such as carotid sinus syndrome
- Medications (eg, neuroleptics, benzodiazepines, and antidepressants)

**Environmental**
- Tripping hazards (eg, rugs, electrical/telephone cords)
- Slippery surfaces
- Bathtubs without grab bars
- Stairs without handrails
- Poor lighting

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training (Resources). If patients report a fall or you observe balance or gait difficulties, assess predisposing and precipitating factors that increase risk for falls (see box). Recommend strength and balance training, and refer to a physical therapist, as appropriate. Refer patients who need an assistive device such as a cane, walker, or wheelchair to an occupational or physical therapist for advice on the most appropriate devices and detailed instructions in their use. Refer patients who are homebound and need skilled rehabilitation to a rehabilitation medicine team or home care agency, both of which are covered by Medicare. A Home Safety Questionnaire (Resources) can help identify potential modifications to address environmental risk factors for falls and other injuries.

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### TABLE 3. ENTITLEMENTS AND SERVICES FOR THE AGING

Patients can call 311 for information about:

#### Benefits/Entitlements
- Benefits Guide for Seniors (booklet)
- Case Assistance for Seniors: help with benefits and entitlements for seniors who can visit a senior center
- Case Management for Seniors: help with benefits and entitlements for frail or homebound seniors

#### Food/Hunger
- Farmers Market Coupon Information for Seniors
- Food and Nutrition for Seniors, Women, Infants and Children (FAN)
- Group Meals for Seniors
- Meals: information on nutrition, free food, and meal delivery

#### Grandparents
- Foster Grandparents Program
- Grandparents Raising Children Assistance

#### Health Care Services
- Alzheimer’s Disease
- Blood Pressure Monitoring locations (Harlem and South Bronx)
- Fitness Programs (local walking clubs and free/low-cost exercise classes)

#### Hot Weather Preparedness
- Cooling Centers/Cooling Assistance Programs

#### Housing/Utilities
- Home Energy Assistance Program (HEAP): helps to pay home energy and heating bills
- Home Loans for Seniors
- Home Repair Assistance for Seniors
- Home Sharing Program
- Housing for Seniors
- Nursing Homes, Adult Homes, Assisted Living, and Enriched Housing
- Weatherization Referral and Packaging Program (WRAP)

#### Insurance
- Elderly Pharmaceutical Insurance Coverage (EPIC) Program
- Health Insurance Information Counseling and Assistance Program (HIIHAP), including information about Medicare benefits
- Long-term Care Insurance

#### Legal/Financial
- Legal and Financial Information Booklet for Seniors

#### Safety
- Elder Abuse Complaints
- Letter Carrier Alert Program

#### Senior/Caregiver Support Services
- Adult Day Care
- Bereavement Support Groups
- Caregiver Services
- Home Health Agencies
- Naturally Occurring Retirement Community (NORC) Complaints
- ReServe Program Information for Retired New Yorkers (volunteer opportunities)
- Senior Centers (offering meals, educational and recreational activities, social services, application assistance, and volunteer opportunities)

#### Transportation
- Transportation for Seniors

#### Work
- Job Placement and Training for Seniors
DIRECTING YOUR PATIENTS TO SERVICES

Many community-based services are available at no or low cost for older patients and their family caregivers (Table 3). These services are designed to help keep older patients safely at home with appropriate supports. Case management agencies will help with accessing government entitlements, home care, and home-delivered meals, while caregiver programs additionally focus on the needs of caregivers of older patients. Become familiar with these service providers, and refer your patients and their caregivers to them.

Some patients may be able to afford the services of a geriatric care manager. Geriatric care managers are fee-for-service providers for patients with multiple chronic care needs and their caregivers. They will coordinate care and support services and link to community services (Resources).

Patients who need more extensive services than are available in the community or who cannot afford to pay for these services may be candidates for nursing home placement. Community services such as Medicare-covered home care agencies have social workers and nurses who can assist patients and their families in making decisions about nursing home placement, when appropriate.

SUMMARY

Primary care providers can manage many of the health care needs of the City’s growing elderly population. Assess older patients for functional and cognitive status, depression, polypharmacy, and risk of falls and refer them to local services that will help them age in place. If necessary, refer patients with complex conditions to geriatric centers.

RESOURCES

For Physicians

Training Programs

- The Consortium of New York Geriatric Education Centers: Offers training for health care professionals: www.nygec.org/index.cfm?section_id=10 718-584-9000, x3850 or 3836
- Mount Sinai School of Medicine, Physician Mini-Fellowships: Geriatrics for the Non-Geriatrician: www.mssm.edu/geriatrics/education/mini_fellowship/index.shtml 212-241-3624

Hospital-Based Geriatrics Programs

- Bronx
  Einstein-Montefiore Division of Geriatrics 866-633-8255 (866-MED-TALK)
  Lincoln Medical and Mental Health Center 718-579-4900
- Brooklyn
  Coney Island Hospital 718-616-3870
  Kings County Hospital Center 718-245-3325
  Long Island College Hospital 718-780-2768
  Maimonides Medical Center 718-283-7071
  New York Methodist Hospital 718-780-3000
  Woodhull Medical and Mental Health Center 718-963-8537
  Wyckoff Heights Medical Center 718-486-4221
- Manhattan
  Bellevue Hospital Center 212-562-1312
  Beth Israel Medical Center 212-420-4326
  Gouverneur Healthcare Services 212-238-7897
  Harlem Hospital 212-939-8491
  Metropolitan Hospital Center 646-672-3558
  Mount Sinai Medical Center 212-241-5561

Continued on page 71
RESOURCES (Continued)

New York Presbyterian Hospital–Allen Pavilion
212-932-4080
New York Presbyterian Hospital–Weill Cornell Campus
212-241-5561
New York University School of Medicine
212-562-6380
Saint Luke’s–Roosevelt Hospital Center
212-961-5500
Saint Vincent’s Hospital Manhattan
212-463-0101

Queens
Elmhurst Hospital Center
718-334-1090
Flushing Hospital Medical Center Program
718-670-3121
New York Hospital Center Queens
718-888-1722
Queens Hospital Center
718-883-4343

Staten Island
Staten Island University Hospital
718-226-4374

General Information
• American Geriatrics Society: www.americangeriatrics.org
• American Society on Aging: www.asaging.org
• National Association of Professional Geriatric Care Managers: www.caremanager.org
• National Institute on Aging AgePages: www.niapublications.org

Fitness
• CDC: Growing Stronger: Strength Training for Older Adults: www.cdc.gov/ncdphp/dnphp/physical/growing_stronger/index.htm

Mental Status and Depression Assessments
• MacArthur Toolkit on Depression in Primary Care (includes PHQ-9): www.depression-primarycare.org/clinicians/toolkits
• Mini-Mental Status Examination (MMSE), available for purchase at www.minimental.com

Preventing Falls
• Connecticut Collaboration for Fall Prevention: www.fallprevention.org
• Help Seniors Live Better: Preventing Traumatic Brain Injury From Falls: www.cdc.gov/BrainInjuryinSeniors
• Home Safety Questionnaires for Older Adults: www.cdc.gov/ncipc/pub-res/toolkit/cksafety.pdf
• National Council on Aging, Fall Prevention Center: www.healthyagingprograms.org/content.asp?sectionid=69
• Tinetti Balance and Gait Evaluation: http://geriatrics.uthscsa.edu/tools/TINETTI.pdf

For Patients
• Aging in the Know: Your Gateway to Health and Aging Resources on the Web: www.healthinaging.org/agingintheknow
• Alzheimer’s Association of New York: www.alz.org/nyc
• Alzheimer’s Disease Education and Referral Center, National Institute on Aging: www.nia.nih.gov/alzheimers
• Centers for Medicare and Medicaid Services, Home Page: www.medicare.gov
• Call 1-800-MEDICARE (1-800-633-4227) for general information and assistance 24 hours a day, 7 days a week
• New York State Division of Veterans Affairs: www.veterans.ny.gov
• NIH SeniorHealth: http://nihseniorhealth.gov
• Social Security Online (includes information on disability benefits): www.ssa.gov/onlinebenefits
  Online hours of operation: Weekdays: 5 AM-1 AM, Saturdays and holidays: 5 AM-11 PM, Sundays: 8 AM-11:30 PM
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REFERENCES  

Continuing Education Activity

This issue of City Health Information, including the continuing education activity, can be downloaded from www.nyc.gov/html/doh/html/chi/chi.shtml.

Instructions
Read this issue of City Health Information for the correct answers to questions. To receive continuing education credit, you must answer 4 of the first 5 questions correctly.

To Submit by Mail
1. Complete all information on the response card, including your name, degree, mailing address, telephone number, and e-mail address. PLEASE PRINT LEGIBLY.
2. Select your answers to the questions and check the corresponding boxes on the response card.
3. Return the response card or a photocopy of the card postmarked no later than December 31, 2011.

Mail to: CME/CNE Administrator; NYC Department of Health and Mental Hygiene, 2 Lafayette Street, CN-65, New York, NY 10277-1632.

To Submit Online
Visit www.nyc.gov/html/doh/html/chi/chi.shtml to complete this activity online. Once logged into NYC MED, use the navigation menu in the left column to access this issue of City Health Information. Your responses will be graded immediately, and you can print out your certificate.
1. The medical evaluation of elderly patients should include:
   A. Evaluation of prescription and OTC medications.
   B. Assessment of functional status.
   C. Depression screen.
   D. Vision and hearing screening.
   E. All of the above.

2. Instrumental activities of daily living include:
   A. Food preparation.
   B. Bathing.
   C. Laundry.
   D. Toileting.
   E. A and C.
   F. B and C.

3. Factors that can affect a patient’s performance on a screen for cognitive impairment include:
   A. Depression.
   B. Hypothyroidism.
   C. Kidney failure.
   D. All of the above.

4. The most common risk factor for falls among the elderly is:
   A. Orthostasis (postural hypotension).
   B. Muscle weakness.
   C. Use of 4 or more medications.
   D. Age >80 years.
   E. Osteoporosis.

5. Risk factors for heat-related illness include:
   A. Age ≥65 years.
   B. Limited mobility or confinement to bed.
   C. Social isolation.
   D. One or more chronic medical or mental health conditions.
   E. All of the above.

6. How well did this continuing education activity achieve its educational objectives?
   A. Very well.
   B. Adequately.
   C. Poorly.

7. Will the content learned from this activity impact your practice?
   A. Yes.
   B. No.
   C. Not applicable.

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