Since 2012, the American Geriatrics Society (AGS) has also been collaborating with the American Board of Internal Medicine (ABIM) Foundation, joining its “Choosing Wisely” campaign on two separate lists of Five Things Healthcare Providers and Patients Should Question. The campaign is designed to engage healthcare organizations and professionals, individuals, and family caregivers in discussions about the safety and appropriateness of medical tests, medications, and procedures. Participating healthcare providers are asked to identify five things—tests, medications, or procedures—that appear to harm rather than help. Providers then share this information in a published article about these things on the ABIM campaign’s website (www.choosingwisely.org). The first AGS list was published in February 2013. J Am Geriatr Soc 2014.

Key words: geriatrics; special article; patient-centered care

The United States is aging at an unprecedented rate. Only 3 years ago, Americans aged 65 and older made up 13% of the population. Today, they make up 15%. By 2029, when the youngest of the 77 million baby boomers turn 65, an estimated 19% of the population will be comprised of “seniors.” To put those numbers in context, Americans aged 65 and older made up roughly 7% of the population in 1946, when the first of the boomer generation were born.

Given the dramatic demographic changes facing the United States, it is essential that we understand—and meet—the unique healthcare needs of the growing number of these aging adults. More than 70% of older adults have heart disease, one in five has diabetes mellitus, half have three or more chronic health problems, and half of adults aged 85 and older—who make up the fastest-growing subgroup of older adults—have Alzheimer’s disease.

Because of their medical complexity and heterogeneity, older adults are often underrepresented in clinical trials, making it particularly challenging to customize their care to their unique needs. Overtreatment of these individuals is a concern, as is the growing shortage of geriatricians—physicians with advanced training that prepares them to care for the most-complex seniors. Providing these adults with quality, patient-focused care is the mission of the American Geriatrics Society (AGS).

The AGS is a not-for-profit organization of more than 6,000 health professionals devoted to improving the health, independence, and quality of life of all older people. The society provides leadership to healthcare professionals, policy-makers, and the public by implementing and advocating for programs in patient care, research, professional and public education, and public policy. To achieve its mission, the society:

- Expands the geriatrics knowledge-base through initiatives that promote clinical and health services research regarding the health of older adults.
- Increases the number of healthcare professionals employing the principles of geriatric medicine when caring for older persons by supporting the expansion of geriatric education in all applicable health professions and promoting the development of systems of care and practice redesign that facilitates the provision of quality geriatric care.
- Recruits physicians and other healthcare professionals into careers in geriatrics through efforts to ensure that geriatrics is a viable, attractive, and rewarding career choice.
- Guides public policy through advocacy so that policy supports better health and health care for seniors.
- Raises public awareness of the need for high-quality, culturally sensitive geriatric health care so an empowered, proactive public can help drive improvements in the quality of care that older people receive.

One of the important ways the AGS advances this goal is by playing leading roles in developing best-practice...
guidelines and related resources that support geriatric research and clinical care. In 2011, for example, the society updated and expanded the AGS Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. The criteria are among the most-frequently consulted sources of information about safe prescribing of drugs for older people. Among other things, the revised and expanded edition makes it easier for clinicians to use by flagging medications that carry risks that may exceed their benefits for people aged 65 and older.

In addition to updating and expanding the Beers Criteria in 2011, the AGS revised the society’s Position Statement on the Use of Feeding Tubes in Advanced Dementia, and in 2012, it convened another expert panel that published a new guideline—Patient-Centered Care for Older Adults with Multiple Chronic Conditions: A Stepwise Approach from the American Geriatrics Society—which focuses on the care of older adults with multiple chronic conditions, who have greater risks of treatment side effects and interactions, as well as disability, institutionalization, and death.

In another recent undertaking, the society revised its diabetes mellitus guidelines. These guidelines were first published in 2003 in collaboration with the California Healthcare Foundation. A completely updated version is now available through the AGS portal, GeriatricsCareOnline.org. An abridged version—The American Geriatrics Society Guidelines for Improving the Care of Older Adults with Diabetes Mellitus: 2013 Update—was published in the November issue of the Journal of the American Geriatrics Society (JAGS).

In concert with the society, the AGS Foundation for Health in Aging (FHA) works to improve the health of and health care available to older adults. Among other things, the foundation publishes easily understandable articles and “tip sheets” for older people and their family caregivers based on new AGS research and guidelines. These resources are posted to the FHA’s public education website, www.healthinaging.org; visitors are welcome to customize and share these publications with others.

Since 2012, the AGS has also been collaborating with the American Board of Internal Medicine (ABIM) Foundation, joining its “Choosing Wisely” campaign, which is designed to engage healthcare organizations and professionals, individuals, and family caregivers in discussions about the safety and appropriateness of medical tests, medications, and procedures. Participating healthcare providers are asked to identify five things—tests, medications, or procedures—that appear to harm rather than help. Providers then share this information in a published article about these things on the ABIM campaign’s website (www.choosingwisely.org) (Table 1).

The ABIM Foundation first invited the AGS to join the campaign 3 years ago. At that time, the society identified an initial five things that it recommends against when caring for older adults, except in certain circumstances:

- Percutaneous feeding tubes in individuals with advanced dementia; instead, it advised offering oral assisted feeding.
- Antipsychotics as a first choice to treat behavioral and psychological symptoms of dementia.
- Benzodiazepines or other sedative–hypnotics for older adults as a first choice for insomnia, agitation, or delirium.
- Antimicrobials to treat bacteriuria in older adults, unless specific urinary tract symptoms are present.
- Medications to achieve a glycosylated hemoglobin level of less than 7.5% in most adults aged 65 and older, because moderate control is generally better for this age group.

The results of this first campaign were published in JAGS, and the FHA published a series of easily understandable articles for laypeople based on the JAGS Choosing Wisely publications explaining how older adults and their caregivers can use this information.

**METHODS**

Every participant in an ABIM Choosing Wisely campaign can request an opportunity to develop a second list of five things. The AGS did so and began working on it earlier this year.

The rules for participating were the same as before. The AGS was allowed to determine how to identify its “five things” as long as they met these criteria:

- Each of the five must be within the specialty’s purview.
- The tests and procedures must be frequently used in the specialty.
- Recommendations must be based on sufficient evidence.
- The process for making decisions was documented and could be available to the public if requested.

In February, the AGS reconvened the same Choosing Wisely Workgroup that developed its first list. As with the 2012 list, Paul Mulhausen, MD, vice-chair of the Society’s Clinical Practice and Models of Care Committee, headed the panel. To ensure that any conflict-of-interest concerns were addressed appropriately, workgroup members disclosed potential conflicts of interest at the beginning of the process.

After conducting preliminary research focused on tests and treatments commonly recommended for older adults, the workgroup surveyed the society’s members through its website (www.americangeriatrics.org) and in its weekly e-mail list, asking members what five things should be included in a list. The AGS then expanded the survey to others in the field through the Association of Directors of Geriatrics Academic Programs e-mail list (http://adgap.americangeriatrics.org), the GeriPal blog (www.geripal.org), and the POGoE website (www.pogo.org). The workgroup reviewed and identified the tests and treatments most often recommended for inclusion in the list and then narrowed the number of these to 10. Next, workgroup members consulted AGS members with expertise in these areas, discussing current research, clinical experience, and opinions concerning each. Based on these reviews and expert opinions, members of the workgroup then singled out the final second set of things.

The AGS’s second group of five things has been posted on the ABIM website (www.choosingwisely.org) and linked to the AGS websites (www.americangeriatrics.org and www.healthinaging.org). As part of this undertaking, the AGS and the FHA have created a series of online...
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<tr>
<th>Recommendation</th>
<th>Rationale</th>
<th>Citations</th>
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<tr>
<td>Initial list</td>
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<td>Do not recommend percutaneous feeding tubes in individuals with advanced dementia; instead offer oral assisted feeding.</td>
<td>Careful hand-feeding for individuals with severe dementia is at least as good as tube-feeding for the outcomes of death, aspiration pneumonia, functional status, and comfort. Food is the preferred nutrient. Tube-feeding is associated with agitation, greater use of physical and chemical restraints, and worsening pressure ulcers.</td>
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<td>Do not use antipsychotics as a first choice to treat behavioral and psychological symptoms of dementia.</td>
<td>People with dementia often exhibit aggression, resistance to care, and other challenging or disruptive behaviors. In such instances, antipsychotic medicines are often prescribed, but they provide limited benefit and can cause serious harm, including stroke and premature death. Use of these drugs should be limited to cases in which nonpharmacological measures have failed and individuals pose an imminent threat to themselves or others. Identifying and addressing causes of behavior change can make drug treatment unnecessary.</td>
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<td>Avoid using medications to achieve a glycosylated hemoglobin level &lt;7.5% in most older adults; moderate control is generally better.</td>
<td>There is no evidence that using medications to achieve tight glycemic control in older adults with type 2 diabetes mellitus is beneficial. In younger adults, except for long-term reductions in myocardial infarction and mortality with metformin, using medications to achieve glycosylated hemoglobin levels less than 7% is associated with harms, including higher mortality. Tight control has been consistently shown to produce higher rates of hypoglycemia in older adults. Given the long time frame to achieve theorized microvascular benefits of tight control, glycemic targets should reflect individual’s goals, health status, and life expectancy. Reasonable glycemic targets would be 7.0–7.5% in healthy older adults with long life expectancy, 7.5–8.0% in those with moderate comorbidity and a life expectancy &lt;10 years, and 8.0–9.0% in those with multiple morbidities and shorter life expectancy.</td>
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<td>Do not use benzodiazepines or other sedative-hypnotics in older adults as a first choice for insomnia, agitation, or delirium.</td>
<td>Large-scale studies consistently show that the risk of motor vehicle accidents, falls, and hip fractures leading to hospitalization and death can more than double in older adults taking benzodiazepines and other sedative-hypnotics. Older adults, their caregivers, and their providers should recognize these potential harms when considering treatment strategies for insomnia, agitation, and delirium. Use of benzodiazepines should be reserved for alcohol withdrawal symptoms and delirium tremens or severe generalized anxiety disorder unresponsive to other therapies.</td>
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<td>Do not use antimicrobials to treat bacteriuria in older adults unless specific urinary tract symptoms are present.</td>
<td>Cohort studies have found no adverse outcomes in older men or women associated with asymptomatic bacteriuria. Studies of antimicrobial treatment for asymptomatic bacteriuria in older adults demonstrate no benefits and show adverse antimicrobial effects. Consensus criteria have been developed to characterize the specific clinical symptoms that, when associated with bacteriuria, define urinary tract infection. Screening for and treatment of asymptomatic bacteriuria is recommended before urological procedures for which mucosal bleeding is anticipated.</td>
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<td>Second list</td>
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<td>Recommendation</td>
<td>Rationale</td>
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<td><strong>Don’t prescribe cholinesterase inhibitors for dementia without periodic assessment for perceived cognitive benefits and adverse gastrointestinal effects.</strong></td>
<td>In randomized controlled trials, some individuals with mild-to-moderate and moderate-to-severe Alzheimer’s disease achieve modest benefits in delaying cognitive and functional decline and decreasing neuropsychiatric symptoms. The impact of cholinesterase inhibitors on institutionalization, quality of life, and caregiver burden are less well established. Clinicians, caregivers, and patients should discuss cognitive, functional, and behavioral goals of treatment prior to beginning a trial of cholinesterase inhibitors. Advance care planning, patient and caregiver education about dementia, diet, and exercise, and nonpharmacological approaches to behavioral issues are integral to the care of patients with dementia, and should be included in the treatment plan in addition to any consideration of a trial of cholinesterase inhibitors. If goals of treatment are not attained after a reasonable trial (e.g., 12 weeks), then consider discontinuing the medication. Benefits beyond a year have not been investigated and the risks and benefits of long-term therapy have not been well established.</td>
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<td><strong>Don’t recommend screening for breast or colorectal cancer, nor prostate cancer (with the prostate-specific antigen (PSA) test) without considering life expectancy and the risks of testing, overdiagnosis, and overtreatment.</strong></td>
<td>Cancer screening is associated with short-term risks, including complications from testing, overdiagnosis and treatment of tumors that would not have led to symptoms. For prostate cancer, 1,055 men would need to be screened and 37 treated to avoid 1 death in 11 years. For breast and colorectal cancer, 1,000 patients would need to be screened to prevent 1 death in 10 years. For patients with a life expectancy under 10 years, screening for these three cancers exposes them to immediate harms with little chance of benefit.</td>
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<td><strong>Avoid using prescription appetite stimulants or high-calorie supplements for treatment of anorexia or cachexia in older adults; instead, optimize social supports, provide feeding assistance and clarify patient goals and expectations.</strong></td>
<td>Unintentional weight loss is a common problem for medically ill or frail elderly adults. Although high-calorie supplements increase weight in older people, there is no evidence that they affect other important clinical outcomes, such as quality of life, mood, functional status, or survival. Use of megestrol acetate results in minimal improvements in appetite and weight gain; no improvement in quality of life or survival; and increased risk of thrombotic events, fluid retention, and death. In patients who take megestrol acetate, one in 23 will die. The 2012 AGS Beers Criteria lists megestrol acetate and cyproheptadine as medications to avoid in older adults. Systematic reviews of cannabinoids, dietary polyunsaturated fatty acids (docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA)), thalidomide, and anabolic steroids, have not identified adequate evidence for the efficacy and safety of these agents for weight gain. Mirtazapine is likely to cause weight gain or increased appetite when used to treat depression, but there is little evidence to support its use to promote appetite and weight gain in the absence of depression.</td>
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<td><strong>Don’t prescribe a medication without conducting a drug regimen review.</strong></td>
<td>Older adults use disproportionately more prescription and nonprescription drugs than other populations, increasing the risk of side effects and inappropriate prescribing. Polypharmacy may lead to diminished adherence, adverse drug reactions, and increased risk of cognitive impairment, falls, and functional decline. Medication review identifies high-risk medications, drug interactions, and medications continued beyond their indication. Additionally, medication review elucidates unnecessary medications and underuse of medications and may reduce medication burden. Annual review of medications is an indicator for quality prescribing in vulnerable elderly.</td>
<td>53 54 58 98 99</td>
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RESULTS

Don’t Prescribe Cholinesterase Inhibitors for Dementia without Periodic Assessment for Perceived Cognitive Benefits and Adverse Gastrointestinal Effects.

Dementia is a progressive illness that leads to profound disability and total dependence on others. Many fear dementia more than death. Consequently, proposed treatment for dementia is eagerly sought. Unfortunately, there is no truly effective treatment for dementia.

The drugs most commonly prescribed for dementia—cholinesterase inhibitors—do not reverse underlying pathophysiology. At best, they modestly slow neuropsychiatric symptom progression in some people as measured using tests of cognition and behavioral function. This benefit is usually not apparent to the individual or their family. For other people, they provide no benefit and may distract attention from other important aspects of managing dementia, such as education, caregiver training, advance care planning, and behavioral approaches to management.

Moreover, cholinesterase inhibitors can cause troublesome side effects, including gastrointestinal dysfunction and anorexia in individuals who may lack the ability to perceive symptoms accurately and report them faithfully. Measuring the benefit of drugs that purport to slow the rate of progression of symptoms is difficult, given that those symptoms are expected to progress with or without drug treatment. This leads to the recommendation that goals of treatment be clearly specified in advance so that the treatment’s ability to stabilize symptoms can be better assessed.

If a benefit from cholinesterase inhibitors is not apparent within 12 weeks, it is not likely to occur. Evidence is lacking regarding any benefit of treatment for longer than 1 year.4–7

Don’t Recommend Screening for Breast or Colorectal Cancer, nor Prostate Cancer (with the Prostate-Specific Antigen Test) without Considering Life Expectancy and the Risks of Testing, Overdiagnosis, and Overtreatment.

Cancer screening can benefit people by detecting and treating cancers earlier—preventing future morbidity and mortality—yet cancer screening can also harm people if there are complications of screening (e.g., infection, perforation, anxiety, pain). Screening may also cause harm if it identifies or leads to the treatment of cancers that are unlikely to have caused symptoms before the individual’s death from other causes. Older adults are more likely to have multiple chronic conditions and functional impairments, which increases their risk of immediate complications and limits their life expectancy.8 For individuals with a life expectancy of less than 10 years, there is good evidence that screening for prostate, breast, and colon cancers exposes them to immediate harms with little chance of benefit.

In 2012, the results of two major randomized trials of prostate cancer screening interventions—the multicenter
European Randomized Study of Screening for Prostate Cancer (ERSPC) and the U.S. Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial (PLCO)—led the U.S. Preventive Services Task Force (USPSTF) to recommend against prostate-specific antigen (PSA)-based screening for prostate cancer.\textsuperscript{9,11} Neither study found a difference in overall mortality. Focusing on a subgroup of men aged 55 to 69, the ERSPC demonstrated that PSA screening in this age group was associated with a 21% lower relative risk of prostate cancer death after 11 years of follow-up, whereas there was no benefit for men aged 70 and older. The study indicated that 1,055 men would need to be screened and 37 to be treated to prevent a single death from prostate cancer in 11 years.\textsuperscript{10} Because prostate cancer treatments such as radical prostatectomy and radiation have a 20% to 30% risk of urinary incontinence and erectile dysfunction,\textsuperscript{12,13} many men would suffer substantial side effects to prevent a small number of prostate cancer deaths.

Based on these findings, the USPSTF concluded that “existing studies adequately demonstrate that the reduction in prostate cancer mortality after 10 to 14 years is, at most, very small, even for men in what seems to be the optimal age range of 55 to 69 years.”\textsuperscript{10} The American Urological Association, which had previously recommended PSA screening for all healthy men aged 40 and older, recently reversed its position. The panel now recommends individualized decision-making regarding PSA screening for men aged 55 and older, taking into account the modest likelihood of benefit and high risk of harm.\textsuperscript{14}

Similarly, research suggests that, for individuals who are not likely to live at least 10 years, the potential risks of colorectal and breast cancer screening outweigh the likelihood of benefit. A recent meta-analysis of large, high-quality, randomized clinical trials found that 1,000 people would need to undergo at least two rounds of fecal occult blood testing to prevent one death from colorectal cancer in 10.3 years.\textsuperscript{15} As a result, one in 10 of these individuals undergoing testing would have a false positive leading to colonoscopy. Serious complications, such as perforation, major bleeding, cardiovascular events, and death would occur in 3.1 per 1,000 individuals screened with colonoscopy.\textsuperscript{16} Consequently, it is particularly important to consider that colonoscopy has never been evaluated in a randomized controlled trial with colorectal cancer incidence and mortality as endpoints.\textsuperscript{17}

The same meta-analysis also examined survival data from four large breast cancer trials and found that, after 3 years, one death from breast cancer was prevented for every 5,000 women screened. After 10.7 years, one death was prevented for 1,000 women screened.\textsuperscript{15} Based on systematic reviews, one in 10 women screened will have a false-positive result, one in 100 screened will need a biopsy, and one in 1,000 will undergo unnecessary treatment for a cancer that would not have become clinically evident during her lifetime.\textsuperscript{18} A Cochrane review noted that, for every 2,000 women screened over a 10-year period, one would have her life prolonged, and 10 healthy women would be treated unnecessarily.\textsuperscript{19} No randomized, controlled trials of mammography screening have included women aged 80 and older,\textsuperscript{20} yet a healthy 80-year-old woman can expect to live another 13 years and could conceivably benefit from breast cancer screening.\textsuperscript{8} A cohort study of breast cancer outcomes in 2,011 women aged 80 and older found that 51% underwent mammography and that fewer than 2% of those potentially benefited by being diagnosed with early-stage disease and living at least 2 years after diagnosis, yet 12.5% experienced a burden from screening (e.g., additional testing), and nearly 10% of those screened died within 2 years, from other causes.\textsuperscript{20}

These data should be used to help women aged 80 and older understand the risks and benefits of screening mammography so that they can make informed, preference-based decisions. The burdens become more relevant for frail older women who have life expectancies of less than 5 years and for whom screening is therefore unlikely to result in a survival benefit. A study that followed 216 nursing home–eligible women after screening mammography found that 17% declined further examination because of comorbid illnesses, had false-positive results, or were diagnosed with clinically insignificant lesions.\textsuperscript{21}

There are substantial opportunities to improve decision-making related to cancer screening in older adults. A recent study that evaluated data from Department of Veterans Affairs and Medicare claims found that 45% of men with limited life expectancy (aged ≥85 with Charlson comorbidity scores ≥1 or aged ≥70 with Charlson scores ≥4) received PSA screening.\textsuperscript{22} There is similar evidence of overscreening for colorectal and breast cancer in older adults with limited life expectancy because of comorbidities such as severe dementia.\textsuperscript{23,24} Prognostic indices and online tool kits such as www.eprognosis.org and the ePrognosis cancer screening application (available for free at the Apple App Store) can help clinicians estimate prognoses and guide discussions with individuals and their caregivers about cancer screening.\textsuperscript{10,25}

Although people continue to believe in the effectiveness of cancer screening even in situations in which it is unlikely to benefit them,\textsuperscript{26} older adults and their families might make different choices if they were properly informed and given the opportunity to participate in shared decision-making.\textsuperscript{27}

Avoid Using Prescription Appetite Stimulates or High-Calorie Supplements for Treatment of Anorexia or Cachexia in Older Adults; Instead, Optimize Social Supports, Provide Feeding Assistance, and Clarify Patient Goals and Expectations.

Unintentional weight loss is a common problem in vulnerable elderly people. It is often associated with serious health consequences, including mortality.\textsuperscript{28} There are many potential explanations for abnormal weight loss in people aged 65 and older, but in the economically developed world, anorexia, cachexia, and sarcopenia are among the leading causes. Potentially reversible causes of unintentional weight loss in elderly adults include depression, adverse medication effects, and therapeutic diets.\textsuperscript{29}

Appetite-stimulating medications and high-protein and energy supplements are frequently prescribed for older adults with unintentional weight loss.\textsuperscript{30} Clinicians caring for these older people often feel pressure to recommend these pharmacological interventions and frequently provide them, but the evidence that these interventions are beneficial is weak at best.\textsuperscript{31}
A number of appetite-stimulating medications have been proposed for improving the health status of frail older people with abnormal weight loss. These medications include megestrol acetate (progestin), dronabinol (cannabinoid), mirtazapine (tetracyclic antidepressant), cyproheptadine (antihistamine), eicosapentaenoic acid (polyunsaturated fatty acid), and anabolic steroids. Megestrol acetate, mirtazapine, and dronabinol are widely used. Recent systematic reviews have provided considerable insight into the benefits and risks of pharmacological interventions used to treat unintentional weight loss in elderly adults, as well as other medical conditions. These reviews have generally found little or modest evidence of benefit and risk-to-benefit profiles that appear to be cause for concern.

Use of megestrol acetate results in small improvements in appetite and weight gain but no improvement in quality of life or survival. At the same time, it has been found to increase risks of thrombotic events, fluid retention, and death. One in four individuals who take megestrol acetate will experience an increase in appetite, one in 12 will have an increase in weight, and one in 23 will die. The AGS 2012 Beers Criteria list megestrol acetate among potentially inappropriate medications for older adults.

Although use of mirtazapine causes weight gain in elderly adults with depression, it is not clear whether it offers a significant advantage over most other antidepressants when weight loss is a predominant symptom. In addition, there is no high-quality evidence to suggest that mirtazapine is effective for weight gain in the absence of depression. The Food and Drug Administration has approved dronabinol for the treatment of anorexia associated with weight loss in individuals with acquired immunodeficiency syndrome, but a systematic review of its use in this indication concluded that evidence of its benefit is limited and that data to judge its effect on longer-term outcomes—such as survival—were lacking. Dronabinol has been studied to only a limited extent in geriatric care, and its pharmacokinetics have not been investigated in older adults. Its therapeutic benefit has not been clearly demonstrated in this population, and it consequently cannot be considered for routine treatment of unintentional weight loss in elderly adults.

Cyproheptadine was among the first pharmacological agents proposed for the treatment of unintentional weight loss in elderly adults, but demonstrated beneficial effects have been minimal, and it has not been evaluated as an appetite stimulant specifically in older people. Cyproheptadine has strong anticholinergic properties, can produce delirium, and is listed as a potentially inappropriate medication for use in older adults in the 2012 Beers Criteria.

High-quality systematic reviews of dietary polyunsaturated fatty acids (eicosapentaenoic acid and docosahexaenoic acid), thalidomide, and anabolic steroids have not found adequate evidence of the efficacy or safety of these agents for weight gain in late life or advanced progressive illness. In addition, they have been studied to a limited degree, or not at all, in elderly adults.

Although high-protein, high-calorie oral nutritional supplements present a convenient opportunity to address unintentional weight loss in older adults, rigorous efforts to demonstrate benefit have been disappointing. Some studies have demonstrated meaningful benefits in malnourished elderly adults, but the effects have been less clear in individuals with dementia or other progressive illnesses. A recent Cochrane Library systematic review concluded that oral nutritional supplements consistently produce small weight gains and may reduce mortality in undernourished older people, yet most of the studies of nutritional supplements have been considered to be of poor quality. There appear to be no clear improvements in other clinical outcomes, such as hospital length of stay, functional status, and mood.

When faced with older adults experiencing unintentional weight loss, physicians should focus early attention on diagnosing and addressing treatable causes. Strengthening social supports, ensuring adequate feeding assistance, improving mealtime ambiance, and reducing dietary restrictions are practical measures that may improve nutritional intake. Decision-making regarding feeding choices of elderly people with advanced, progressive illness can be ethically and emotionally difficult, but engaging individuals, their surrogates, or both in clarifying their treatment goals and expectations can increase their knowledge and reduce decisional conflict.

Don’t Prescribe a Medication without Conducting a Drug Regimen Review.

Older adults use prescription medications disproportionately more than the rest of the population, filling more than 20 unique medications annually. Using multiple medications increases an individual’s risks of receiving inappropriate medications, of having an adverse drug reaction, and of nonadherence to medication therapy. Polypharmacy may also lead to greater risks of cognitive impairment, falls, and functional decline. In addition, physiological changes that occur with aging may result in multiple alterations to the pharmacokinetics and pharmacodynamics of drugs, both of which increase the risk of adverse drug–drug and drug–person interactions.

Despite the risks of polypharmacy, nearly 20% of community-dwelling adults aged 65 and older take 10 or more medications—and this may be consistent with practice guidelines for just a few chronic conditions. At the same time, medications that may be of potential benefit to older adults are often underused because of the underestimation of benefit or perception of harm.

Medication review can disclose unnecessary medications, potentially harmful medications, and the underuse of medications. It can also reduce medication burden. Medication review can also provide an opportunity to discuss the individual’s goals of care and to match medication use to desired outcomes. Framing medication decisions within the individual’s life expectancy and his or her likely time to benefit from a medication may also help inform decisions related to medication burden and quality of life. In addition, annual review of medications is an indicator of quality prescribing for vulnerable elderly adults—and one that is being measured and publicly reported.

In summary, older adults are at risk of medication overuse and underuse, as well as potentially adverse drug reactions. Before prescribing a medication, healthcare
providers should complete a drug regimen review to minimize harm and optimize benefit.

**Avoid Using Physical Restraints to Manage Behavioral Symptoms of Hospitalized Older Adults with Delirium.**

Hospitalized older adults with delirium may exhibit behaviors that risk injury or interfere with treatment, putting them at markedly greater risk of being physically restrained. The use of physical restraints in long-term care facilities was effectively addressed almost 25 years ago through nursing home reform legislation resulting in a major reduction in physical restraint use in these facilities, but the use of physical restraints in acute care settings remains common. Accreditation and regulatory entities such as the Joint Commission and the Centers for Medicare and Medicaid Services (CMS) have since focused on restraint reduction strategies in acute inpatient settings, especially over the last 10 to 15 years.

The CMS definition of physical restraints is a useful one. It describes a physical restraint as any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the patient’s ability to move his or her arms, legs, body, or head freely. Common examples of physical restraints used with hospitalized individuals include wrist and leg restraints, chest and vest restraints, lap belts, mitts, lap trays, full-length side rails in upright positions, and even geri-chair recliners in full-tilted positions, which prevents individuals from leaving these chairs.

One recent study noted that the most commonly cited reason for using physical restraints is to prevent therapy disruption. Individuals are also restrained to “manage” their behavior and because they may be confused or at risk of falls. Although physical restraints are used with the intention of protecting people and preventing complications, evidence suggests that restraints are associated with myriad risks, complications, and poor clinical outcomes, including death. Risks associated with physical restraint use have been well documented and include discomfort, greater delirium and agitation, longer length of stay, pressure ulcers, infections, injury, and death by strangulation. Older adults with delirium, especially those in intensive care unit (ICU) settings, run higher risks of being physically restrained than those without.

Despite a greater emphasis on restraint-reduction efforts over the last 2 decades, restraint use in the acute care setting continues to be a fairly common practice, occurring with strikingly high variability across the United States and within institutions, depending on the type of unit. Nationally, older adults appear to be more commonly restrained than younger adults on general inpatient medical floors, although this was not found to be the case in a study of physical restraint use in ICU settings. In these settings, large numbers of older and younger adults appear likely to be restrained with more or less equal prevalence. Studies have reported overall physical restraint prevalence rates in the range of 50 per 1,000 patient-days overall in acute care hospitals, with the highest rates observed in ICU settings in the United States and in Europe. Although it is likely that differences in methodologies for measuring restraint prevalence between studies cause some of the variability in restraint prevalence, there is substantial variation in the use of physical restraint use within institutions and between medical centers across the United States.

It is likely that decreasing restraint use in hospitalized older adults will require greater attention to individual’s circumstances, employing multifaceted approaches directed toward falls prevention, bed modifications, the management of problematic behavior, and physical environment redesign. Although more research is needed to identify effective strategies to reduce the need for restraints, observational experience supports the use of approaches that prevent and treat delirium, identify and manage conditions causing discomfort, promote environmental modifications to orient individuals and facilitate effective sleep–wake cycles, and support frequent family contact and supportive interaction with staff. A recent study found that a multifactorial intervention employing diversionary activities for individuals exhibiting restlessness, volunteer activity assistance to engage with individuals at risk of needing restraints, and dedicated restraint-prevention nursing rounds were effective in reducing restraint prevalence on acute medical units. Another recent observational study showed that incorporating nursing education, innovative practice, and environmental changes was also effective in implementing a restraint-free approach to individuals with delirium. This approach involved using continuous observation, trying reorientation once but discontinuing it if it was not initially effective, observing behavior to obtain clues about individual’s needs, discontinuing or hiding unnecessary medical monitoring devices or intravenous lines, and avoiding agitating the individual further by refraining from asking short-term memory questions. In this study, pharmacological interventions were occasionally used after an evaluation by a medical provider at the bedside—if an individual appeared likely to do harm to himself, herself, or others.

Overall, it is recommended that a thoughtful approach be used to the behavioral management of delirium by employing true geriatric assessment principles that optimize patient functioning, comfort, and dignity and by taking the least-restrictive approach. More-rigorous study is sorely needed to further elucidate best practices in managing hospitalized individuals with delirium and agitation and to identify effective alternatives to restraint use in hospitalized older adults.

**CONCLUSION**

After its initial contribution to the ABIM Choosing Wisely campaign in 2012, the AGS has identified this second group of five things that older adults should discuss with their healthcare providers and, when appropriate, their family members or other informal caregivers before taking tests or undergoing treatments.

Since 2011, the ABIM has been inviting medical and related societies to identify commonly used diagnostic tests, medications, and procedures in their fields and to report their safety and appropriateness. These organizations then publish this information, post it on the ABIM website (www.choosingwisely.org), and further disseminate it through their own sites and publications. The idea is to
make this invaluable information widely accessible so that individuals, healthcare providers, and others can consult, discuss, and make wise decisions regarding these choices.

The ABIM campaign and its findings are invaluable resources for healthcare providers who care for older adults given the high prevalence of acute and chronic illness in this cohort. The approaches to care that Choosing Wisely promotes—the sharing and discussion of information that is presented in an easily understandable manner and the emphasis on ensuring that the individuals wishes are respected—are in keeping with important tenets of geriatrics care.

While there has been significant progress in the care of older adults, a more complete evidence base for these patients—who continue to be underrepresented in clinical trials—is needed. As this article notes frequently, there have been few clinical trials including participants aged 65 and older, so evidence of the treatment of common acute and chronic conditions in older adults is limited. With the rapidly growing ranks of adults aged 65 and older, and with half of these individuals with multimorbidity, a continued focus on these challenges is essential.

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Sponsor’s Role: AGS staff participated in the final technical preparation and submission of the manuscript.

REFERENCES


APPENDIX A: AGS CHOOSING WISELY WORKGROUP

Workgroup members were Audrey Chun, MD; Ariel Green, MD, MPH; Arthur Hayward, MD; Sei Lee, MD, MCR; Bruce Leff, MD, AGSF; Matthew McNabney, MD; Pushpendra Sharma, MD, CMD; and Caroline Vitale, AGSF. In addition, the society convened an advisory board including Roseanne Leipzig, MD; Sharon Levine, MD; and David Reuben, MD, and consulted with this group throughout the process. Additional content experts included in the process were Nicole Brandt, PharmD, CGP, BCPP, Elizabeth A. Capezuti, MD, Thomas Finucane, MD, Jessica Lee, MD, Sunny Linnebur, PharmD, FCCP, BCPS, CGP, Joseph Shega, MD, and Rebecca A. Silliman, MD, PhD.