Unique Challenges in the Treatment of Older Patients with Vasculitis

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Dear Colleagues:

Deciding where to send your patients who need comprehensive geriatric care can be difficult. Our goal in Cleveland Clinic’s Center for Geriatric Medicine is to serve as a central resource for geriatric and gerontological clinical, educational and research activity throughout the Cleveland Clinic Health System. Our center coordinates programs and advises and assists clinicians through a system of eight hospitals and 18 family health centers. We are eager to assist and educate physicians, nurses, therapists, social workers, other clinical health providers and caregivers in improving the care of the oldest and frailest members of society.

This year we initiated a new Geriatric Falls Clinic. We paired our geriatric advanced practice nurse Anne Vanderbilt, MSN, APN, CNP, with a physical therapist and our clinical assistant. Their multidisciplinary assessment is based on the 2010 American Geriatrics Society guidelines and includes screening of vision, medical conditions, polypharmacy, urinary concerns, nutritional status, cognition, depression, physical function, balance and strength. If appropriate, they can recommend a physical therapy program tailored to the patient's needs. A joint letter addressing the above concerns is sent to the patient and the referring physician. We plan to describe outcomes from our clinic in a future issue of Geriatric Times.

In this issue, we describe our pharmacological approach to treating osteoporosis, concerns that need to be addressed when treating vasculitis in older adults, efforts toward polypharmacy reduction, our evolving definition of Alzheimer’s disease, non-pharmacological interventions in cognitive health research, end stage kidney disease and dialysis, the impact of changes in the older adults’ immune system on infection and vaccination, voice disorders in the elderly, decreasing hospital admissions through distance monitoring, and others. These articles represent a small sample of the work we do every day to help make a real difference in the quality of our patients’ lives.

We look forward to continuing our partnership with you. Please don’t hesitate to contact me with any questions, concerns or suggestions on how we might improve our services to you and your patients in the future at 216.444.5665.

Kind regards,

Barbara Messinger-Rapport, MD, PhD
Director, Center for Geriatric Medicine
Cleveland Clinic Medicine Institute
The way that geriatricians are defining and diagnosing Alzheimer’s disease (AD) is in the process of profound change. Spearheading this transformation is the staff at the architecturally spectacular Cleveland Clinic Lou Ruvo Center for Brain Health, which opened in Las Vegas in July 2009.

Until recently, the criteria for a diagnosis of AD were somewhat narrow, with attention focused mainly on the dementia aspect. But thanks to innovations in imaging technology and biomarker detection, we now understand that the scope of AD is wider than we had imagined. Specifically, we have learned that AD develops long before the onset of symptoms.

“In the past few years, we’ve come to realize that the symptoms leading to the diagnosis of Alzheimer’s disease may actually be a late manifestation of the disease,” says Jeffrey L. Cummings, MD, Director of the Lou Ruvo Center for Brain Health and coauthor of the widely used textbook *The American Psychiatric Publishing Textbook of Geriatric Neuropsychiatry*, the third edition of which has just been released. “Now we know that AD is present for about 10 years before the patient begins to manifest the symptoms that meet our criteria for Alzheimer’s dementia.”

An expanded definition of AD was originally proposed in 2007, and just this year the description was refined. According to the new definition, AD is subclassified into three phases: the clinically asymptomatic phase, the prodromal phase (also known as “mild cognitive impairment”) and the dementia phase.

“During the clinically asymptomatic phase, patients function normally, but we can determine by the presence of various biomarkers that AD is present,” Dr. Cummings explains. “After approximately 10 years, patients enter the prodromal, or pre-dementia, phase. This is the period when patients begin to notice signs of memory impairment. Finally, as the disease progresses, patients enter the dementia phase that we are all so familiar with.”

According to Dr. Cummings, the expansion of the definition to include the clinically asymptomatic and prodromal...
phases has raised the number of patients who can be classified as having AD from 5 million to roughly 10 to 12 million.

Breakthroughs in Biomarker Detection
The expanded definition came about as the result of the development of detection methods for certain biomarkers — particularly amyloid. Amyloid is a protein that is deposited in the brain and is reduced in the cerebrospinal fluid of AD patients. These changes are pathognomonic. Until now, it was detectable only at autopsy. Researchers have been concentrating on two different ways of detecting amyloid: radiologically and serologically.

IMAGING. Prior to the refinement of amyloid imaging, the standard brain imaging modalities for patients with AD were magnetic resonance imaging (MRI) and glucose metabolism imaging. The advantage of amyloid imaging is that it is much more specific.

But when amyloid is found in the brain, there are very few possibilities other than Alzheimer’s disease that would explain its presence in an otherwise healthy elder.

“MRI may detect shrinkage of the memory areas of the brain, but there are many reasons why your brain could shrink,” Dr. Cummings explains. “Brain glucose metabolism imaging identifies metabolic patterns in the brain, but again, there are other problems that can alter glucose metabolism of the brain, such as seizure foci, frontotemporal dementia, movement disorders, and oncological processes in the brain. But when amyloid is found in the brain, there are very few possibilities other than Alzheimer’s disease that would explain its presence in an otherwise healthy elder. Amyloid imaging is a new and exciting technology.”

While the approval of amyloid imaging by the FDA seems imminent, its use in asymptomatic patients can be controversial. “This is a tricky issue,” says Dr. Cummings. “It raises an important question: Do you want to know that you have Alzheimer’s disease if there’s nothing you can do about it? That’s a dilemma that we have to discuss and deal with.”

BLOOD TESTING. Studies on developing a blood test for amyloid are still in their infancy, but some early results are promising. At the Alzheimer’s Association International Conference this past July, Australian researchers were the first to report positive results with their blood test.

“There has been a lot of discussion about that study, but the results need to be confirmed by more observations and by other laboratories,” Dr. Cummings cautions.

“At the Lou Ruvo Center, we are working with a French company to develop a different approach to blood-based diagnosis. We’ve just applied for our Institutional Review Board approval.

“A blood test would be very useful, of course, because it is obviously much more convenient, much more available and much less expensive than imaging studies,” Dr. Cummings continues. “It could serve as a gateway test that would allow us to screen a much larger number of patients and help us determine who might benefit from imaging.”

Cleveland Clinic Initiatives
The expansion of the definition of AD comes at a time when Cleveland Clinic is expanding its own role in geriatric care.

“We have begun to develop an integrated network of clinical services and research activities throughout Cleveland Clinic,” Dr. Cummings explains. “Among these programs under development are the Brain Health Initiative and the Center for Brain Health Knowledge Program.”

The Brain Health Initiative is a coordinated, multidisciplinary plan that combines elements of diet, physical exercise, mental exercise and lifestyle counseling to optimize brain health for older patients. “For example,
one of its components is a memory-testing exercise that can identify people who are beginning to undergo brain changes so that they can be referred for a more targeted clinical evaluation.”

The Knowledge Program is a software-based electronic medical record that is being customized for dementia patients. It helps clinicians conduct patient interviews by prompting them with a standardized set of questions and suggesting avenues of inquiry. “The goal here is to make sure that every patient who is being evaluated receives the same high-quality assessment. It’s a way of ensuring that nothing is overlooked. Once we perfect it internally, we plan to make it available to institutions and community practitioners throughout the world. We hope to take the next step by the end of the year.”

Treatment Trials Need Patient Referrals
In terms of therapeutic advances, the focus is on “translational research,” which represents an effort to translate scientific findings into everyday benefits. Several studies are being conducted on various antibodies directed at amyloid, including one that contains a neuroprotective compound that might actually prevent Alzheimer’s dementia rather than just slow it.

“That is a very exciting new way of thinking about therapy,” says Dr. Cummings. “And it’s a strong justification for identifying populations of patients with early AD, which explains why the expanded definition of AD is so important. We’re just in the planning stages for the first trials that will enroll people who are completely asymptomatic but who are at high risk for AD.”

Unfortunately, research in AD has been slowed by the lack of an adequate number of patients to populate clinical trials, a fact that Dr. Cummings hopes he and his staff can change. “Patient recruitment is the slowest part of all drug development studies,” he says. “I don’t think you could find a single example of a clinical trial that finished on time. I would ask all primary care physicians to consider referring their AD patients for clinical trials. In most cases, the drugs and the imaging are free of charge. Patients hold the key to discovering new therapies, and we need to test them. Getting patients involved in clinical trials is a very critical part of what we’re doing to develop urgently needed new therapies.”

Dr. Cummings, Director of the Lou Ruvo Center for Brain Health in Las Vegas, can be contacted at 702.483.6031 or cumminj@ccf.org.
Geriatric patients who are diagnosed with vasculitis can face challenges from not only the disease itself but also its treatment. Implementing management strategies that recognize the unique needs of older patients with vasculitis is a critical part of their care.

Vasculitis, or blood vessel inflammation, is a histologic characteristic shared by a family of uncommon diseases. The approach to vasculitis in people of all ages is directed toward ascertaining the diagnosis, often through biopsy or arteriogram, together with assessing severity and sites of involvement, all of which influence treatment. The etiology of most forms of vasculitis is not known, and therapy usually consists of immunosuppressive medications. Although there are no differences in the medications used to treat vasculitis in geriatric patients compared with their younger counterparts, geriatric vasculitis management is more likely to be complicated by risk of infection, bone fragility, and comorbidities such as diabetes, hypertension, chronic renal insufficiency, COPD and cancer. Complete care of the geriatric patient with vasculitis must take into account not only the vasculitis itself but how factors common in older life may impact treatment and outcome.

Giant cell arteritis (GCA) occurs exclusively in people over the age of 50. It is most commonly recognized by its cranial symptoms of headache, jaw or tongue claudication, scalp tenderness and risk of vision loss. Systemic inflammatory features can be prominent in GCA and include fevers, night sweats, weight loss, elevated sedimentation rate and C-reactive protein. Other manifestations are polymyalgia rheumatica with aching in the shoulder and hip girdles and large vessel vasculitis with thoracic aortic aneurysms and subclavian artery stenosis. Although an abnormal temporal artery biopsy secures the diagnosis of GCA, biopsy can be falsely negative in some patients.

The foundation of treatment for GCA is high-dose glucocorticoids, typically consisting of prednisone 40 to 60 mg daily. While such treatment reduces symptoms and, more important, protects vision, the side effects of high-dose prednisone can be substantial in older individuals, with the number one concern being infection. Prednisone can also cause proximal myopathy, further compromising mobility in older patients and increasing their risk of falls. The potential for fracture from a fall is further intensified by prednisone-induced bone loss. Prednisone can unveil diabetes or complicate glycemic management in known diabetics. Prednisone also increases blood pressure and accelerates cataract formation. Older patients may be particularly sensitive to cognitive complications of prednisone that can range from mood swings to frank psychosis.

Although many prednisone side effects cannot be prevented, steps can be taken to minimize these toxicities and their consequences. Making sure that older patients are up to date on non-live immunizations, particularly the pneumococcal and influenza vaccines, is important. Discussion of infection symptoms and reporting can allow prompt treatment should this occur. Screening for diabetes and instituting early treatment may avert glycemic complications. Proactive bone monitoring with annual bone density testing, measurement of and treatment with vitamin D, and both pharmacological and non-pharmacological interventions to correct or prevent bone loss are essential. Patients should have a regular assessment of muscle strength performed and a review of strategies to prevent falls.

Vasculitis can also affect small blood vessels with important diseases in older patients including granulomatosis with polyangiitis (Wegener’s)(GPA) and microscopic polyangiitis (MPA), where studies from Europe have found the average age of onset to be in the 60s. These multisystem diseases can be immediately life threatening and can involve the sinuses, lungs, nerves, eyes, skin and kidneys, which can lead to renal failure. A high percentage of...
patients with GPA/MPA have antineutrophil cytoplasmic antibodies (ANCA). Their diagnostic value depends on the clinical scenario, and up to 20 percent of patients may be ANCA-negative. Because of this, biopsy continues to play an important role in diagnosis for many patients with GPA/MPA.

Outcome studies have shown that GPA/MPA patients over 65 who have renal failure have a less favorable prognosis due not only to the disease but also the impact of treatment. Initial treatment of GPA/MPA consists of high-dose glucocorticoids in combination with cyclophosphamide or rituximab for severe disease or methotrexate for eligible patients with non-severe disease. In addition to the risks of high-dose prednisone, concurrent immunosuppressive agents further increase the risk of serious infection from both bacterial and opportunistic pathogens. Cyclophosphamide, methotrexate and most other conventional immunosuppressives carry the potential for bone marrow toxicity. In older patients, bone marrow

Caring for a Frail Elder Is a Delicate Balance of Meeting Psychosocial Needs and Treating Disease

Physicians balance complications of vasculitis treatment with difficulties of leaving the home.

Hattie Gaines, a 79-year-old retired clerical worker, had been living independently in the community until recently. During the six months prior to May 2011, she had two hospitalizations and required extended rehabilitation that did not give her back her independence.

This past May, she was diagnosed with a small vessel vasculitis and was started in the hospital on immunosuppressive therapy. She and her caregiver niece, Mary, had multiple concerns at that time, including the ability to continue to live in the community, challenges of taking multiple medications, risks for osteoporosis, management of pain, mild cognitive impairment, delirium, risk of infection and other concerns.

Hattie was seen by geriatrics for an inpatient consultation and, with the help of the admitting physician and the hospital case manager, developed a home plan that included home health care starting in June 2011 and a Cleveland Clinic visiting geriatrician, Ethel Smith, MD, starting in July 2011. Although the first few weeks were rocky in terms of coping with her pain, Hattie’s care team started her on duloxetine and gabapentin for pain, cyclophosphamide for the vasculitis, prophylactic antibiotics, and a challenging course of therapy in the home.

At this point she is doing better, although she is still frustrated by the limitations in mobility that she has now compared with a year ago. However, she recognizes that she has less pain and more mobility than a few months ago, and she is managing to stay in the community.
reserve may be diminished and the risk of cytopenias is higher. Some medications are eliminated by the kidneys and require dose reduction or may be contraindicated in patients with renal insufficiency. Close monitoring of blood and urine tests, frequent physician visits to look for side effects, as well as verbal and written education with the patients and their caregivers regarding side effects are essential to protecting patient safety.

Cutaneous vasculitis is the most common vasculitic manifestation encountered in all people. Cutaneous vasculitis typically manifests as palpable purpura, usually on the lower extremities or gravity-dependent areas, with other appearances including nodules, chronic urticaria or ulcerations. Even lesions that look typical for cutaneous vasculitis should be biopsy-proven as there are important mimics. Cutaneous vasculitis can be seen in a systemic vasculitic or connective tissue disease and also secondarily to a medication, infection or malignancy. In about 30 percent of patients, an idiopathic cutaneous vasculitis is present in which the vasculitis is isolated to the skin and no underlying cause can be found.

Upon diagnosis of cutaneous vasculitis, involvement of other organs should be ruled out through physical examination, measurement of renal function, urinalysis and a chest radiograph. Many medications can be associated with a cutaneous vasculitis, and the common prescription of antibiotics, cardiac medications and antihypertensive agents in older patients enhances their potential risk. A thorough medication history should be taken, emphasizing recent changes and including over-the-counter and dietary/herbal supplements. The consideration of additional testing must be individualized but often includes autoimmune testing such as antinuclear antibodies (ANA), rheumatoid factor, ANCA, cryoglobulins, complement levels, serum protein electrophoresis, and hepatitis B and C antibodies. Age- and gender-appropriate malignancy screening should be updated, and any patients with features concerning for malignancy should have these pursued. If an underlying disease or trigger is found, management of the cutaneous vasculitis is directed toward removal or treatment of the underlying cause. For idiopathic vasculitis, aggressive immunosuppression should be avoided and management should focus on using the least toxic effective approach.

The vasculitides are treatable diseases in which excellent outcomes can occur. In older patients, outcome is influenced by the impact of comorbid illnesses on the vasculitis and its treatment, enhanced risk for medication toxicities, and the consequences of those toxicities. Recognition of these issues, proactive monitoring and patient education all play an important role in the care of geriatric patients with vasculitis.

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Rheumatologist Carol A. Langford, MD, MHS, specializes in vasculitis and is Director of Cleveland Clinic Center for Vasculitis Care and Research. For more information or to refer a patient, please contact Dr. Langford at 216.445.6056 or langfoc@ccf.org.
A elderly woman went to the hospital again and again. She kept going back because of reoccurring abdominal pain. During a house call, Steven Landers, MD, MPH, realized that the woman’s memory and vision were so poor that she didn’t notice the mold covering her food — she was eating spoiled and burnt food.

Physicians often hear stories like this about geriatric patients. Confusion about medicine, unhealthy living conditions and failure to follow up with physicians can all contribute to patients reentering the hospital after an initial stay. With the proper intervention, rehospitalization can be avoided. Cleveland Clinic Home Health has made decreasing readmissions a priority, and with good reason — rehospitalization often leads to further health complications and costs billions of dollars.

“Unsafe housing, inadequate care and dementia — all tend to cause unnecessary readmissions,” says Dr. Landers, Director of Cleveland Clinic Center for Home Care and Community Rehabilitation.

Cost of Readmissions
A seminal study published in 2009 highlights the high cost of hospital readmissions among the elderly. Analyzing 2003-2004 Medicare claims data, Stephen F. Jencks, MD, MPH, et al. looked at rehospitalization rates of nearly 12 million patients. Patients who were readmitted to hospitals cost an estimated $17.4 billion of the total $102.6 billion paid by Medicare that year.

Almost 20 percent of patients reentered the hospital within 30 days of discharge; 34 percent returned within 90 days. A whopping 56.1 percent reentered the hospital within 365 days. Of those patients who were discharged with a medical condition, 68.9 percent either died or were readmitted to the hospital within a year; of those who were discharged after surgery, 53 percent died or were rehospitalized within a year. Of all the patients, only half followed up with their physician after discharge.

Distance Health Monitoring
In 2010, under Dr. Landers’ direction, Cleveland Clinic expanded its home health services by creating a new program specifically for patients recovering from cardiac problems. The transitional Heart Care at Home program targets patients 55 years and older who have had a heart attack, heart failure or heart surgery. These patients tend to be sicker and at higher risk for rehospitalization.

A nurse visits these patients within 72 hours of their leaving the hospital. The nurse helps set up telehealth equipment that is monitored by a nurse manager in the call center to ensure that the patient’s vital signs are within a healthy range.

Health issues are addressed before they become serious enough to require rehospitalization. Nurses and nurse practitioners visit the homes of patients in need of more care and provide health coaching, covering such information as how to take medications properly. Patients also participate in weekly health-coaching phone calls that give important information about how to maintain their health. Heart Care at Home monitors patients for about 30 days, assuring that they are well on their way to recovery.

“The combination of the liaison and the coaching interaction is a great recipe,” says Dr. Landers. “We’re able to focus on physician follow-up, medication management, self-management tasks and using a personal health record. Patients like the coaching, the connectivity of the monitoring and the security as they transition from the hospital.”

Heart Care at Home also serves patients who are released to skilled nursing centers. A transitional care nurse practitioner visits the patient within 72 hours of hospital discharge and visits weekly to confer with the medical team, providing patients with much-needed wraparound services.

For more information on Cleveland Clinic Home Health, please contact Dr. Landers at 216.636.8742 or landers@ccf.org.
More Elderly Patients Are Seeking Help for Voice Disorders
Advanced Voice Treatments Improve Quality of Life

As people age, their voices change. We can all recognize an elderly person by his or her voice, which tends to be weaker, breathier and have pitch alterations. Some individuals show earlier or more pronounced changes than others, but, in general, these are common changes that occur as we age.

Speech scientist Claudio Milstein, PhD, a staff member of Cleveland Clinic Head & Neck Institute, says in the last 10 to 15 years his specialty is seeing a greater frequency in the number of referrals of elderly patients for voice problems. Dr. Milstein is a member of the Cleveland Clinic Voice Center team, and he has been actively involved in the clinical management of voice patients for more than 20 years.

“In recent years there has been an increase in the vocal demands of our nation’s elderly population, as many individuals remain in the workforce and maintain active social lives well past the age of 65,” says Dr. Milstein. “This can be an issue as the vocal folds age and several changes occur in our bodies.”

Overall fatigue and lack of energy can result in a tired and weak voice, and concurrent diseases or disorders can have a major impact on a person’s vocal abilities. In the normal aging process, the laryngeal cartilages become ossified, and the tissues and membranes become stiffer. In addition, there is loss of muscle mass — or vocal fold atrophy — and loss of muscle tension, resulting in bowing of the vocal folds. These factors can result in what is called “glottic incompetence,” with weak and breathy voices. Changes also occur in the power source (the breathing apparatus). Rib cage cartilages calcify, there is a decrease in the size of the lungs and thorax, and, with decreased elastic recoil, the lungs become stiff. Decreased breathing ability can compound further weakening in the voice.

It is important, Dr. Milstein points out, when examining elderly patients who complain of voice problems to distinguish whether they are primarily the result of aging or whether an illness is causing or exacerbating the problems. The patient may be dehydrated due to a certain drug or feel weak from another medical condition that impacts voice strength.

When elderly patients with voice problems visit Dr. Milstein, he has them fill out a Voice Handicap Index to determine how badly the voice problem is impacting their lives. He conducts a full voice evaluation that includes videoendoscopic and stroboscopic examinations to determine the status of the vocal folds.

“Having voice issues can profoundly impact quality of life,” says Dr. Milstein. “With a decreased ability to communicate, people will often stop participating in activities they enjoy, which may lead to decreased social interactions and less support. This can often leave people isolated and depressed.”

Dr. Milstein says that many elderly patients complain that they can’t be heard on the phone or have trouble talking in places where there is background noise, such as restaurants or social gatherings. And many express frustration that they have had to stop singing, whether at church or in a choir. “This can affect their spiritual support and can be a real concern,” says Dr. Milstein. “In the past, we thought of voice issues as a normal part of the aging process, and the mind-set was that people just had to learn to live with it. This is not the case today. We have advanced treatments that can greatly improve a person’s voice quality as he or she ages.”

Treatments for Age-related Hoarseness

There are three main treatment options for voice disorders in the elderly. The first course of action is voice therapy conducted by a speech pathologist with expertise in voice disorders. This noninvasive treatment has proven to be highly effective. For patients with mild to moderate voice disorders, voice therapy often leads to significant improvements in voice quality. Voice therapy can be done in isolation or concurrent with surgical treatments.
In patients for whom therapy is not sufficient, there are surgical options. An injection laryngoplasty — which can be done in the office or in the operating room and does not require any incisions — involves injection of a filler such as fat, calcium hydroxylapatite, collagen or another derivative, into the vocal folds. This procedure has proven successful for many patients, but it is not permanent. The materials are eventually resorbed by the body, and the patient may need to repeat it. Dr. Milstein notes that in-office injections are a good approach for elderly patients for whom a more involved surgical procedure is contraindicated.

Another surgical option is a medialization thyroplasty, in which an implant that is placed through a window cut on the side of the thyroid cartilage provides bulk for a vocal fold that is atrophied, bowed or thin. The most common materials used for implants are Gore-tex® and Silastic®. This procedure has also proved successful for the right patients.

“The goal of these treatments is to help our elderly patients have improved vocal quality so they can communicate better,” says Dr. Milstein. “Stronger voices make patients feel more confident. If they feel better and can be social again, it greatly improves their quality of life well into their later years. And it is well worth the effort.”

Data from an epidemiology study show that up to 47 percent of the general population will experience a voice disorder during their lifetimes and 29 percent of the elderly population is currently dealing with a voice disorder. However, just 14 percent of elderly people with voice problems have sought professional help to improve their voice quality. Dr. Milstein encourages people at any age to step forward and get help with these effective treatments.

To refer a patient to Dr. Milstein for evaluation at Cleveland Clinic Voice Center, please call 216.444.6691 or email him at milstec@ccf.org. For more information, visit clevelandclinic.org/head_neck/patients/voice_center.
The over-65-year-old population is expected to double over the next 20 years. End stage kidney disease (ESRD), defined as the irreversible decline in kidney function to the point where dialysis or transplantation has occurred to support life, is increasing in the population at a steady rate. The incident rate in the over-75-year-old population has increased more than that of any other group: a 9.4 percent increase in incidence since 2000, to a rate of 1,718 per million population (Figure 1). Comparatively, the incident rates have declined for those aged 45 to 74 years. Currently there are almost 6,000 cases of ESRD per million in the over-65-year-old population. It is crucial that healthcare professionals become more familiar with the impact of kidney failure on their older patients.

Dialysis is typically performed by one of two techniques: hemodialysis (HD) or peritoneal dialysis (PD). Hemodialysis is performed roughly 10 times more often than peritoneal dialysis in the United States. Geriatric patients in particular, due to frailty, may be less capable of performing home dialysis (either hemodialysis or peritoneal), necessitating in-center treatments. Only 3 to 5 percent of all incident patients over age 65 will utilize PD.

Geriatric patients are more ill with more comorbidities — 3.5 chronic illnesses on average. This translates into more and longer hospital admissions and higher 1-year mortality rates. Survival rates in

Figure 1: Incidence of ESRD in 75+ age 1990-2008

Figure 1: Counts of new ESRD patients over 75 years of age. Adapted from reference tables of United States Renal Data Systems annual data report, 2010.
dialysis in general are approximately 25 to 30 percent the average life years remaining without kidney disease, and this proportion exists for the elderly patient as well.

For example, the mean life expectancy for a typical 75-year-old is about 12 years for a woman and 9 years for a man. The average life expectancy for a 75-year-old on dialysis is thus 2.5 to 4 years. For the “old-old,” where a 90-year-old man has a 3-year life expectancy and a 90-year-old woman has a 4-year life expectancy, dialysis survivors may live only 1 to 1.5 years.

Additionally, recent studies examining the function of older adults following initiation of dialysis, whether in the community or in the nursing home, have not shown an improvement in function. Primary care providers and their patients may have inappropriately high expectations in terms of function and survival of their elderly patients. Dialysis does not appear to improve function in the old-old and does not restore the life expectancy. However, dialysis can help manage severe fluid and electrolyte imbalances, prevent symptom-associated hospitalizations and potentially provide palliation. These benefits have to be balanced against the burden of dialysis and the frequent line infections seen in this population.

For an old-old patient, a “time limited” trial of dialysis is an option so that if complications arise that impact the quality of life, or symptomatic improvement does not occur, dialysis can be withdrawn. Many hospice providers will also continue to allow dialysis as long as the primary cause of death is not renal disease, and in selected cases this may offer symptom control and keep patients more comfortable.

The type of vascular access has a profound impact on the survival of dialysis patients. Arteriovenous fistulas are typically associated with the best survival, although optimizing the benefit requires fistula maturation time. The needed lead time, plus the higher rate of primary access failure in the elderly patient, should prompt early creation of the fistula well ahead of predicted time of dialysis initiation. The DOPPS trial, which was an international observational trial of dialysis practice patterns, reveals markedly higher rates of fistulas in countries outside the U.S. and suggests that the elderly dialysis patient can successfully be initiated and treated with a fistula.

The choice of dialysis technique is largely driven by comorbidities, functional ability of the patient and personal choice. After education, a large percentage of patients

![Figure 2: Patients over 65 added to transplant list vs. kidney transplants](image-url)
would choose PD; however, much fewer patients actually initiate on that therapy. The reason for this discrepancy is not entirely known. Older dialysis patients may have concomitant conditions that impair the function of the peritoneal membrane, such as diverticulitis, or chronic constipation. Also, elderly patients may have functional or cognitive impairments, necessitating a caregiver prepared to offer a significant time commitment to assist with PD.

“Assisted” automated peritoneal dialysis, where contracted help (such as visiting nurses) can assist with peritoneal dialysis connection and disconnection, has also been gaining in popularity, although it has regional availability. Assisted automated PD could extend the utilization of peritoneal dialysis to additional older adults.

Patients over 65 years have been increasingly added to the transplant wait list (Figure 2), although data suggest that over half of these patients will not survive to transplantation. Transplant center criteria vary for age, with some having an absolute ceiling at or above which they will not offer transplantation; some have differing criteria depending on availability of a living donor, and others evaluate each patient individually. Despite age, some patients with ESRD and relatively low comorbidity, preserved functional capacity and the ability to adhere to complex medical regimens may realize the benefits of transplantation in terms of life years gained and improved quality of life. Although elderly patients have a lower risk of acute rejection, they are more likely to have longer hospital stays and a higher incidence of infections. If patients qualify for transplantation, despite the inherent selection bias, they will usually realize a mortality benefit over a 5-year period (Figure 3).

In summary, the geriatric patient population has the highest incidence rate of ESRD. These patients have a high comorbidity index, with a high prevalence of chronic diseases such as diabetes and congestive heart failure. The survival of elderly dialysis patients, regardless of modality, is poor; dialysis has also not been shown to improve function in the old-old. However, dialysis may offer the patient alleviation of target symptoms, such as fluid overload, and prevent hospitalizations. Dialysis may provide symptom palliation for selected hospice patients. Kidney transplantation is increasingly being offered to older recipients, as evidenced by an increasing number of wait-listed transplant candidates. Those eligible for transplantation may appreciate an increase in life years compared to dialysis.

Richard Fatica, MD, is Medical Director of Kidney Transplantation at Cleveland Clinic and Medical Director of Willoughby-Fresenius Dialysis in Willoughby, Ohio. For more information on ESRD, please contact Dr. Fatica at faticar@ccf.org; to refer a patient to Dr. Fatica, please call 216.445.9953.
Identification of Polypharmacy in the Continuum of Care

Systematic Medication and Assessment Review and Tracking (SMART): An Approach to Reduce Polypharmacy

With advancing age comes accrual of chronic diseases, often resulting in multiple prescription and nonprescription drug use. Chronic disease management in older adults challenges clinicians to contend with adverse drug effects, drug/drug interactions, drug/disease interactions and inappropriate dosing.

Several studies have employed medication reviews conducted by either physicians or pharmacists in an effort to minimize polypharmacy, loosely defined as multiple or potentially inappropriate medication use. These studies suggest that eliminating active medications that lack an appropriate indication may be a safe and easily accomplished measure to reduce polypharmacy risks.

Cleveland Clinic Florida Krupa Geriatric Medicine Department in Weston follows older adults in the continuum of care — acute, nursing home and outpatient. We developed a system to review medication use of our older patients in all settings. The core of the Systematic Medication and Assessment Review and Tracking (SMART) program is documentation of a medical assessment or diagnosis for each scheduled drug. We tested this SMART program in a nursing home setting, monitoring how many patients could have a drug discontinued on this basis and what the clinical outcomes were, including new symptoms that required attention from the staff, transfer to the hospital or death.

Interestingly, more than half of our subjects had at least one medication that lacked an indication. The class of medications that most frequently lacked an indication was the gastric acid suppressant class, specifically omeprazole. This is a concern because several studies link long-term use of proton pump inhibitors to a variety of adverse outcomes, including fractures, pneumonia and vitamin B-12 deficiency. Our study was not long enough to address those outcomes, but we did have, overall, fewer clinical events in the intervention group than in the control. We presented our findings at the poster session of the American Geriatrics Society in 2011.

In some ways, the long-term care setting is an “easy” target for polypharmacy reduction, because more than 70 percent of nursing home residents nationwide take nine or more scheduled medications. However, the nursing home setting is more strictly regulated than is the home setting. In the nursing home, federal regulations address indications for psychotropic medications and require attempts at gradual dose reduction at prescribed intervals. No such regulation exists for elders on psychotropic medications living in the community.

Older adults on long-term serotonin reuptake inhibitors are, for example, at higher risk for falls, low bone density, fractures and, depending upon the dose and concomitant use of CYP2C19 inhibitors such as proton pump inhibitors, ventricular dysrhythmia due to prolonged QTc.

Application of the SMART program to the outpatient setting may identify persons who have continued on these and other drugs for which they may have actually completed therapy and for whom a dose reduction or trial of discontinuation may be appropriate. We hope to continue our study of the SMART program in all settings of the continuum of care.

For more information on the SMART program or to refer a patient to the geriatric clinic at Cleveland Clinic Florida in Weston, please contact Jerry O. Cioccon, MD, at 954.659.5867 or ciocconj@ccf.org.

The research team for this study also included:
Diana J. Galindo, MD, Cleveland Clinic Florida
Renato V. Somala, MD, Cleveland Clinic
It is estimated that 5 million people in the United States have Alzheimer’s disease. By 2050, experts expect that this number will increase to 15 million, based on the aging baby boomer population and increased longevity. According to the Alzheimer’s Association, Alzheimer’s disease is defined as a type of dementia that causes problems with memory, thinking and behavior. Symptoms usually develop slowly and get worse over time, becoming severe enough to interfere with daily tasks. Alzheimer’s is the most common form of dementia. It is not a normal part of the aging process, it worsens over time, and there is currently no cure.

Cleveland Clinic researcher Stephen Rao, PhD, and his team of physicians and researchers from Cleveland Clinic Lou Ruvo Center for Brain Health are doing what they can to investigate opportunities to slow or prevent the progression of the disease. Dr. Rao is the Ralph and Luci Scely Chair and Director of the Scely Center for Cognitive Neuroimaging at Cleveland Clinic.

“We now know that the brain changes causing Alzheimer’s begin to occur as much as a decade before symptoms — such as memory loss — emerge,” says Dr. Rao. “Today, the emphasis in Alzheimer’s research is to identify accurate measures, called biomarkers, to detect these preclinical brain changes and to use these biomarkers to test the efficacy of novel treatments designed to slow or prevent disease progression.”

One possible biomarker is functional magnetic resonance imaging (available since 1992). This MRI technique allows researchers to view activity of the brain as a person performs a task in the scanner. Dr. Rao has applied this technique to examine the parts of the brain involved in memory. He has participants in his studies perform a memory task that involves making a decision as to whether a presented name is that of a famous person (such as Frank Sinatra) or an unfamiliar person.

Dr. Rao has found that cognitively normal older persons at genetic risk for Alzheimer’s disease demonstrate greater MRI brain activity than do persons not at risk for the disease. The increased activity may be necessary to compensate for early brain changes associated with Alzheimer’s disease. Dr. Rao and his colleagues have shown that this increased brain activity can be used to predict who will go on to develop cognitive decline. “These results provide evidence that functional MRI is sensitive to changes in the brain prior to the diagnosis of Alzheimer’s disease,” says Dr. Rao.

Study on Preventive Measures

Prior to joining Cleveland Clinic in 2007, Dr. Rao was Director of the Functional Imaging Research Center and Professor of Neurology (Neuropsychology) at the Medical College of Wisconsin, Milwaukee. While there, he applied the functional MRI biomarker to examine the role of physical activity on brain activation. Results from this study indicated that persons who had the gene marker apolipoproteinE-e4 (APOE-e4), a risk factor for Alzheimer’s, had different patterns of brain activity depending on whether they engaged in regular physical exercise or were relatively inactive.

Physically active persons at risk for Alzheimer’s exhibited a greater degree of brain activity (shown in red in Figure 1). Greater activity has been shown to offer protection against future cognitive decline in cognitively normal older adults. More recently, Dr. Rao showed that persons who have mild cognitive impairment, a condition that usually precedes Alzheimer’s disease, also show the positive benefit of physical exercise on brain activity.

“In addition to physical exercise, other lifestyle factors, such as engaging in cognitively stimulating activities, may also be protective against the effects of Alzheimer’s,” says Dr. Rao. “We know that persons who continue to read, go to concerts, attend museums, play musical instruments and do crossword puzzles, to name a few, are less likely to develop the symptoms of Alzheimer’s than are people who stop participating in these cognitively enriching activities.”
Effect of Exercise and Cognitive Stimulation on Brain Activity

Dr. Rao and his team are currently conducting a randomized clinical trial to compare the effects of physical exercise and cognitive stimulation on brain activity. This study is funded by the National Institute on Aging. The clinical trial includes participants in three groups. One group is focused on doing exercise, the second is doing cognitive training using a computerized program, and a third group is doing a combination of exercise and cognitive training. The study participants are committed to going to Cleveland Clinic’s main campus four times a week for three months. There are three criteria for members in the trial, as follows: they have to be sedentary, be at least 60 years old and have a family history of Alzheimer’s. Over the course of the trial, Dr. Rao and his team will study a total of 100 participants.

“As researchers, we maintain an open mind as to whether exercise, cognitive training or a combination is best for altering brain activity in the short term,” says Dr. Rao. “Our long-term goal is to find out if these lifestyle interventions work to delay the onset of Alzheimer’s. If we can delay the onset by five years, we can cut the number of people diagnosed with Alzheimer’s by about 50 percent; if we can delay onset by 10 years, we can cut this figure by 85 percent and, in so doing, virtually eliminate this major health problem.”

If you know of someone who might be interested in joining Dr. Rao’s study and who lives within driving distance of Cleveland Clinic’s main campus, please contact us at 216.445.9009 or email raolab@ccf.org to learn more and be considered for the trial.

The research team also includes:
Gordon Blackburn, PhD, Cleveland Clinic
François Bethoux, MD, Cleveland Clinic
Kristy Nielson, PhD, Marquette University
J. Carson Smith, PhD, University of Maryland

Figure 1: The effect of physical activity on preservation of cognitive function. Persons at risk for Alzheimer’s disease who engage in high levels of physical activity (PA) exhibit greater brain activity in memory regions (shown in red) than do at-risk persons who engage in low levels of PA. Higher levels of brain activity are associated with preservation of cognitive function.
The topic of elder abuse is rarely touched on during medical training. Though trainees may encounter this issue in the process of patient care, its presence likely goes unnoticed and unacknowledged while the physician addresses the patient’s many other problems that are demanding attention. Surveys conducted on practicing physicians have suggested that lack of training about elder abuse in medical school and residency as one reason why it goes unrecognized. Additionally, once elder abuse is encountered, many physicians are unsure of how to respond to the problem.

Geriatric Medicine at Cleveland Clinic has been collaborating with Cuyahoga County Adult Protective Services (APS) to review difficult cases of elder abuse and develop plans of care to address the unmet needs of these patients. APS provides services directed at remedying abuse or exploitation of adults over age 60 who are unable to protect their own interests because of disability. Services are provided to elders and dependent adults residing in Cuyahoga County without regard to income or resources, because victims of abuse are found in all socioeconomic groups in all areas of the county.

APS is mandated by the state of Ohio to investigate reports of abuse of elders that are alleged to have occurred in the community. Specially trained social services workers conduct investigations, coordinating services with community agencies and law enforcement when it appears that a crime has been committed. APS also provides crisis intervention, 24-hour emergency response and case-management services, as well as certain tangible services for victims.

Many of these cases represent unaddressed neglect, self-neglect and financial exploitation. The importance of early recognition and intervention in such cases was emphasized repeatedly during collaborations. As a result, Cleveland Clinic has developed a resident experience involving a home visit with APS for internal medicine residents, who are required to rotate through geriatric medicine during their three years of residency. During this four-week rotation, they are assigned a day to perform a home visit with APS.
The goal of this visit is to allow the trainee to see cases of suspected elder abuse as they are investigated by case-workers. The field visit includes:

- Intake and case acceptance
- A review of the investigation
- Client autonomy and self-determination
- Capacity and decision making
- Voluntary interventions
- Court intervention (nonvoluntary interventions, guardianship hearings)

This collaboration addresses the main reasons why physicians are reluctant to report elder abuse:

- Missing subtle signs of abuse
- Victim denial
- Uncertainty of reporting procedures and reporting laws
- Desire to preserve patient and family confidentiality
- Desire to preserve the therapeutic relationship

APS arranges the schedules of its case managers to maximize the residents' experience. Though the residents are observers, they have the opportunity to review the medical problems and medications of clients being visited to help confirm compliance with medications and medical diagnoses. When a problem occasionally arises, residents may contact the client’s primary care physician to address issues requiring more urgent attention.

The ultimate goal of this visit is to increase trainees' confidence in recognizing and reporting suspected cases of elder abuse in their clinical practices. One resident commented on being approached by a judge at one of the court hearings. The judge stated how valuable the information from the physician was in deciding whether or not a guardian would be appointed in a particular case. Such experiences may dispel many of the myths associated with the legal process and give physicians greater confidence in completing legal documents such as a Statement of Expert Evaluation that is necessary for the court to proceed in these hearings.

Residents’ feedback regarding their experience with APS has been very positive. Many of the trainees see their patients only in clinic or the hospital and are unaware of what the patients’ home environments are like. The ability to see patients in their own homes has been eye-opening for them. Many of the residents report understanding better how their patients’ environments affect their ability to follow physician recommendations and plans of care. They also see many of the obstacles that their elderly patients face at home, including clutter and litter that interfere with their ability to walk around the house, improper meal preparation and the lack of social and financial supports. The residents are able to see firsthand the effects of neglect and self-neglect.

This APS field experience may be the only exposure the medical resident will receive while in training regarding elder abuse identification, intervention and prevention. Sylvia Pla-Rath, Director of APS in Cuyahoga County, said the following about the residents’ visits: “My goal is to ensure that each medical resident walks away with the knowledge of what APS does and the confidence that he or she is prepared to make a report if needed. I also want residents to understand and appreciate the importance of a comprehensive medical evaluation in developing an adequate service plan as well as the value of the physician’s expert opinion in cases in which APS is questioning the client's capacity and decision making.”

A day spent with APS seems to be a valuable experience for the residents. Seeing patients in this light may allow young physicians to act more quickly and appropriately when they encounter suspected elder abuse in their own clinical practices in the future.

Dr. Factora, a staff member in the Section of Geriatric Medicine, specializes in aging, dementia and delirium. To refer a patient to Dr. Factora or for more information on elder abuse, please call 216.444.5665 or contact him at factorr@ccf.org.
Despite recent advances in treatment of osteoporosis, the condition affects more than 50 percent of people over the age of 50, or 10 million Americans. Of those with osteoporosis, 80 percent are women. As the over-65 population increases in the coming years, the incidence of osteoporosis is predicted to rise dramatically.

Because osteoporosis is “silent,” the patient may not seek attention until it becomes symptomatic at an advanced stage. At that point, patients may have stooped posture, loss of height and back pain due to collapsed vertebrae.

Bone densitometry is the standard screening method for assessing bone mass and is “still the best diagnostic tool,” says Angelo Licata, MD, PhD, Director of Cleveland Clinic’s Center for Space Medicine and Endocrine Calcium Unit. However, bone density, for example, of the spine may be artificially elevated, or normalized, with concomitant arthritic conditions. Additionally, bone density does not show the quality and strength of bones. Also, conditions such as dementia, Parkinson’s disease and diabetic neuropathy increase the risk for falls and fracture but are not accounted for in either the bone density test or in FRAX, the World Health Organization’s tool for estimating fracture risk. In making a diagnosis, clinical risk factors should be taken into account. “If an 85-year-old patient has an exceptionally good bone density but has had a fragility fracture, you need to investigate further to determine what is going on,” says Dr. Licata.

The most serious consequences of osteoporosis are bone fractures. These occur mainly in the spine, hip or wrist and can incapacitate older people. Falling and breaking bones is a major fear for many older people and can impact how they live or don’t live. Strengthening bones to prevent fractures is the goal of pharmacological osteoporosis treatment. “Waiting for someone to break a bone is like waiting for the horses to break out of the barn,” says Dr. Licata. “You want to prevent osteoporosis from getting worse and start treatment as soon as symptoms are detected.”

Bisphosphonates, the most commonly prescribed medications for osteoporosis, slow the bone breakdown process, preserve bone mass and can increase bone density in the critical spine and hip bones. Medications in this class have been shown to decrease the risk of hip fracture, the type of fracture with the most morbidity and mortality. These medications, including alendronate (Fosamax), ibandronate (Boniva) and risedronate (Actonel), have been on the market for more than 10 years, and their efficacy and safety are well-documented. They generally are well-tolerated but can have significant side effects, such as nausea, difficulty swallowing, leg cramps and dizziness. Other side effects — including osteonecrosis of the jaw, thigh fractures, irregular heartbeats and visual disturbances — also have been reported.

Although there is no duration of treatment suggested by the FDA or the manufacturer, some clinicians stop treatment, at least temporarily, after five years. Since bisphosphonates are deposited in the bones and remain there for some time, these drugs may continue to work after patients stop taking them.

Bisphosphonates must be taken properly to ensure efficacy and avoid side effects. This can be an issue for older patients who may have difficulty following treatment regimens. Compliance in older adults with dementia can be particularly difficult. Those with mild to moderate dementia may not recall which day of the week to take it or understand the need for remaining in the upright position afterward. Those with moderate to severe dementia may have swallowing problems. Studies show that after one year of therapy, most women taking an oral bisphosphonate stop treatment or take less than the prescribed dose.

Newer Preparations Improve Compliance

Two medications, ibandronate and zoledronic acid (Reclast), a newer bisphosphonate, can be administered intravenously, which also makes them easier to tolerate. “You know the patient has gotten 100 percent of the medication, which is a major advantage,” says Dr. Licata. “Patients also appreciate the convenience.”
A new osteoporosis medication, denosumab (Prolia), which received FDA approval in 2010, is a monoclonal antibody that inactivates the body's bone-breakdown process. It is the first biologic therapy approved for osteoporosis treatment. Denosumab is administered by injection twice a year, which requires less medical intervention than does intravenous administration. It may be particularly useful for those men and women with osteoporosis and chronic kidney disease who cannot take a bisphosphonate due to renal insufficiency.

Beyond medication, a patient’s overall health is a major factor in keeping bones strong. Dr. Licata recommends that older patients take adequate doses of calcium and vitamin D, avoid tobacco, and exercise to strengthen muscles and improve coordination to help protect bones and prevent falls. Cataract extraction to improve vision may reduce the risk of falls and fractures. Those taking four or more medications may wish to have their regimen reviewed by a geriatrician.

An estimated one-half of all women over age 50 will break a bone because of osteoporosis, according to the National Osteoporosis Foundation.

To refer a patient to Dr. Licata, please call 216.444.6248. To contact the Endocrinology & Metabolism Institute for evaluation of osteoporosis, please call 216.444.6568.
Aging and Immunity

David van Duin, MD, PhD, of Cleveland Clinic’s Department of Infectious Disease, says that in most older people changes in both innate and adaptive immunity can be found that may affect a person’s ability to fight infections as well as a person’s response to vaccinations.

Aging and the Adaptive Immune System

The adaptive immune system, which is characterized by the ability to form a memory to previously encountered threats, is made up primarily of T and B cells. All of these millions of different cells carry a randomly generated receptor for their specific target. If they encounter that target in the right setting, many more cells carrying the same receptor are produced and an immune response aimed at fighting the infection is generated.

In every person, the thymus, which produces new T cells that help fight infection, decreases in size and function as part of the normal process of aging. The thymus begins to shrink, and its function decreases rapidly beginning around age 20. The consequence is the production of fewer new T cells, which is balanced by an expansion of experienced T cells (T cells that already have encountered their specific target).

As a part of this expansion of experienced T cells that occurs with age, an increase is seen in certain types of T cells that fight the cytomegalovirus (CMV). This virus, which is very easily transmissible, generally infects people as children and is contracted through direct contact with saliva. Most people don’t have any symptoms when they are infected. Although rare, a more serious illness can occur if someone contracts it for the first time in older adulthood. The symptoms in adulthood are similar to mononucleosis, and sometimes the illness is indicated by a long-standing fever of unknown origin.

Once a person is infected with CMV, it stays within his or her body in a state of dormancy for life. But the process of dormancy is dynamic, Dr. van Duin says. The virus is constantly trying to break out, and the immune system is constantly suppressing it. The cost of this constant “cold war” remains an issue of much debate, but it has been blamed for some of the changes in the immune system observed as we get older.

One of the most well-defined changes in human aging, Dr. van Duin says, is the increase in CD28-negative T cells. These “lazy” cells are functionally inadequate, doing less than what they are supposed to. When these cells encounter their target, they are generally unable to mount an
effective immune response. Interestingly, a number of these CD28-negative T cells carry receptors aimed at CMV.

The biology of aging of B cells is less well-defined, but we do know that fewer new B cells are produced as we age. B cells are the antibody factories of the immune system, and in older people the ability to produce new specific antibodies also decreases.

**Aging and the Innate Immune System**

Aging in the innate immune system, which is the first line of defense and has no specific memory, is less well-studied than is the adaptive immune system. However, similar to changes in the adaptive immune system, innate immunity is also affected by aging. For instance, the ability to express CD80, which interacts with CD28 on T cells, is diminished on aged cells of the innate immune system.

For all of these changes, it is important to realize that they may vary greatly from one person to the next. Why one older adult has many age-related changes in the immune system while another has few is the subject of ongoing studies. Exercise, diet, environmental exposures, genetics and viral infections all may play a role.

**What These Changes Mean for Older Patients**

Changes in the immune-system function in older adults can mean the possibility of an increased incidence of and change in response to infection as well as a difference in response to vaccination.

“Changes in the immune-system function in older adults can mean the possibility of an increased incidence of and change in response to infection as well as a difference in response to vaccination.”

Older adults are most susceptible to a reactivation of viruses. Varicella zoster, for example, the virus that causes chicken pox in children, often settles into dormancy once it has infected a person. As the person ages, the risk then becomes higher and higher that it will develop into shingles.

“We haven’t figured out how to affect the immune system to break latency,” Dr. van Duin says. Because it is easier for the immune system to kill an active virus, the shingles vaccine does not cure herpes zoster (shingles).

For several bacterial infections, including pneumonia, the increased susceptibility of older adults to infection is multifactorial. In the case of pneumonia, it is caused partly by a change in immunity and partly by changes in lung architecture, as well as by changes in the ability to keep the airways free of contaminants.

For more information on aging and immunity, please contact Dr. van Duin at 216.444.8472 or vanduid@ccf.org.
In June 2011, Quratulain Syed, MD, traveled to Lamay, Peru, where she helped provide outpatient medical care in a community clinic and surrounding villages with very limited medical facilities.

Dr. Syed, a geriatrician with Cleveland Clinic since August 2011, participated in the Lamay Clinic Project, part of an international medical school elective organized by medical students at Cleveland Clinic Lerner College of Medicine of Case Western Reserve University in Cleveland and others who have joined the efforts. The students run a monthlong public-health project that includes treating acute infections, doing educational projects in the medically underserved Sacred Valley and providing vision checks and eyeglasses to patients.

Describing her experience, Dr. Syed says: “There isn’t any better way of spending one’s vacation than helping those who are deprived of basic life amenities. It helps medical students and physicians learn how to provide medical services in areas with very minimal resources. It is interesting to learn about various cultures and give medical care to people while respecting their traditions.”

Participants are asked to carry medical supplies with them that are provided by MedWish International in Cleveland. They are also encouraged to collect used eyeglasses to distribute to patients. Funds are also provided to purchase medications.

Half of the participants’ time is spent in the Puesto de Salud de Lamay, a small clinic that is run by Dr. Rueda...
and a medical team. The students borrow three to four exam rooms and run their own clinic within the Puesto de Salud de Lamay, dispensing medications that they bring or buy.

Each provider sees about 30 to 40 patients a day. Students perform triage, taking basic information such as chief complaints and demographics. They also perform histories and physicals that are presented to and confirmed by faculty members. The students cannot access any imaging or blood tests at the clinic except hematocrit assessment.

Students also spend time seeing patients in remote villages in the mountains. Many of these patients speak only the local language and have very limited access to medical care. Students also visit local schools and orphanages in the area.

Students and medical professionals who are interested in participating in this international educational experience in 2012 can learn more about the rotation at www.lamayclinic.org.

Journal Publications


Book Chapter

Cleveland Clinic Geriatric Medicine Staff

GERIATRICIANS/
GERIATRIC PSYCHIATRISTS IN THE
CLEVELAND CLINIC HEALTH SYSTEM

MAIN CAMPUS
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Barbara Messinger-Rapport, MD, PhD
Quratulain Syed, MD
Anne Vanderbilt, CSN, CNP

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Wanda Williams, CNP

INDEPENDENCE FAMILY HEALTH CENTER
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Geriatric Psychiatry
Louis Klein, MD
John Sanitato, MD

FAIRVIEW FAMILY MEDICINE
Carl V. Tyler Jr., MD, MS

WILLOUGHBY HILLS FAMILY
HEALTH CENTER
Ami Hall, DO

JOINT APPOINTMENT WITH THE
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ENDOCRINOLOGY & METABOLISM INSTITUTE
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Elaine Husni, MD
Bruce Long, MD

All physicians with appointments in
Regional Geriatrics have a joint appoint-
ment in the Center for Geriatric Medicine.
Resources for Physicians

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24/7 hospital transfers or physician consults
800.553.5056

Internal Medicine and Geriatric Medicine
Appointments/Referrals
216.444.5665 or
800.223.2273, ext. 45665
On the Web at clevelandclinic.org/geriatrics

Physician Directory
View all Cleveland Clinic staff online at clevelandclinic.org/staff.

Referring Physician Center
For help with service-related issues, information about our clinical specialists and services, details about CME opportunities, and more, contact the Referring Physician Center at refdr@ccf.org, or 216.448.0900 or 888.637.0568.

Track Your Patient’s Care Online
DrConnect is a secure online service providing our physician colleagues with real-time information about the treatment their patients receive at Cleveland Clinic. To receive your next patient report electronically, establish a DrConnect account at clevelandclinic.org/drconnect.

Request Medical Records
216.445.2547 or 800.223.2273, ext. 52547

Critical Care Transport Worldwide
Cleveland Clinic’s critical care transport teams and fleet of mobile ICU vehicles, helicopters and fixed-wing aircraft serve critically ill and highly complex patients around the globe. Transport is available for children and adults. To arrange a transfer for STEMI (ST elevated myocardial infarction), acute stroke, ICH (intracerebral hemorrhage), SAH (subarachnoid hemorrhage) or aortic syndromes, call 877.379.CODE (2633). For all other critical care transfers, call 216.448.7000 or 866.547.1467 or visit clevelandclinic.org/criticalcaretransport.

Outcomes Data
View clinical Outcomes books from Cole Eye Institute and other Cleveland Clinic institutes at clevelandclinic.org/quality/outcomes.

CME Opportunities: Live and Online
Cleveland Clinic’s Center for Continuing Education’s website offers convenient, complimentary learning opportunities, from patient simulations, webcasts and podcasts to a host of medical publications and a schedule of live CME courses. Physicians can manage CME credits using the myCME.com Web portal available 24/7. Visit ccfcme.org.

Resources for Patients

Medical Concierge
For complimentary assistance for out-of-state patients and families, call 800.223.2273, ext. 55580, or email medicalconcierge@ccf.org.

Global Patient Services
For complimentary assistance for national and international patients and families, call 001.216.444.8184 or visit clevelandclinic.org/gps.

MyChart®
Cleveland Clinic MyChart® is a secure, online personal healthcare management tool that connects patients to portions of their medical record at any time of day or night. Patients may view test results, renew prescriptions, review past appointments and request new ones. A new feature, Schedule My Appointment, allows patients to view their primary physician’s open schedule and make appointments online in real time. Patients may register for MyChart through their physician’s office or by going online to clevelandclinic.org/mychart.
U.S. News Ranks Cleveland Clinic One of America's Best Hospitals

Geriatric Care Ranked No. 7

Cleveland Clinic has been ranked among America’s top hospitals since U.S. News & World Report began its annual survey of “America’s Best Hospitals” in 1990.

The 2011 survey recognizes Cleveland Clinic No. 4 overall in the country. For the 16th consecutive year, cardiac care is No. 1, and 13 specialties are listed among the Top 10.

Center for Geriatric Medicine Expands into New Space

Cleveland Clinic’s Center for Geriatric Medicine has moved into expanded space at 10685 Carnegie Avenue on main campus. The 11,000-square-foot building is notable for its accessibility, with close-in patient parking in the front and a check-in desk near the outside door. Elders with or without mobility difficulties are accommodated with side hallways, accessible restrooms and large examination rooms that have space for the patient and up to two family members. A quiet consultation room offers privacy for patient and family counseling and education. The first floor includes 12 exam rooms, an on-site laboratory, a Coumadin Clinic and a library.

The Center for Geriatric Medicine now offers multispecialty clinics, including a Geriatric Falls Clinic, and outreach programs at Cleveland Clinic Health System hospitals and family health centers throughout Northeast Ohio.

To schedule an appointment or to refer a patient to the Center for Geriatric Medicine, please call 216.444.5665.