

GEC Channel

New Territory for the GREAT GEC: Evidence-Based Practice and Diabetes

By Naushira Pandya, M.D., CMD

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The second funding cycle, which began in July 2010, has taken the **GREAT GEC** and all the GECs into new territory—evidence-based practice or EBP. The new mandate from HRSA is not only to educate health professions students and professionals in geriatrics, but also to show that teaching changes practice and the way care is provided by providers to elders. The purpose of this is to show that grants given to

centers of learning can lead to a measurable change in practice. At the current time, clinical outcome measures are not required.

All GECs were asked to select an area of focus for their EBP research projects from topic areas such as depression, falls, dementia, and diabetes. Diabetes was chosen as our area of focus due to the extensive experience of GREAT GEC faculty members and discipline heads, as well as a state and national emphasis on this potentially devastating disease. Cardiovascular disease, cancer, and stroke are the three leading causes of death in those over 65 years of age, followed by chronic lower respiratory disease (influenza and pneumonia), Alzheimer's disease, and diabetes.

Although death rates for heart disease and stroke declined by approximately 44 percent since 1981, deaths from diabetes increased by 38 percent. In all, four GECs have chosen this focus (NSU-COM, Arkansas, Texas, and Stanford), and there is consensus among them, with guidance from HRSA, to narrow the research enquiry even further to one practice that is teachable and measurable. Hence, the practice of foot assessment has been chosen and the disciplines trained will include physicians and nurses as well as physical and occupational therapists. The National Training and Coordination Center funded by HRSA and housed at Case Western University will assist in standardizing, measuring, and evaluating teaching and practice or care provided. Each center will modify processes to suit its various clinical sites and health record systems.

Diabetes affects about 8.3 percent of the U.S. population, but the elderly are disproportionately affected. Among residents 65 years of age and older, 10.9 million, or 26.9 percent, had diabetes in 2010.

Diabetes care accounts for an estimated 32 percent of Medicare expenses and is an independent predictor of long-term care facility placement in the elderly. Residents with diabetes are a heterogeneous group characterized by a higher degree of cardiovascular comorbidities, infections, lower extremity complications, pain, pressure ulcers, urinary incontinence, injurious falls, oral problems, cognitive dysfunction, and functional dependency. Other complications in the frail elderly include dehydration, delayed wound healing, recurrent heart failure and cardiac ischemia, weight loss, and urinary-tract infections. Many elderly have diabetes-related complications secondary to accelerated microvascular and macrovascular disease as well as other comorbidities requiring multiple medications.

There is little consistency in the management of this condition in elders, and recent studies would suggest that previous goals of "tight" glycemic control in elders with existing complications may not yield beneficial outcomes in terms of reduction in mortality and major cardiovascular events. In such individuals, an A1c goal of 7-8 percent, rather than the usual goal of <7 percent, may be acceptable. However, there is little doubt that regular foot assessments, proper foot care, timely intervention for and attention to infections, calluses, or ulcers can reduce morbidity, hospitalizations, and ultimately loss of limb.

The next few months will be spent recruiting sites for training as well as developing training materials and evaluation and measurement tools. The strength of combined results from the four GECs mentioned above that will be working on diabetic foot assessments will hopefully yield persuasive data for publication and presentation to funding bodies and Congress.

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Interprofessional Education and Practice: Our Guiding Light for the 21st Century

By Cecilia Rokusek, Ed.D., R.D., GREAT GEC Executive Director and Professor of Family Medicine/Public Health



As we set out for our journey into the second decade of the 21st century, I am energized by what I see happening around us. The next 30 years will result in dramatic changes in population demographics. The over-50 population will increase from being 13 percent now to over 20 percent by 2030. More people will reach the 100-year mark than ever before in history. “Smart aging” is evident everywhere, and baby boomers are setting a new standard for what it means to live after 50. They have defined the new middle age as being anyone 50-70 years of old. This is a huge paradigm shift that has significant ramifications for health care practice in geriatrics.

In 2009, geriatrics marked its centennial as a medical discipline in the United States. Yet the field continues to struggle with its identity, its mission, and its attraction to students to enter into the study of geriatrics. Even with the advancing tsunami of older persons in the United States, students are not seeking careers in the geriatric professions.

There are many reasons why this is happening. Certainly salary and medical reimbursements for geriatric practice are not as lucrative as other specialty areas. Yet the rewards and practice styles of geriatric care may be more gratifying on a different level. We as educators and practitioners need to be aware of what we are doing to encourage students to enter into a geriatric health or health-related profession. I believe recruitment needs to start early.

The elementary level is a good place to start by focusing on educational experiences involving young people with elders. In fact, this is already being done throughout the United States, although I am not sure though how much time is then spent with students talking about career options in regard to working with elders. This is an area we can all improve on in our elementary and secondary schools. A geriatric profession is a cool thing and should be the “in thing.” I know I may be biased, but we need to change our attitudes and move with the paradigm shift. If we do not, I am fearful the positive tsunami of change could become a fatal one.

Concurrent with this is the fact that the new geriatric population will provide geriatric professionals with a novel set of challenges that can make practice rewarding because today’s elders are more active and more concerned about overall health, disease prevention, and health promotion. They are staying in their communities longer. They are more connected to the Web and social media outlets. They are more concerned about longevity and quality-of-life issues. They are concerned about health care and insurance costs in

an unstable economy. They are vocal about their health care and choices they make regarding it. They clearly do not want to have unnecessary procedures and pay for duplicated tests and care that is not coordinated.

This is the time for the interprofessional geriatric care team and medical home concept to become part of our health care practice. I believe we can no longer talk about this topic. Instead, we must commit to it now and for the future. The demographic and attitudinal shifts are not going away. Are you stepping up to the plate for these important changes in this new decade?



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Confusion to Clarity: Getting a Grip on Delirium

Hady Masri, D.O., Assistant Professor of Geriatrics and
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Delirium is one of the geriatric syndromes that remains a challenge to even the most experienced clinicians working in long-term care facilities and hospitals. This syndrome is abrupt, with fluctuating disturbances in consciousness, attention, and cognition. Most importantly, the disturbance is related to underlying and potentially reversible medical causes.

The geriatric patient may offer very few clues, and the clinician may have a good deal of detective work to do when investigating the underlying cause. Urgent identification of the cause is needed since this syndrome may be life threatening. Delirium has shown to be a predictor of approaching death. It may complicate hospitalizations with longer stays and lead to the development of aspiration pneumonia and pressure ulcers. With rehabilitation, delirium may lead to longer recovery time and even sustained loss of function.

Clinicians, sometimes unfamiliar with the patient, can overlook delirium and consider the syndrome to be dementia. Often, family members are helpful in clueing physicians as to what their loved one's functional status was prior to the event. The challenge of identifying delirium is further compounded when superimposed onto dementia. While dementia is insidiously progressing and chronic, with individuals usually maintaining attention, delirium is sudden, with impaired attention, and fluctuates in its course.

Delirium can manifest in different forms. The hyperactive form can easily be confused with psychiatric mood disorders as the patient displays combativeness and agitation. On the other hand, some may be withdrawn and subdued, and the signs are mistakenly interpreted as depression. The Confusion Assessment Method is a commonly used tool with nurses to gain clues about delirium. The assessment tool cues the interviewer to recognize the features of delirium, which are inattention, disorganized thinking, altered level of consciousness, and slow movements.

Myriad causes need immediate identification when investigating delirium because a patient may have more than one cause. In almost half of all elderly patients with delirium, two or more etiologies are responsible. A thorough medication review should be at the top of the list of things to do. Over-the-counter sleep medications that contain diphenhydramine can precipitate delirium and are very accessible to the elderly

as sleep aides. Conversely, medication withdrawal can cause similar effects.

In addition, electrolyte disturbances need to be explored by the clinician. As we age, our thirst sensation diminishes. Consequently, many elders are hospitalized due to delirium caused by severe dehydration. Diabetics can present with altered mentation due to a hypoglycemic event. Low oxygenation from worsening emphysema or heart attack is also a possibility.

Urinary retention is a common offender in delirium, which was once dubbed "cysto-cerebral syndrome." Urinary and respiratory infections are also very common culprits. Fecal impaction and unmet pain also need to be addressed, as they may lead to further agitation. Cerebral causes such as strokes, meningitis, hemorrhages, and masses can present as delirium with neurological deficits.

Prompt intervention should be attempted in order to orient a patient and quell behavioral disturbances. Constant verbal orientation is helpful. Calendars and clocks at eye level, along with familiar family pictures, may be hung in the room. Having a family member present is even more helpful. Use of existing dentures, eyeglasses, and hearing devices is often needed to optimize the senses. Setting a comfortable room temperature and having relaxing sounds emanating from a TV or radio are important calming tools, as are the use of night lights and quiet areas.

Although medical therapy is sometimes utilized, treating the reversible cause should be the first priority. Antipsychotic medications are considered "first line," though they are not FDA approved for the treatment of delirium. These

medications are certainly not benign, potentially increasing the risk of movement disorders, pneumonia, arrhythmias, heart attacks, strokes, and falls. Sedating medications can also be utilized for agitation, with a strong emphasis on tapering the medications once symptoms resolve.

Another important issue is care of the caregiver. Caregivers helping delirious individuals have a 12-fold increased risk of developing anxiety disorders and burnout. This should also be addressed. Sadly—and often—many loved ones experience a "double bereavement" where there is a loss of connection from the delirious individual who is mentally withdrawing and a second mourning from the death of a loved one.





Hoarding in the Elderly: A Long-Hidden Problem and Emergent Elder Health Concern

By Michelle Gagnon Blodgett, Psy.D., Coordinator of Geriatric Clinical Services for NSU's Health Professions Division, and Rachele Dorne, Ed.D., OTR/L, Associate Professor of Occupational Therapy and director of the Master's in Occupational Therapy Program, NSU College of Allied Health and Nursing

Hoarding has captured the media spotlight with the advent of several television shows featuring this behavioral health problem. However, those who work with the elderly have long recognized that hoarding is a complex behavioral health problem that is resistant to treatment (Cornell). While hoarding is a problem that typically arises in young adulthood, the behavior tends to become more problematic as the person ages. The worsening of the problem of hoarding with age is due, in part, to the interaction between decades of accumulation of items that clutter the home and the decline in functional status of the individual that may come with advancing age, chronic illness and/or disability. Hoarding and clutter are problematic when the environment poses physical risk, the person cannot use the home as it is intended, the home environment violates laws or regulations, and, in the case of animal hoarding, the pets are inadequately cared for and/or are abused (Cornell, Maidment, Saxena, Steketee, and Frost).

It is difficult to give definitive prevalence or incidence

figures for problematic hoarding in the United States. Prevalence estimates range from 600,000 to 1.4 million people (*Mayoclinic.com*). What is known is that men and women are equally affected, and that the problem tends to run in families (Cornell, *Mayoclinic.com*). Having a close family member who hoards greatly increases one's risk for developing the problem. Other risk factors include advanced age, stress, loneliness, and perfectionism (Cornell, Maidment, Saxena, Steketee, and Frost). Our most vulnerable adults may be especially at risk. Of the 6,000 cases of reported elder abuse investigated by the Southeast Florida Region of Adult Protective Services last year, at least 500 cases had hoarding as an issue (E. Maicas, Personal Communication, March 31, 2010). Similarly, a poll of 10 Manhattan community service agencies revealed that 10 percent of their elderly clients were afflicted with hoarding behavior (Cornell).

There is debate about the etiology and maintenance of hoarding behavior. There is no one mental health disorder

that accounts for hoarding; rather, hoarding can be seen in a significant minority of people with a variety of mental health disorders, ranging from obsessive-compulsive disorder or depression to dementia. Some experts argue that the development of a separate disorder is warranted, such as the proposed “Compulsive Hoarding Syndrome” (CHS, Cornell). Symptoms of CHS would include (1) information processing deficits that manifest in difficulties with attention, categorization, memory, and decision-making; (2) strong emotional attachments to possessions; (3) strong beliefs about the nature of possessions (e.g., unrealistic beliefs about items); (4) motivational problems (e.g., poor insight, low motivation to discard; and (5) behavioral avoidance to avoid negative emotions such as anxiety and fear (Cornell).

Two basic types of saving motivations are noted to be Instrumental saving (“I may need it later.”) and Sentimental saving (“This is too important to discard.”). Further, while people who hoard may have some insight into the fact that their behavior is problematic, they tend to minimize its impact and to resist intervention.

Unfortunately, there are many potential costs to hoarding behavior. These include

- social isolation (e.g., secondary to family discord, embarrassment/shame, and fear)
- expenses related to de-cluttering and cleaning
- reduced daily functioning
- illness and injury
- involvement in the legal and judicial system (e.g., eviction, cost of legal representation)
- withholding of in-home services until home is de-cluttered
- decreased access to emergency medical care
- loss of home value (Franks, Lund, Poulton, and Casterta)

Elderly hoarders may be at risk of falling when clutter prevents clear access to bathroom facilities, bedroom, and kitchen. Plumbing fixtures may be in disrepair, resulting in flooding and floor damage. Likewise, hoarding may result in illness due to consumption of spoiled foods or loss of needed medications. While the behavior threatens the overall health and safety with the individual, it can also come to threaten the individual’s sense of dignity and quality of life. It may even serve as the impetus for group home or institutional placement.

Identification of problematic hoarding behavior requires more than just a working understanding of the issue. Foremost would be either access to the person’s home and/or a good working relationship with the elder or his/her loved one. This is especially important as people with hoarding problems tend to deny or minimize this issue. It is important to look for indirect evidence, such as refusal to allow others into the home. Assessment tools are emerging. Frost developed the Hoarding Assessment Tool (Cornell). Clutter image

rating scales are also available (Steketee and Frost, 2006).

Treatment of hoarding is a slow, uneven process. A trusting relationship with the individual is paramount. Further, de-cluttering immediately is not the answer and may backfire. The focus of intervention should be on improving the individual’s safety in the home first. Mobility issues may require assessment if the individual was using piles of debris or furniture for balance. If the person has mental health issues, then he/she should be referred to appropriate care. Further, tips for helping a person de-clutter include

- taking a slow pace
- focusing on clients need for control
- allowing client to ultimately decide whether an item stays or not
- focusing on safety
- motivating and encouraging client
- stopping de-cluttering when client feels overwhelmed

Professional de-cluttering services may be helpful in structuring the process of reducing clutter. Ongoing support, maintenance, and supervision are vital to maintaining a safe and health-promoting environment for these individuals and their families. Ultimately, patience and compassion are key tools.

The Cornell University Environmental Geriatrics Web site is a great starting place to discover a treasure trove of resources and information about hoarding: http://www.environmentalgeriatrics.com/home_safety/clutter.html.

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The New Era of Vitamin D

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Vitamin D deficiency and insufficiency is widespread, regardless of geographical location, age, or race. It is particularly prevalent in the elderly and has been associated with many health consequences, including falls, osteoporosis, risk of cancer, diabetes mellitus, increased risk of frailty, immune deficiency, hypertension, cardiovascular disease, and impaired neuropsychological functioning.

Current evidence supports the benefits of vitamin D supplementation and also indicates that the present "Recommended Daily Allowance" is inadequate for optimum health. The measurement of vitamin D levels and appropriate supplementation are becoming common practice in the outpatient clinic setting, although its prevalence in older adults in the long-term setting is so high that measurement of vitamin D levels may not be necessary.

At this time, the utility of assessing serum 25(OH) D deficiency (levels less than 20 ng/mL) or insufficiency (levels between 21-29ng/mL) is being questioned. A recent exhaustive report from the Institute of Medicine (IOM) suggests that a vitamin D level of 20ng/mL is adequate to maintain bone health in most individuals. Although national surveys in the United States and Canada suggest that average vitamin D intake is below the median requirement, average vitamin D levels are above 20ng/mL, indicating that sun exposure is also contributing meaningful amounts of vitamin D.

It is common clinical practice to treat nutritional deficiency of 25(OH)D levels <20 ng/mL with 50,000 international units of vitamin D2 orally once per week for six to eight weeks, and then 800 to 1,000 units of vitamin D3 daily thereafter. The IOM report recommends that seniors older than 71 should ideally receive 800 international units orally daily. This supplementation would accompany foods fortified with the nutrient.

In July 2010, the advocacy group Osteoporosis Canada recommended daily vitamin D intake of 400-1,000 IU for adults under 50 without osteoporosis or conditions affecting vitamin D absorption. For adults older than 50, the group recommended 800-2,000 IU daily. A daily vitamin D dose in excess of 4000 IU is associated with greater harm than benefit. In addition, the IOM report was not able to find a cause-and-effect relationship, or a dose-response relationship, between the non-bone health conditions mentioned above, and calcium or vitamin D supplementation.

The institute also stated that "ensuring bone health" remains the only "established function" of vitamin D supported by research. This leads to a reexamination of popular and health provider beliefs. Requirements for vitamin D supplementation for the prevention of osteoporosis and treatment of vitamin D deficiency associated with other conditions may vary, and research is currently ongoing.

Kompai Takes Care of the Elderly

BIRTHPLACE: Robosoft, France

OCCUPATION: Personal assistant that reminds seniors to take their medications and calls for help if needed.

Kompai is a personal assistance robot built around speech that understands basic instructions and requests and offers appropriate responses with its own monotonic style. It can serve as a note and shopping list recorder, a calendar, a music player, or a video conferencing tool for when old grandpa needs to call his doctor.

WHY WE NEED IT: It's a simple robot for the tech-challenged.

HOW IT WORKS: Kompai's chief feature is its senior-friendly interface and congenial personality. Tell the Web-enabled robot you are not feeling well and it thoroughly asks, "Where does it hurt?" and then emails your symptoms to your doctor. Kompai can record a grocery list, coordinate videoconferences with doctors, and call 911. Around the house, it avoids stairways and knows when it's time to roll itself to its charging dock. Although it operates primarily by voice control, the robot also has a touch screen with simple icons.

It is a mobile and communicative product. Somewhat like a dog, it has its "basket," which is the recharging dock that it heads back to when its batteries are low. Equipped with speech, it is able to understand simple orders and give a certain level of response. It knows its position within the house, recognizes how to get from one point to another on demand or on its own initiative, and remains permanently connected to the Internet and all its associated services. Its primary means of communication with people is speech, with an additional touch screen that features simple icons.

Future generations of Kompai will be equipped with visual abilities and also the possibility to understand and express emotions. At some point in the not-too-distant future, the addition of arms will allow it to handle objects, leading to meal preparation and tidying; more practical functions, yet still fundamental in everyday life.



**Lifelong Learning Institute
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Brandegee is designing it and
will have it ready by Friday.**



Spotlight on GREAT GEC Faculty

Naushira Pandya, M.D., CMD



In July 2010, Dr. Pandya wrote a chapter entitled “Aging in America” that was published in a textbook called *Health Matters: The Human Side of Medicine* that was coauthored by several NSU College of Osteopathic Medicine (NSU-COM) faculty members.

Health Matters: The Human Side of Medicine, available through Cognella Medical Publishing, brings awareness to human issues reflected in the complexity of providing health care. The book takes a compassionate look at medicine from a

holistic view rather than focusing on illness and disease. The authors reveal a unique perspective on health issues as seen through the eyes of the provider and offer insight and wisdom for the health care providers of tomorrow.

Topics addressed in *Health Matters*

- examine the evolution of health care and health care systems
- review the most important element of health care—the relationship between the patient and the provider—from many viewpoints
- provide guidance on promoting health, advocating good health practices, preventing disease, and being prepared for disasters
- discuss the impact of abuse, addiction, alcohol, tobacco, and aging from the point of the health of the family as well as the health care system
- examine the role of government in health care from the perspective of health care providers as they prepare for the practice of medicine

In December 2010, Dr. Pandya contributed to the creation of a book entitled *Long-Term Medicine: A Pocket Guide*, which was published by Humana Press, by penning the book’s the largest chapter on the topic “Common Clinical Conditions in Long-Term Care.” She also was invited to join the editorial board of the online *World Journal of Diabetes*, which can be accessed at <http://www.wjgnet.com/>.

Did You Know?



Yartsa gombo (Tibetan), called chong cao in China, is a parasite-infected caterpillar that lives only in grasslands above 10,000 feet. The parasite, a kind of fungus, kills the caterpillar and then feeds on its body. Every spring, Tibetan nomads wander their yak meadows with a small, curved metal trowel looking for

the caterpillars. The caterpillars are very difficult to spot, but they are worth more than all their yaks combined. In Chinese medicine shops throughout Asia, chong cao is sold as a cure-all for everything from the ravages of aging to health issues ranging from infection, inflammation, fatigue, and phlegm to cancer. Displayed in climate-controlled glass cases, the highest-quality caterpillars sell for \$80-\$90 a gram.

The American Psychological Association’s (APA) Family Caregiver Briefcase for Psychologists is now available at <http://www.apa.org/pi/about/publications/caregivers/index.aspx>. The briefcase is a Web-based resource that psychologists can use to assist family caregivers through individual and organizational practice, research, teaching, advocacy, and community service. It is also useful for other professionals that work with family caregivers, psychologists facing caregiving challenges within their own families, and caregivers themselves.

Briefcase components include: caregiving facts and figures; strategies for reaching family caregivers; research opportunities and considerations; caregiving interventions; assessment tools; variations in practice for culturally diverse groups; practical aspects of providing services; teaching about caregiving; and advocacy on behalf of family caregivers.

The briefcase was developed by the members of the 2010 APA Presidential Task Force on Caregivers. For additional information, please contact Deborah DiGilio, APA staff liaison to the task force and director of the APA Office on Aging, at ddigilio@apa.org.

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