

# Research Highlights

AN UPDATE FROM THE EDWARD AND ESTHER POLISHER RESEARCH INSTITUTE OF THE  
MADLYN AND LEONARD ABRAMSON CENTER FOR JEWISH LIFE (FORMERLY PHILADELPHIA GERIATRIC CENTER)

## Researchers to evaluate high-tech resident-monitoring system



Mrs. Gold has dementia. At night, she gets up and wanders into Mrs. Stein's room and rearranges the photographs on her dresser. She doesn't mean any harm. In fact, she doesn't even realize what she is doing. But in the morning, Mrs. Stein is very upset to discover that her carefully arranged family pictures have been moved.

At the Madlyn and Leonard Abramson Center for Jewish Life (formerly Philadelphia Geriatric Center), both Mrs. Stein and Mrs. Gold may benefit from the Vigil® Integrated Care Management System™, a noninvasive system designed to enable staff to monitor each resident's actions individually. The Center is the first long-term-care facility in the United States to formally evaluate Vigil®, which was developed by a Canadian company.

The system uses high-tech motion and pressure sensors on residents' beds and elsewhere in their rooms to alert staff to potential problems, such as a resident getting out of bed, wandering into others' rooms, or remaining in the bathroom longer than usual. The system also develops a profile of each resident's routine movements, to help staff individualize and evaluate care.

Vigil® is designed for elderly with dementia, who are often unable to call for help when they need it. Unobtrusive sensors linked to a silent wireless paging system (staff will carry beepers specially designed to work with Vigil®) do away with the need for hospital-like pull cords, flashing lights and electronic bracelets. The result is a more homelike environment. Starting in spring 2002, the system will be installed in 54 of the 324

rooms in the Abramson Residence, the Center's nursing facility, thanks to a generous donation of equipment and installation from the Canadian company that distributes the system.

"Vigil® Health Management (VHM) is delighted to be working with such an esteemed research facility," said Stacy Kuiack, President & CEO of VHM. "Not only will the Vigil® installation benefit current residents, the ongoing research at the campus will produce new information on dementia care and the use of technology facilitating further improvements in the delivery of care and quality of life of dementia sufferers."

A team led by Kimberly Van Haitsma, Ph.D., director of the Harry Stern Family Center for Innovations in Alzheimer's Care at the Polisher Research Institute, will study Vigil®'s impact on the Center's residents. For example, by paging a nearby staff member when a frail resident tries to get out of bed alone, can the system prevent falls and help reduce the need for restraints or other systems that impede resident independence? Can it reduce incidents of incontinence by pinpointing exactly when residents need to use the bathroom?

The system, since it monitors the amount of time spent in bed, can also be used to test the benefits of daytime therapies, which are intended to improve nighttime restfulness and active time spent out of bed during the day. Similarly, it can help track the results of programs designed to prevent falls, such as strength and gait training.

*Continued on page 6*

### THIS ISSUE

2

*Viewpoint:*

*Evaluating new technologies*

*Saliva study measures stress*

3

*Polisher Research Institute  
library goes online*

4

*New and Noteworthy*

*Dr. Marcia Ory receives Polisher  
Award*

5

*When the last parent dies*

## New campus offers opportunities to evaluate new technologies

By Kimberly Van Haitsma, Ph.D.

The opening of the new Madlyn and Leonard Abramson Center for Jewish Life (formerly Philadelphia Geriatric Center) has provided the Polisher Research Institute with a unique opportunity to expand its current research agenda to include a focus on gerontechnology—the assessment and development of technologically advanced products, services, and environments designed to meet the needs of an aging population.

Often there is a gap between useful products that are available to society in general and what is available specifically for older adults. People with cognitive impairment are particularly excluded in this regard. New technologies are usually expensive to initiate, and the interface between cognitively challenged individuals and the operation of new technological approaches can be formidable. The planners of the

Abramson Center for Jewish Life considered these difficulties and built in the capability to evaluate the impact of new technologies on quality of care and quality of life for persons residing on the campus.

Although we can't cure cognitive decline in persons with dementia, gerontechnology offers tremendous possibilities in providing comfort, safety and a means of communication to this under-served group. One prime example of this is the Vigil® system; a passive nurse-call technology that enables staff to unobtrusively monitor resident behavior (see article on page 1). The evaluation of this and similar technologies is critically needed to determine their impact. Do they enhance quality of life for people with dementia? Can the technology add a measure of joy or comfort into their daily lives? Can it compensate for cognitive declines?

What is the impact on quality of care to individuals with dementia? Does it allow staff to provide services with more efficiency? Does a particular technology free staff from certain routine tasks so they can spend more “quality time” with residents?

What scientific aims can be advanced by studying new technologies? What makes elders or staff members adopt, use, reject or give up new technology? Can a technology improve the assessment of the needs of a person with dementia?

As we embark on this new area of research, our challenge will be to answer these questions and many more as we explore the ever-changing opportunities that new and emerging technologies bring to long-term care.

*Dr. Kimberly Van Haitsma directs the Harry Stern Family Center for Innovations in Alzheimer's Care of the Polisher Research Institute.*

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## Saliva test probed as measure of stress in frail seniors

*Cortisol levels may express stress when words cannot*

Moving to a new location can be stressful even for young, healthy adults. But what does it mean for frail seniors in a nursing home? And for those with dementia, who can no longer communicate with words, how can they express their stress to caregivers?

A study is underway at the Polisher Research Institute to probe the value of saliva-hormone testing as an indicator of stress in frail seniors, especially those with dementia. The study, funded by the National Institute on Aging with supplemental support from the Madlyn and Leonard Abramson Center for Jewish Life and Penn State University, could help change the way caregivers evaluate stress among frail elders.

The researchers are measuring levels of cortisol, a hormone found in saliva, as an indicator of stress. Elevated cortisol levels have been linked to stress, anxiety and depression. Saliva testing is easier than blood testing, and is considered a more accurate indicator of biologically active hormone levels. The method is widely used in medical circles, but has not been used extensively in nursing homes.

“Cortisol levels have been used to look at stress in healthy elderly, but they have never been widely used with elders who are extremely frail, or who have cognitive problems,” said Joel Leon, Ph.D., director of the Polisher Research Institute.

According to lead investigator Vicki Freedman, Ph.D., this approach could potentially revolutionize how clinicians identify, manage and ultimately prevent stress among nursing home residents, especially those who cannot communicate how they feel.

The study takes advantage of what Dr. Freedman terms “a unique, naturally occurring experiment”—the relocation of nursing-home residents from the former Philadelphia campus of the Abramson Center for Jewish Life to its new campus in Horsham, Pa. More than 130 residents are taking part in the study.

*Continued on page 3*

# Automation grant to 'open research library to rest of the world'

*Catalog to be available on Polisher Research Institute website*

From a rare 1889 monograph called *Old Age* to the latest journal articles on memory loss, the Edward and Esther Polisher Research Institute's library has one of the nation's largest and most diverse collections of information about aging. But until now, you'd have to actually visit the library to browse its catalog.

That will change, thanks to a grant from the Pennsylvania Department of Education, through the federal Library Services and Technology Act. The funds will enable the library to post its catalog on the Polisher Research Institute website, [www.abramsoncenter.org/pri](http://www.abramsoncenter.org/pri). By this summer, consumers and researchers around the nation will be able to scan the database and borrow materials through the nationwide interlibrary loan system.

"It's a wonderful library, very rich in material about the aged, the aging process, and aging policy," says Institute librarian Sheryl Panka-Bryman. "Right now, people are not aware of the resources that we own. The automation project will open our library to the rest of the world."

Currently, the library's main users are social-science researchers, both at the Polisher Research Institute and at universities and research facilities around the world. "To researchers, the collection is a gem," said Ms. Panka-



*Polisher Institute librarian Sheryl Panka-Bryman with a sampling of the library's more than 200 journal titles related to aging.*

Bryman. "Between the specificity of the journal collection and the depth of the book collection, they can often find all the material they need in one place."

The library aims, over the next few years, to also become a resource for consumers. It plans to add significantly to its collection of consumer-oriented materials on topics such as Alzheimer's disease, caregiving, Medicare, and housing for the elderly.

"Our goal is to build a geriatric consumer collection, which will educate our residents, their families, and the community-at-large about the issues surrounding the aging process," says Ms. Panka-Bryman.

The card catalog has already been computerized through Access Pennsylvania, a database containing the holdings of public and school libraries across the state. The new grant will be used to buy software that will convert the digitized records into a format that can be posted on the web. Plans call for the online catalog to also include multimedia resources—photos, audiotapes, 35mm film—chronicling the history the Abramson Center for Jewish Life and its predecessor agencies.

For more information about the Polisher Research Institute's library, call (215) 780-1014, or e-mail [info@abramsoncenter.org](mailto:info@abramsoncenter.org).

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## Saliva test probed as measure of stress in frail seniors

*Continued from page 2*

"By charting our residents' hormone reactions, our researchers can begin to sort out who is feeling calm or stressed," said Dr. Freedman. Then, further steps can be taken to identify the causes of the stress and to provide appropriate therapies.

Under the direction of Nancy Hodgson, R.N., Ph.D., saliva samples

are being taken multiple times per day both before and after residents move, along with other measures of physical, emotional and cognitive health. Over a thousand samples will be sent for testing to Penn State's Behavioral Endocrinology Laboratory.

Collections of saliva samples over time, combined with observations,

interviews and medical tests, will be analyzed together with residents' medical, medication and administrative records. The information will be used to design and test new interventions to help frail elders cope with the stress of environmental changes and other stress.

## New and noteworthy

*The following presentations were made by Polisher Research Institute staff at the 2001 annual meeting of the Gerontological Society of America, held Nov. 15 - 18 in Chicago. Due to space limitations, collaborating presenters not affiliated with the Polisher Research Institute are not listed here.*

### POSTERS

**“Cancer Mortality Determinants and Differentials in the U.S. Elderly.”** Nancy Hodgson, R.N., Ph.D.

**“Diurnal Variation in Adrenocortical Activity in Frail Elderly.”** Vicki Freedman, Ph.D.; Nancy Hodgson, R.N., Ph.D.; Kimberly Van Haitsma, Ph.D.; Jonas Marainen; Joel Leon, Ph.D.

**“Factor Analysis: Valuation of Life.”** Kimberly J. Curyto, Ph.D.; Morton Kleban, Ph.D.; Miriam Moss, M.A.; Rooju Parmar; Christine Hoffman.

**“Impact of Health Decline in Quality of Life and Mental Health.”** Christine Hoffman; Miriam Moss, M.A.; Elizabeth Carpenter, M.S.W.; Morton Kleban, Ph.D.

**“Race and Valuation of Life.”** Rooju Parmar, Morton Kleban, Ph.D.; Kimberly Van Haitsma, Ph.D.; Miriam Moss, M.A.; Christine Hoffman.

### PAPERS

**“Does Culture Change Improve the Recruitment and Retention of Frontline Workers in Long-Term Care?”** Joel Leon, Ph.D.; Jonas Marainen; John E. Marcotte, Ph.D.

**“Exploring Science, Society, Spirituality and Suffering in Elders’ Life Narratives.”** Helen K. Black, Ph.D.

**“Factors Influencing the Balance of Assistive Technology and Personal Care Among Older Persons in the Community.”** Vicki A. Freedman, Ph.D.

**“Implications of Asking Leading Questions for Estimates of Functional Limitations.”** Vicki A. Freedman, Ph.D.; Hakan Aykan, Ph.D.

**“A Structural Equation Test on Positive Valuation of Life.”** Morton Kleban, Ph.D.; Rooju Parmar.

### SYMPOSIA

**“The End of Life Odyssey: A Symposium on its Biological, Psychosocial and Spiritual Dimensions.”** Elizabeth Carpenter, M.S.W.; Miriam Moss, M.A.

**“Issues in Disability Measurement.”** Hakan Aykan, Ph.D.

## Polisher Research Award presented to Dr. Marcia Ory

Marcia G. Ory, Ph.D., M.P.H., a longtime research administrator at the National Institute on Aging (NIA), now a professor in the School of Rural Public Health at Texas A&M University, received the Polisher Research Award at the 2001 annual meeting of the Gerontological Society of America in November. The award, presented annually by the Polisher Research Institute, honors contributions in research that have directly benefited older people and their caregivers.

Dr. Ory is known among U.S. gerontologists as a talented, innovative scientist and as an effective grant administrator, who diligently worked with NIA-funded colleagues at universities and research institutions to advance the study of aging and long-term care. She was cited in particular for her leadership in nationwide

research projects such as the Alzheimer’s Special Care Unit study and the Resources for Enhancing Alzheimer’s Caregiver Health study.

As an officer in NIA’s Behavioral and Social Science Research Program from 1981 through 2001, Dr. Ory chaired numerous committees and advisory panels. She also held many volunteer leadership roles with professional groups such as the American Public Health Association and the Society for Behavioral Medicine. Along with her administrative duties, she continued to publish journal articles, book chapters, reports and other important writings dealing with aging-related issues.

The late M. Powell Lawton, Ph.D., who often collaborated with Dr. Ory during his long and illustrious career at the Polisher Research Institute, was



among those who nominated her for the award before his death. “The prolific and effective nature of her writing frequently has had an impact beyond the community of scientists,” he wrote. “She is an advocate who translates easily from laboratory to life.”

# When the last parent dies...

## *Sibling ties run deep in times of grief*

The loss of the last parent. It happens to almost everyone sooner or later. But few people, regardless of their age, are emotionally prepared to cope with this difficult life event.

Sociologist Miriam Moss and her husband, social worker Sidney Moss, have devoted much of their careers to exploring the impact of the death of the last parent on surviving family members—especially adult children.

Mr. Moss has been a grief counselor for 25 years and runs a bereavement support group for adult children in the Philadelphia area. As a team, the Mosses have published dozens of scholarly papers and book chapters on death, dying and bereavement.

Recently, they studied how adult siblings cope as a *family unit* with the loss of their parent, and how the family on the whole is affected by the death. The work is part of a completed project, now in its fifth year, funded by the National Institute on Aging. Among other aims, the research is designed to help guide counselors who work with bereaved families.

*Research Highlights* talked with Miriam and Sidney Moss about their work with adult siblings who have lost their last parent.

**RH:** *To what extent do siblings help each other cope with the loss of a parent?*

**MM:** It's not clear that siblings always help each other cope, but we can say that family relationships are very salient to each surviving child. There may be positive or negative aspects to sibling relationships. But the behaviors and attitudes of the other siblings are central to what each child experiences.

In the past, bereavement counselors, as well as researchers, have tended to focus only on the individual. We believe it's important to integrate this family perspective more fully into research and clinical work, in order to understand what the individual is going through.

**RH:** *Do surviving children usually grow closer after the death of a parent?*



*Sidney and Miriam Moss*

**MM:** I'm not sure all families become closer as the result of the death of a parent. I remember one daughter who said, "Now that Mom has died, I'm glad I don't have to have anything more to do with my brother—he has been impossible!" We don't find that basic relationships change in most families. If there is increased bonding following the death, it may be a continuation, or renewal, of closeness that existed beforehand. However, families do shift, and new roles are taken on. Very often there is a surviving child who becomes the "kin keeper" when the parent dies. And often, more than one sibling sees himself or herself as the one who should appropriately take the lead in carrying on the parent's legacy and maintaining the family identity.

**RH:** *Today, many families are spread out geographically. How does that change the way siblings interact when their parent dies?*

**SM:** From practical experience in my death-of-a-parent support group, I know that the siblings can be in the same town, even next door to each other, and there can still be resentment that one of the siblings—often a brother—has not been helpful in regard to the death of a parent, either before or after. So it's hard to generalize about the implications of geographic distance.

**RH:** *What is the experience of the sibling who lives far away and is unable to play a significant day-to-day role when a parent dies?*

**SM:** We have seen that the distant child suffers just as much, or maybe even more, than the child who is present. There are a lot of conflicting emotions in those who are not there to deal with the parent directly. There could be guilt that they were not able to do more, or jealousy of the other siblings who were more involved. Sometimes there is relief—"The sister or brother who is nearby is taking care of Mom or Dad, so I don't have to..."

**RH:** *Do brothers and sisters react differently to the death of a parent?*

**MM:** There are patterns that emerge among men and among women, although it is important to keep in mind that many men and women do not follow these gender patterns. In general, men tend to control their expressions of grief and to discuss their loss in terms of things they can do, such as taking care of the finances. There's also a sense of the brother wanting to protect his sisters from being too upset and at the same time protect himself from their grief. Women, having often been more involved in caregiving, are often more

*Continued on page 6*

**The Edward and Esther Polisher Research Institute** of the Madlyn and Leonard Abramson Center for Jewish Life (formerly Philadelphia Geriatric Center) serves as an umbrella under which psychologists, anthropologists, nurses, social workers, sociologists and physicians work to understand the process of aging. Established in 1959, it was the first gerontological research center in the nation to be sponsored by a geriatric facility.

The Institute is supported by major grants from the National Institutes of Health, the Alzheimer's Association, private foundations, and contributions from individuals interested in fostering research on aging. The Center is a nationally recognized leader in geriatric care, education and research.

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**Research Highlights** is published twice yearly by the Madlyn and Leonard Abramson Center for Jewish Life, 1425 Horsham Rd. North Wales, PA 19454-1320. For additional copies, write or call (215) 371-1879. Look for the Polisher Research Institute on the Internet at [www.abramsoncenter.org/pri](http://www.abramsoncenter.org/pri).

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### INSIDE

- SALIVA STUDY MEASURES STRESS
- DEATH OF A PARENT
- POLISHER LIBRARY GOES ONLINE

## High-tech resident-monitoring system

*Continued from page 1*

Vigil® also generates a computerized record of all alarm and sensor activity, along with staff responses. This database can be used by researchers for clinical purposes and to help management ensure quality and cost-efficiency.

The researchers also plan to look at whether Vigil® increases staff satisfaction. In preparation for the Vigil® study, Dr. Van Haitsma interviewed staff in nursing care settings in British Columbia and Ohio who have been working with the system. "Most staff expressed satisfaction with the system," she reports. "They are able to know what's going on in the room even when they are not right there."

## When the last parent dies...

*Continued from page 5*

bereft because they've lost a lot of this day-to-day interaction and intimacy.

**RH:** *Is it a good idea for siblings to seek grief counseling together?*

**SM:** This can be very helpful. A case in point: About five years ago an older couple was killed in a traffic accident. All five siblings came to my support group for about a year, and I still maintain contact with them today. It's a continuous problem for every member of that family. The younger ones, who are not married, have suffered the most. But this is a case where the siblings have really tied together beautifully, with each one supporting the other.