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PRHI Executive Summary

Pittsburgh Regional Healthcare Initiative



The double-bind in long-term care

As Pennsylvania's long-term care facilities face simultaneous demands for decreased cost and increased quality, PRHI's Pete Carlson offers a perspective on how such a double-bind might be addressed.

Long-term care needs a long-term fix. This is especially true in Pennsylvania, with the nation's second highest elderly population and fourth highest per capita spending on long-term care. Because it relies on nursing homes as the primary provider of long-term care and services, Pennsylvania spends about 40 percent more than other states on its frail elderly.

Seventy percent of the 80,000 nursing home residents in the state rely on Medicaid to pay for their care, but that program is running at a \$15-a-day shortfall in Pennsylvania—or

\$279 million a year for the nursing home residents on Medicaid.¹

Governor Rendell estimates that the state's Medicaid program will be \$400 million in debt next fiscal year. The Bush Administration proposes to trim another \$60 billion from federal Medicaid spending nationwide over the next decade. These looming cuts will increase the pressure on long-term care facilities to reduce costs.

Simultaneously, these facilities face increasing pressure to improve the quality of their care. Nursing homes

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VA long-term care facility addresses MRSA

Heidi Walker, RN, unloads 33 pounds of macaroni—about 103,000 pieces—as she prepares to talk to staff members about MRSA. The audience comprises RNs, LPNs, nursing assistants, housekeepers, escorts and others at the H. John Heinz III Progressive Care Center, the long-term care facility affiliated with the VA Pittsburgh Healthcare System (VAPHS).

Walker's topic is MRSA, an antibiotic-resistant microorganism to which nursing home residents are particularly vulnerable.

What's the point of the macaroni? Each year in the United States, approximately 2 million people contract a hospital-acquired infection in the United States each year, and 103,000 die. About half of them are attributable to MRSA.¹



Macaroni & MRSA? Heidi Walker, RN, uses macaroni to show how many Americans die each year from MRSA infections.

Photo by Warren Park, VA Pittsburgh

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The double-bind in long-term care

are required to report on a growing number of dimensions of quality of care, and much of this information is now available to the general public to promote competition among providers. Last year, the Centers for Medicare and Medicaid Services (CMS) launched a new website (www.medicare.gov/NHCompare/home.asp) that allows anyone with access to the internet to compare the performance of different nursing homes on a wide range of quality measures.

Dilemma extends to nursing

The pressure to both cut costs and improve quality creates a real dilemma for most long-term care facilities, especially when it comes to the nursing staff. While they represent the largest

category of expense, nurses are also the main determinant of quality of care. A 2001 CMS study analyzing the relationship between nurse staffing levels and quality of care found strong evidence that if staffing falls below a certain threshold, the quality of care begins to deteriorate.

For nurse aides, who provide most of the hands-on care to

residents, researchers found that the threshold level was between 2.8 to 3.2 hours of care per resident per day, depending on how many residents can perform some functions on their own. The study estimated that 91 percent of nursing homes were staffing below that

threshold level in 2000, when the national average was 2.0 nurse aide hours per day.

Complicating this picture is the high rate of turnover among the nursing staff, averaging 49 percent for registered nurses and 71 percent for nurse aides nationwide. The vacancies and the operational instability they create further decrease the quality of care and add costs. Nationally, the total cost of the turnover of nurse aides is estimated at over \$4 billion a year, or an average of \$250,000 annually for each nursing facility. It costs about \$5,000 to replace a nurse aide and about twice that to replace a nurse, considering the costs of advertising, interviewing, training, and using agency nurses during the vacancy.

Poor quality costs more

But poor-quality care is also expensive. Consider these common complications:

- **Pneumonia.** The average cost of treating pneumonia, the leading cause of hospitalization and death among nursing home residents, adds \$458 to the cost of care when treated in the nursing home, \$1,486 when treated in the emergency room, and over \$7,000 when the resident is admitted to the hospital.
- **Pressure ulcers.** The costs of treating a pressure ulcer range from \$4,000 to \$40,000 for newly developed ulcers. The cost of specialized beds and

mattresses to prevent pressure ulcer development can also be high, ranging from \$40 to \$85 per day for low air-loss beds.

- **Falls.** In a 100-bed nursing home, between 100 and 200 falls are reported each year. Four percent of these falls result in injury, such as a fracture, and each injury adds \$5,325 to the cost of care.

Poor quality care can also lead to lawsuits, which are on the rise in nursing homes, causing malpractice insurance rates to rise by 51 percent in recent years. A 2003 study found that the average recovery amount for paid claims, resolved both in and out of court, was about \$406,000 per claim. The researchers estimated that expenditures on lawsuits represent about 2.3 percent of total spending on nursing home care nationwide.

Creating real change

Many quality improvement efforts in nursing homes over the past few years have emphasized resident-focused care and creating a more home-like environment. This culture change movement has led to significant improvements in resident satisfaction, as well as staff satisfaction, leading to lower turnover. However, these approaches have not led to significant reductions in costs. As cost pressures mount, there is some question whether these efforts will continue to spread to other nursing homes or be sustained.

In Pittsburgh, the Jewish

Nurses and nurse aides represent the largest expense—but are the main determinant of quality.



¹In a report prepared for the American Health Care Association earlier this year, the accounting firm BDO Seidman, LLP calculated that the shortfall between the cost and the reimbursement per resident in Pennsylvania in 2002 was around \$15 per day. That added up to an annual shortfall of around \$279 million for all nursing home residents on Medicaid that year.

Association on Aging (JAA) is experimenting with a model designed to simultaneously improve the quality of resident care, reduce costs, and improve staff satisfaction and retention. The model is an adaptation of the Perfecting Patient Care™ system developed by the Pittsburgh Regional Healthcare Initiative (PRHI), based on lessons learned from other industries and from the experience of PRHI in other healthcare institutions. (See article, below.)

The JAA approach is to start at the point of care, focusing on the needs of residents and their families, and systematically eliminate whatever is getting in the way of delivering the highest quality of care at the lowest possible cost. The management

team is both driving and supporting these efforts by setting overall direction and high expectations, establishing priorities, removing obstacles, tracking progress, identifying what's working and what's getting in the way, sharing lessons learned, and providing necessary training.

Based on initial observations and experience elsewhere, the staff spend from one-third to one-half of their time in activity that adds little value to residents. By involving staff in getting rid of unnecessary steps that waste their time and effort, they will be free to spend more time with residents in value-added activities, which will increase both resident and staff satisfaction.

To evaluate the impact of these efforts, JAA has established baseline measures in resident, family, and staff satisfaction, key quality indicators such as falls and pressure ulcers, and staff turnover. They plan to calculate the savings achieved from improvements in quality and from reductions in turnover to identify what changes make the biggest difference in reducing costs, and to identify how improvements in quality affect overall financial performance.

This experiment should yield new insights into how nursing homes can get out of the double bind of lowering cost while improving quality.

Observations at several facilities confirm that staff spend from 1/3 to 1/2 of their time in activity that adds little value to residents.

Getting rid of unnecessary steps will free staff members to spend more time with residents.

Charles M. Morris Nursing and Rehabilitation Center

Perfecting Patient Care: It's not just about the closets

At the Charles M. Morris Nursing and Rehabilitation Center in Squirrel Hill, part of the Jewish Association on Aging (JAA), Nora Morant knows the value of a good system for delivering linens. After all, she has worked there for 56 years—since 1949.

“When you're working with teamwork and you have an organized system, it's fine. It's beautiful,” says Morant. “We used to have a system, so that idea is nothing new to me. But we need to get even better with teamwork.”

Morant, along with over 150 fellow JAA staff members, has completed a four-hour introductory course in the principles of Perfecting Patient

Care (PPC). The training, conducted by PRHI personnel through a grant from the Jewish Healthcare Foundation, is being offered over the next several months to every frontline worker at Charles Morris.

President and CEO Dave Gritzer, with firm backing from JAA's Board of Directors, has declared that residents' needs are first and foremost, and that safety and quality will be built into the way work is done. Top priority is the elimination of falls and infections among residents.

“It's the way we're doing business,” says Gritzer of Perfecting Patient Care. “Our number one concern is



A real veteran. Systematic work shows respect for everyone, including workers like Nora Morant, a 56-year veteran of the Linen Department at JAA's long-term care facility.

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Perfecting Patient Care at Charles Morris



Getting training to those on the front line. Over 150 JAA employees from across all departments have received a four-hour introductory course in the principles of Perfecting Patient Care. Team Leader Monica McWilson, R.N., leads an exercise using Legos to help participants understand how small changes can improve work flow and improve everyone's productivity. Staff members have returned to the workplace with new enthusiasm about their role in improving their work.

making sure all residents at Charles Morris and the adjoining JAA facilities have the best of care. Our other big concern is making sure our staff members have what they need, when they need it, so they can be successful and satisfied with the care they provide every day."

Weinberg Village's Squirrel Hill campus offers a number of services as part of the region's comprehensive Jewish Association on Aging (JAA). Weinberg Village, as all JAA services, are intended for the elderly people of Pittsburgh and Allegheny County. The Squirrel Hill Campus includes:

- **Charles M. Morris Nursing and Rehabilitation Center:** 157 beds
- **Assisted Living Residence:** 44 beds
- **Ladies Hospital Aid Society (LHAS)** Arbor Unit (for patients with dementia): 16 beds
- **Irving Spolan Center** for Adult Day Care : appx 40 people
- **Sivitz Jewish Hospice:** open to people all over the county, including those at other nursing homes.
- Largest **kosher kitchen** in Allegheny County includes service for Mollie's Meals, kosher, home-delivered meals for those over 60.

Long-term health care consumes 30% of America's health care dollar. Studies show that healthcare workers spend up to half of their time looking for supplies, such as linens. That's time they cannot spend with residents doing the work for which they were trained. The opportunity exists at Charles Morris—as it does at thousands of healthcare organizations across the country—to streamline work and return time to the staff and residents.

"Giving the best care to residents means having reliable systems that make work easier and more efficient," says Monica McWilson, RN, Team Leader for Perfecting Patient Care at Charles Morris.

Cold meals: finding the root cause

Eliminating falls and infections begins at the point of care. When

staff reported residents' complaints of cold meals, McWilson went to the units and, along with other frontline workers, watched what happened at meal times. They noted that often, residents had not been groomed or readied for the meal when it arrived—usually hot and on time. Why? One problem was traced to the linen supply on the floor—too many of one thing, not enough of another. If staff had to run from place to place to find appropriate linens, time was lost and residents could not be ready for meal time.

"We asked the staff on the floor, 'What are the obstacles? Why can't we have all residents ready for their meals on time?' It was the staff who identified linens as a good place to start," said McWilson.

Looking at the closet

Starting closest to the point of care, McWilson and crew on the Beechwood unit observed the linen closet there. They watched how the closet was stocked, how staff found and retrieved linens, and whether it was easy to tell if there were too few of an item or enough to meet residents' needs 100% of the time.

The linens were clean and stacked, but not in a way that made the needed item easy to find. Occasionally, access to the linen shelves was blocked with a cart full of bed pads, which had to be removed before access could be gained to other linens. Linen carts, which workers use to transport linens from room to room during scheduled bed changes, also occasionally blocked access.

Relying on the principle of the "visual work place," McWilson and several frontline workers labeled the shelves to keep linens in a



Ask them. JHF/PRHI onsite coach, Fran Sheedy Bost, leads the frontline worker training at JAA. "If you ask the workers, they will tell you," says Sheedy Bost. "They will tell you they could deliver better care if they had more time with each resident. They will tell you the current system is filled with waste or error. But here's the real key: direct care staff know how to fix the problems. It's up to us to ask them."

standardized order. Blankets will always be on the bottom shelf, for example, pads in the center, washcloths on the right-top. Blue tape lines above the shelves show the top limit for stacking according to state requirements. Likewise, cards posted on the floors prevent anything from being stored there. The portable linen carts for staff are on the side in a taped-off area, no longer inhibiting access.

Early results

So far, not only can the healthcare workers find linens more easily on Beechwood, but the visual closet has made other problems apparent, too. Currently, blankets and washcloths are in short supply; pads are plentiful. Staff are examining the causes and solutions to those problems.

Over time, McWilson believes, the closets will "talk" to them, helping them quickly recognize when they have too much or too little of an item. Stabilizing the system will make work easier across all

departments: resupply will become almost automatic; linen suppliers will know exactly what is needed; workers will never run out of linens; and residents will always have what they need.

Leaders of other units are taking a look at Beechwood's improvement, which is still very new. But promising signs include more on-time grooming for residents and decreasing complaints about cold food. The effects on falls and infections are also being monitored.

"But beyond this one experiment," says McWilson, "we hope that creating reliable, organized linen storage can be the first step in transforming the way we do our work. Not only can this benefit all of our residents, but all of our co-workers too."

Or as Nora Morant says, "We're getting back to teamwork. Everything's come full circle."



Above: It wasn't always easy to tell how much was needed, what was or wasn't being used.

Right: linen cart blocked access to a cart that overflows with pads.



Visual work space: taped lines show stack height limit

Labeled shelves: show where items go, makes it easy to see what's running low. Nothing's in the way.

Nothing on the floor: signs taped to the floor say it all.

From page one

VA's Heinz long-term care facility takes on MRSA

"When I tell co-workers that each little piece of macaroni represents a human being, a fellow American who died last year due to hospital-acquired infection, it really gets their attention," says Walker, the MRSA Prevention Coordinator at Heinz.



Supply line. Beginning at the VA's acute-care hospital in 2002, the Toyota-based Perfecting Patient Care System™ helped create a reliable supply of hand hygiene products. These system improvements paved the way for further advances against MRSA at the main hospital—and also at the Heinz long-term care facility.

Long-term care and MRSA

In the United States, more patients are in long-term than in acute-care facilities.² But long-term care facilities differ from hospitals in one significant way: most patients reside there. When those residents need episodic treatment at acute-care hospitals, they usually return to their long-term care domicile once the crisis has passed.

This back-and-forth movement of patients between and among

facilities is thought to increase both their exposure to infection and their chances of spreading it to others. For this reason, tracking down and eradicating MRSA in long-term care facilities is especially hard work.

Patients who are *infected* or *colonized* with MRSA carry the organism on or in their bodies and can potentially spread it to others. And while colonized people may have no symptoms, about a quarter of them will ultimately acquire a full-blown MRSA infection.

Healthcare workers can become colonized, too. In fact, MRSA is spread most commonly through the hands of healthcare workers. Although colonization among healthy workers is often transient, it raises the unsettling possibility of spreading MRSA beyond the hospital walls, to friends and family. The issue of MRSA represents the confluence of patient safety and worker safety.

VAPHS targets MRSA

The VA's University Drive acute-care hospital garnered national attention for all but eliminating MRSA infections on the post-surgical unit, 4 West. The work on 4 West began as a joint venture in 2002 between the VA, PRHI, and the Centers for Disease Control and Prevention.

Beginning in 2002, 4 West Team Leader, Ellesha McCray, RN, and PRHI Coach, Peter Perreiah, began improving access to equipment and materials staff need for MRSA patients. Using the Toyota-based

Perfecting Patient Care™ model, the improvement team helped to create a reliable supply of gowns, gloves and hand hygiene supplies, and made dozens of other improvements that freed up time for staff to devote to infection control.

The work spread through the acute-care hospital, and also to Heinz. These early measures also paved the way for what came next: the capacity to test every patient for the presence of MRSA.

Screening every patient

Now, the entire VA University Drive hospital and the Heinz long-term care facility, has begun screening every patient for MRSA on admission; isolating patients who harbor the organism; and raising the expectation among staff of 100% adherence to infection control protocols. The hospital also tests all patients on discharge to learn whether they became colonized or infected during their stay.

Over five days in June, all 250 patients at Heinz received an initial screening for MRSA. The screening yielded a surprise: 39 patients, about 16%, unexpectedly turned out to be colonized. Had these asymptomatic patients been mixed in with the general population, they could have spread the microorganism to others. But the screening allowed those patients to be placed in a room requiring contact precautions (hand hygiene, gloves and gowns) and other measures in their treatment. When a patient is

¹ Thronsberry C. NNIS. 38th ACAAC. 1998; San Diego, CA, Abstract E22; MMWR Morb Mortal Wkly Rep. 1997; 46:624-636

² Nicolle, Lindsay E., Preventing Infections in Non-Hospital Settings: Long-Term Care. Emerging Infectious Diseases, Centers for Disease Control and Prevention, Vol. 7, No. 2, Mar-Apr 2001

³ The VAPHS, in conjunction with PRHI, developed the MRSA program, and graciously granted permission for PRHI to post it at: http://prhi.org/download.cfm?file=VA_MRSA_Countermeasures_11_02_04.pdf

under contact precautions, equipment like stethoscopes and blood pressure monitors stay in the room and are not shared. Patients are assigned their own wheelchairs and other equipment.

However, ALWAYS screening new patients and ALWAYS screening on discharge is itself a tall order. How can workers make sure that these tests don't fall through the cracks in a complex organization?

In July at Heinz, automated templates were introduced into the computer system, a timely "pop-up" prompting personnel to order the appropriate screening. The VA's electronic medical record also makes it possible to record which patients test positive for MRSA colonization or infection, so that upon subsequent hospitalizations at any VA hospital, contact precautions can be taken by those caring for that person.



Dedicated equipment. Equipment in the rooms of MRSA patients is never shared. The stethoscopes' bright pink color provides a vivid reminder that it belongs in a MRSA room.

Discussion groups

As the full-time MRSA Prevention Coordinator at Heinz, Walker is responsible for educating staff about MRSA. And staff members are eager to learn.

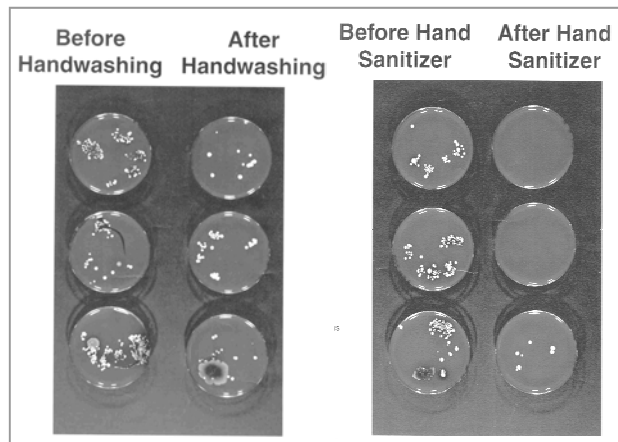
"We held discussion groups on four nights and asked for voluntary attendance. By the end of the fourth night, 100% of nurses had attended," said Walker. "They understood that we were interested in learning what they actually do, what the current condition of their work is, how it really is for them. We talked about the variation in the way they currently do things like hand hygiene. And we let them know we are here to help them make their work easier and help them do the right things for their patients. They really responded."

Walker has created posters on correct procedure for obtaining the screening swab. These now join the other visual cues inviting correct hand hygiene, and build on the MRSA work already begun. Workers also have at their disposal surveys and links to information on preventing MRSA.³

Now a cross-disciplinary core group of staff members has volunteered to research more about the ideas, obstacles and solutions workers face. The group intends to build on what they learned implementing the Toyota-based model to create a VA-specific healthcare improvement method.

"We'll see what we can do right away. And we'll share what we learn at a community MRSA meeting," says Walker.

The largest concern at Heinz, as at any long-term care facility, is patient mobility. Because social interaction is a major part of rehabilitation, patients with



Visual cues: posters are installed in staff areas show petri dishes created on-site from clinicians' hands. The poster demonstrates the superiority of alcohol hand rub over hand washing alone. This information is reinforced through staff meetings at Heinz.

MRSA are free to move about. The group at Heinz will begin identifying and developing applicable precautions for this unique population.

"That will be our greatest challenge," says Walker. "We can isolate the patient in their room, but if they're mobile, they're free to travel the hospital. We have to develop appropriate protective measures while addressing their need for socialization."

MRSA prevention: a healthy contagion

The MRSA program that began at the VA has been taken up by the entire community. Currently, target units at 23 area facilities—as well as the entire VA acute- and long-term care hospitals—have begun screening 100% of their patients on admission and discharge to determine who needs to be isolated and who may have become colonized.

Hospitals and long-term care facilities share patients. Up until now, they have also shared infections. The VA and community efforts represent a way to share information about MRSA prevention and process improvements that will make patients and workers safer.

Calendar, Fall 2005



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Day	Date	Time	Event	Place	Contact
Tues	Nov 8	4-7 p	Perfecting Patient Care™ Introductory Session	PRHI Learning Center	CME credits offered Registration required Barbe Jennion 412-586-6711 bjennion@prhi.org
Weds	Nov 9	8a-5p	PPC™ 101	PRHI Offices	
				Centre City Tower	
				24th floor	
				650 Smithfield Street	
Mon-Fri	Nov 14-18	8a-5p	Perfecting Patient Care™ University	Pittsburgh	CME credits offered Registration required Barbe Jennion 412-586-6711 bjennion@prhi.org
Mon-Tue	Jan 9-10 Jan 23-24, 2006	8a-5p		Charles Morris Nursing and Rehabilitation Center	
Mon	Oct 31	1:45-4p		UPMC Shadyside	
			Perfecting Patient Care™ Team Leader	West Wing Conf Rm C	
			Working Group meeting, host: Jennifer	5230 Centre Avenue	
			Cardiac Forum with guest speaker	5230 Centre Avenue	Karyl Troup-Leasure, Ph.D. 412-586-6716 ktroup@prhi.org
			Blase Caraballo, MD, speaking on valve replacement	UPMC Shadyside	
Sat	Jan 7, 2006	9-11 a.m.			

PRHI Executive Summary is also posted monthly at www.prhi.org

Please direct newsletter inquiries to: Naida Grunden, Director of Communications, 412-586-6706, ngrunden@prhi.org