INFORMATION FOR INTEGRATION

As healthcare shifts from the acute care to the community-based wellness model, a key asset for an integrated delivery system will be the information it has access to and its ability to share and interpret that information. Through their efforts to create better services for older adults along the continuum of care, a group of Ohio healthcare providers learned that organized and shared information can improve seniors' access to services and open new opportunities for partnering with other hospitals.

A COLLABORATIVE EFFORT

In 1985 St. Charles Hospital, Oregon, OH, created a business plan outlining the various services the hospital needed to complete an integrated continuum of care in the community. To implement this continuum, the suburban facility invited a fellow member of Mercy Health System

Ms. Sampsel is senior associate for long-term care, Catholic Health Association, St. Louis; Ms. McNichols is vice president, patient services, St. Charles Hospital, Oregon, OH, and Mercy Hospital of Toledo, OH; Mr. Kordash is president and chief executive officer, St. Charles Hospital; and Mr. Bonitati is PC coordinator, St. Charles Hospital and Mercy Hospital.

A Senior Services Program Spurs Development Of a Multi-Hospital Integrated Network

BY DEBI SAMPSEL, SALLY McNICHOLS, RANDALL D. KORDASH, & DAVID BONITATI

(Cincinnnati), the inner-city Mercy Hospital of Toledo, OH, to explore ways to serve older adults. By streamlining and enhancing their existing senior services, the two hospitals could more

. . . .

Summary   In 1985 St. Charles Hospital, Oregon, OH, and Mercy Hospital of Toledo, OH, launched a plan to jointly offer a continuum of services to area seniors. A multidisciplinary team of professionals from both hospitals decided that a membership program (titled the Senior Advantage Program) would be the most effective way to market the services and make them available.

As part of the program's development, professionals from the two facilities created a personal computer–based software package that enabled them to capture and update information about Senior Advantage participants. The software program includes a detailed application form and a section for recording enrollees' service utilization. The program enables care givers to enter data when they interact with clients in *any* healthcare or community-based setting. To complement the personal computer software, a program to construct a central data base was written for the two hospitals' main computer systems.

In 1991 St. Charles and Mercy hospitals joined two other facilities to form First InterHealth Network, a for-profit integrated delivery network. The Senior Advantage Program became the basis for the first package of services offered by First InterHealth.

In 1992 the program became the catalyst for yet another collaborative venture, linking two rural Ohio Mercy hospitals to St. Charles and Mercy hospitals. The expanded network encouraged rural patients to remain within the Mercy network, utilizing inner-city and suburban Mercy-sponsored hospitals when appropriate.

effectively fill identified service gaps for seniors.

At the invitation of St. Charles's chief executive officer, a team of multidisciplinary professionals from both institutions came together to identify specific areas of need and plan to meet them.

Services already offered by St. Charles Hospital included free transportation, a support group for care givers at a local nursing home, a health promotion program, an interfaith community health assistance team consortium, and a nursing home liaison program. Mercy Hospital's services for older adults included Medicare counseling, van service for hospital and physician appointments, health promotion, and social activities. The team determined that the two hospitals should find a way to package, improve, and sponsor these activities; share resources such as a mailing list and data base; and jointly develop an information brochure, newsletter, and uniform marketing image.

The committee identified existing services that could be bundled into a package of benefits offered by both hospitals. Other planned services included low-income housing projects, nursing home acquisition, case management, an adult assessment team, a home stabilization program, and older adults' exercise programs. An extensive community needs assessment indicated that the hospitals should consider various potential partners and previously unrecognized opportunities within the community (e.g., Catholic Charities and businesses) for the hospitals' future development along the continuum of care.

After identifying existing services gaps, St. Charles and Mercy hospitals took several steps to create a cost-effective, one–entry point system that would allow seniors easy access to a continuum of care. A multidisciplinary team decided that a membership program offered through both hospitals (called the Senior Advantage Program) would give participants access to a full range of benefits. This membership program appeared to

The system was designed to gather data for the development of a variety of products and services.

be the most effective way to market the services and make them available to area seniors.

Through the Senior Advantage Program, St. Charles and Mercy hospitals have filled virtually all of the service gaps the original planning committee identified. After experimenting with various case management models, the hospitals finalized a case management plan about a year and a half ago. They have also helped create two low-income housing units in their service area, with a third scheduled to open soon. In addition, the Senior Advantage Program contracts with local nursing homes to ensure members have access to long-term care services.

The assessment of community needs also prompted St. Charles and Mercy hospitals to begin working closely with Catholic and non-Catholic churches to organize volunteer efforts. The hospitals have developed programs throughout their service area in which volunteers provide a variety of services (e.g., transportation, assistance with household chores) that help the elderly maintain their independence.

SOFTWARE PACKAGE

In developing the Senior Advantage Program, a team of professionals from the two facilities created a software package that enabled them to capture and update information about program participants. The system was designed to gather data for the development of a variety of products and services, including:

- Community outreach services
- Preventive health offerings
- Hospital and physician services
- Marketing and public relations efforts
- Demographic profiles for business plan development
- Patient profiles
- Educational programs
- Health status indicators

The team determined that the software should
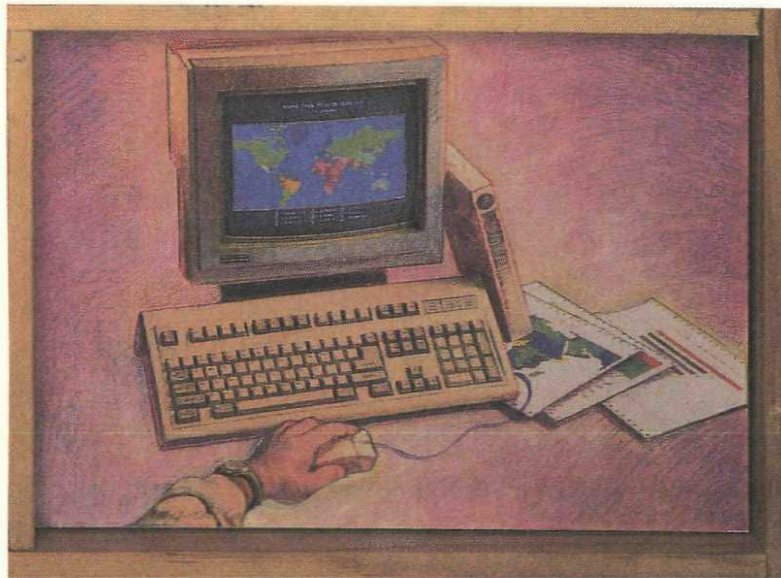
INFORMATION NETWORK START-UP HINTS

Although the Senior Advantage Program has been a success, it would have been even more effective if certain components had been in place from the outset. In developing the program, St. Charles and Mercy hospitals have learned several lessons that may be useful to other institutions building similar services:

• *Develop software simultaneously for the main system and personal computer that meets the organization's cost accounting needs.* At minimum, the software should enable departments in the institution to record data transmission at the point of delivery. Moreover, the main computer should be programed to store data beyond that collected during a person's inpatient stay.

• *Facilitate data transfer from point of care to the main computer system.* All departments' personal computers should be equipped with modems so that patients' encounters with various departments can be tracked and accounted for automatically. In addition, capital budgets should include funds for laptop computers for case managers and community outreach workers, who can record data at the point of care and thus reduce duplication of data entry.

also facilitate future case management by tracking services and utilization. The completed program included a detailed application form for the Senior Advantage Program and a section for recording enrollees' service utilization. The application form captures information on older adult enrollees' health profiles and demographics, generating data that has a variety of uses.

The service utilization section stores information about all aspects of services utilized by older adults along the continuum of care. The program's design enables staff to use laptop computers when they interact with their clients in *any* healthcare or community-based setting.

Data Uses

The process of studying needs, developing the software, and gathering information contributed to a variety of practical uses for the data. The earlier needs assessment helped to determine the package of benefits offered to enrollees and to focus marketing efforts. The membership application form that evolved created data that could be used in future program development, niche marketing efforts, managed care contract bidding proposals, grant proposals, and topic identification for health promotion programing.

The program was introduced without additional staff or costs.

St. Charles and Mercy hospitals introduced the Senior Advantage Program in 1986 without adding additional staff or costs. St. Charles Hospital added the program to its existing gerontological services product line, under the direction of the vice president of patient services. In addition, a full-time clerical person was transferred from the nursing department to coordinate the program with the other gerontological services. A personal computer was purchased and an office established close to the social services and admitting departments. At Mercy Hospital, the IBM personal computer in the planner's office housed the Senior Advantage Program software. Staff members from the public relations, marketing, and planning departments shared responsibility for the program's various components. Now, the two hospitals have only one department, with personnel working at both locations.

Central Data Base

After designing the computer software system, both hospitals wanted an internal mechanism to track seniors' financial records and service usage within the hospitals. This mechanism would allow data base users to communicate with the main computer and access or enter data wherever the patient entered the system—through the emergency room, inpatient, or outpatient settings.

St. Charles and Mercy hospitals agreed on the need for a shared central data base and held extensive discussions about conditions and uses of these data. Hospital representatives decided that respective hospitals' data would be used in a confidential, nondisclosing (or "blind report") format and could be used only with permission. The data could not be sold to outside vendors.

After the Senior Advantage software was up and running on the personal computer, a program to construct the central data base was written for the two hospitals' main computer systems. This program allowed the hospitals to track enrollees' use of revenue-producing and non–revenue-producing services and otherwise monitor their financial impact. The information was also used to look at diagnosis-related group (DRG) categories, physician profiles, and institutional revenue and cost data per patient.

To facilitate exchange of information from the main system to the personal computer, the hospitals added an emulation board to the latter. A special identification marker placed on the files of all program members ensured enrollees' records

would become part of a master file containing data on Senior Advantage members. The profile consisted of individualized records containing financial data, demographics, lengths of stay, DRGs, physician listings, and insurance company names.

By identifying market segments and their potential for enrollment in various health promotion activities, the main computer system program generated data that could be used to reach targeted audiences within the community. For example, the profiles generated by the program on enrollees' self-disclosed medical conditions produced data that led to the development of health promotion programs, focused health lectures, and educational material distribution. Data revealing DRG categories that showed financial losses led to health promotion programs in these areas. Through periodic updates of the applications, planners using the profile can even track when enrollees choose a primary care physician.

BUILDING A NETWORK
As the Senior Advantage Program gained momentum, pressures were building in the Toledo area for hospitals to form integrated systems that could better hold down costs and address important community healthcare needs. One of the early alliances in this community was First InterHealth Network, a for-profit network formed in 1991 that originally included St. Charles and Mercy hospitals; Flower Hospital, Sylvania; and St. Luke's Hospital, Maumee. In 1992 St. Vincent's Medical Center, Toledo, joined the alliance.

Several factors made the Senior Advantage Program an excellent candidate for the initial collaborative effort between First InterHealth members. First, it provided an efficient way to bring together individual data bases from the four hospitals, consolidating information that could eventually be used in bidding for managed care contracts and applying for a Medicare-waiver health maintenance organization. Furthermore, the Senior Advantage Program, through its host institutions, already offered extensive services. Flower and St. Luke's hospitals worked to package and unify their senior services to complement the Senior Advantage Program. In 1991, after all four hospitals had similar programs to offer, they united and presented themselves to the public as "the senior network." In 1992 the Senior Advantage software package was used to create a data base that was downloaded to a central file at

Care for seniors has been enhanced.

the office of First InterHealth Network.

The ready availability of data on Senior Advantage members has helped reduce seniors' lengths of stay and enhanced follow-up care. Case managers now contact patients within a day after hospital discharge to ensure they understand instructions for medication and self-care. Patients are also given a number to call if they have questions. Better, more accessible information on patients' postdischarge needs has reduced readmission rates among seniors.

PROGRAM REGIONALIZATION
The Senior Advantage Program has led to further networking opportunities beyond Toledo. In

SENIOR ADVANTAGE APPLICATION FORM

"Yes, please enroll me in Senior Advantage!"

Last Name	First Name	Middle Initial	

Street Address	City	State	Zip

Home Phone #	Date of Birth	Sex

Social Security #	Physician/Family Doctor

Supplemental Insurance Company

Person to notify in case of emergency:

Name	Relationship	

Street Address	City	State	Zip

Home Phone #	Business Phone #

I have the following medical conditions:

☐ Angina	☐ Hearing loss	I prefer that my records be maintained at: (check one)
☐ Arthritis	☐ Heart failure	
☐ Asthma	☐ High blood pressure	☐ St. Charles Hospital
☐ Back trouble	☐ Incontinence	☐ Mercy Hospital
☐ Cancer	☐ Kidney trouble	
☐ Contact lenses	☐ Liver disease	Have you ever used St. Charles or Mercy health care services before?
☐ Deaf/Mute	☐ Pacemaker	
☐ Dentures	☐ Paralysis	
☐ Depression	☐ Phlebitis	St. Charles ☐ Yes ☐ No
☐ Diabetes	☐ Rheumatic fever	Mercy ☐ Yes ☐ No
☐ Emphysema	☐ Sexual dysfunction	
☐ Epilepsy	☐ Sinus trouble	
☐ Eyeglasses	☐ Stroke	Signature Date
☐ Glaucoma	☐ Other	

are already seeing results. Reducing middle management reduces costs. The annual consumer price index for the health industry increases more than 7 percent each year, but when we raised resident charges, we were able to stay with the consumer price index increase for general business, which is only 3.5 percent.

We will see further reduction in expenses when the neighborhoods are fully remodeled, with functional kitchens. When residents are able to select exactly which foods they want for each meal, far less food will be thrown out at the end of the day. We are anticipating a 40 percent decrease in food costs.

We have always said that our change to a social model would not be more expensive than a medical model. Even if it turns out that the social and medical models are approximately equal in cost, the social model has a huge advantage: It allows the resources to go directly to the resident. It is customer service oriented, the option that nearly everyone would choose for his or her own long-term care.

We will be monitoring customer satisfaction constantly and carefully. McNees and a team of researchers, representing a joint effort by the Sisters of Providence and the University of Washington, are continuing their observations in the nursing center: How are staff and residents interacting? How does each person in the neighborhood spend his or her time? How are things changing?

The university will also be filming a real-time documentary at the Mount. Researchers will install a video camera in a nursing center neighborhood that has not been remodeled and leave it running nonstop for 72 hours. After the remodeling, they will install the camera again for another 72 hours to discover how the change from a medical to a residential environment affects those who live and work here.

We are testing a written survey form that residents, family, and staff can use to express an opinion about anything happening at the Mount. It is designed to help us keep track of what is working and what is not. Once the survey has been refined, we will distribute it throughout the neighborhoods. Using the form is voluntary, but so far we have been getting positive responses.

Probably the most important feedback we get is via the grapevine: conversations with residents, family, and staff. Most of these conversations are informal and spontaneous; some take place during family and neighborhood meetings. Communication is much faster and more direct when you are working with a neighborhood group instead of a formal hierarchy.

One result of improved communication is that more people are involved in hiring decisions. New staff are no longer chosen through a centralized human resources department. They are chosen by residents, family, and staff to complement a neighborhood's unique personality. This creates closer bonds and greater commitment. We are seeing real reductions in staff sick leave and turnover.

Life at the Mount is improving, for everyone. Resident-directed care *can* work. And this is our third reason to make such a dramatic change—to show others that it can be done. I leave you with a sincere invitation: Come visit us. You will find that we are doing some things well and others with a large helping of confusion. We hope you can learn from us, but we want your opinion on what works and what does not. We know there are solutions we have not yet dreamed of. If you help us discover them, then perhaps we will find ourselves taking the next risks together □

For more information, call Charlene Boyd at 206-937-3700.

1992, as a result of a Health Care Financing Administration grant, two rural Mercy Health System hospitals— Mercy Hospital, Tiffin, and Mercy Hospital, Willard—adopted the Senior Advantage Program and were linked electronically with Mercy Hospital in Toledo and St. Charles Hospital.

This networking created an opportunity for the two city hospitals to better serve patients. For example, statistics indicated that rural patient admissions were, to some degree, bypassing those of suburban and inner-city sister hospitals. The expanded network encouraged rural patients to remain within the Mercy network, utilizing inner-city and suburban Mercy-sponsored hospitals when appropriate. The computer linkage also improved patient information flow. The two rural Mercy hospitals' networks can transmit enrollees' membership records to the inner-city and suburban hospitals so that when enrollees are referred to these two healthcare providers, their profiles will be available when they arrive.

Although not part of First Inter-Health Network, the rural hospitals have been able to take advantage of the benefits and cost-effectiveness offered by the Senior Advantage Program and software. At a time when institutions must collaborate to serve needs, Senior Advantage has enabled these Mercy Health System institutions to present a more cohesive identity to the community and to increase staff productivity by sharing expertise.

MANAGED CARE APPLICATIONS
The model provided by the Senior Advantage software shows that this type of computer system can lend itself well to community-based case management and one–entry point contacts for patients. The system avoids duplication of recorded information and increases efficiency and effectiveness. Moreover, having an interhospital computer system in place positions the network to link electronically to other provider sites, such as physician offices, pharmacies, and neighborhood clinics.

Managed care providers like the pro-

gram because it contains patient profiles that can be categorized to provide statistical information on each individual or group. It is also useful for calculating volume projections and service utilization. In addition, comparing enrollment data with research studies can assist with predictions for program and facility planning and resource consumption. These components are essential to the budgeting processes.

FUTURE APPLICATIONS

Programs like the Senior Advantage application will be useful for hospital-based case managers, as well as for others who provide services to older adults: community outreach case managers, home stabilization nurses, and parish nurses. In the future, it is possible that baby boomers—or the generation that succeeds them—will carry their own medical records around on a disk, or have them encrypted into credit card–like devices or even stored under their skin. Programs like Senior Advantage can facilitate this evolution by providing information links between the established patient-centered care plan and the patients' self-reporting and monitoring of their own self-care practices. As computers become household appliances, the patient will be able to enter changes in the profile information; to make journal entries; and to give the healthcare provider progress reports on body functions, health concerns, and adherence to healthy practices. Those who do not own home computers will be able to access terminals or assistance at public locations.

Although it is impossible to predict how all this will take shape, the experience of the healthcare providers in the Toledo area proves that, through networking and efficient use of computer technology, healthcare providers can offer better services to seniors and share, shape, and use information in more ways than ever thought possible. ◻

H ospice of Peace provides services on the basis of need.

ered by Medicare, Medicaid, or third-party insurance pay on a sliding-fee scale. In 1993 more than $52,000 of hospice services were directed to charity care.

Its Catholic foundation drives Provenant to offer a continuum of care, devoting resources to the end stages of life, as well as the beginning stages. Although caring for persons in their homes seems to be the antithesis of a healthcare institution's market strategy, home hospice care exemplifies Provenant's goal of breaking down the barriers that have in the past separated healthcare providers from the communities they serve. ◻

PHILOSOPHY OF HOSPICE

In a time when terminally ill patients and their families feel disenfranchised by a society uncomfortable with death, it is extraordinary for the dying process to be a spiritual journey. Yet families whose loved ones have been cared for at home through Hospice of Peace, Denver, describe the experience as such.

Hospice of Peace nurses are on call around-the-clock to monitor patients' vital signs and help family care givers. Because patients and their families are at home, the environment is one of love and comfort rather than fear and strangeness. Family care givers administer patients' medications and bathe and nourish patients.

"We try to help the patient and family focus on relationships that give life meaning," said Ann Luke, executive director of Hospice of Peace. Team members foster relationships by helping families and patients clarify the needs and challenges they face—interpersonal needs, feelings of abandonment, goals for the time remaining, understanding the myriad feelings that surface, and myths about how things should be.

Such an environment nourishes dialogue about spiritual matters as well. Pastoral care counselors help patients and families voice their beliefs about life and death. Some persons have strong religious beliefs; others have many questions. When appropriate, Hospice of Peace works with a patient's religious institution to facilitate this dialogue.

Hospice care is not just effective in the last moments of life. According to Luke, the sooner the team begins working with a patient and family, the more it can diminish the wear and tear on family care givers. "Knowing that we're there to help enables the family to relax a bit and focus on the quality time that is left."

Hospice care does not stop when the patient dies. The team offers bereavement support for a family throughout the year after a loved one has died. "So many people think they have done all the grieving before the death," commented Luke, "but there is still much more at the time of death and afterward."