Developing a Comprehensive Interdisciplinary Senior Healthcare Practice

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The PeaceHealth Senior Health and Wellness Center (SHWC) provides primary care coordinated by geriatricians and an interdisciplinary office practice team that addresses the multiple needs of geriatric patients. The SHWC is a hospital outpatient clinic operated as a component of an integrated health system and is focused on the care of frail elders with multiple interacting chronic conditions and management of chronic disease in the healthier older population. Based on the Chronic Care Model, the SHWC strives to enhance coordination and continuity along the continuum of care, including outpatient, inpatient, skilled nursing, long-term care, and home care services. During its development, a patient-centered approach was used to identify senior service needs. The model emphasizes team development, integration of evidence-based geriatric care, site-based care coordination, longer appointment times, “high touch” service qualities, utilization of an electronic medical record across care settings, and a prevention/wellness orientation. This collection of services addresses the interrelationships of all senior issues, including nutrition, social support, spiritual support, caregiver support, physical activity, medications, and chronic disease. The SHWC provides access in an environment sensitive to the special needs of seniors, with a staff trained to meet those needs. The SHWC business model attempts to improve access and quality of care to seniors in a mostly noncapitated health-care setting, while also attempting to remain financially viable. J Am Geriatr Soc 52:2128–2133, 2004.

Key words: chronic care model; senior health; outpatient care

Providing high quality, cost-effective primary care to older adults, especially frail elder patients, is a challenge for the U.S. healthcare system. Ideal care of chronically ill older persons should be proactive, comprehensive, continuous, coordinated, efficient, evidence-based, and predicated on the preferences/involvement of patients and their families.1 The practical application of this type of care has produced mixed results, and the few best practices have achieved only a modest penetration into mainstream care.2–4

Although the senior health clinic model, an ambulatory geriatric clinic providing primary care, has existed for some time, and the components of a quality service are well described,5 little is known about its effectiveness and quality compared with more traditional models. This model has introduced care coordination and access to multidisciplinary health workers with the skills to meet the unique needs of seniors.6 Other models have incorporated geriatric expertise into primary care physician (PCP) practices through geriatrician consultation3,7,8 or PCP/staff training.9 A complex interplay of subsystems, including an ever-changing national context, regional variations among provider networks, absence of valid outcome measures, shortages of geriatric healthcare workers, and provider inexperience with team processes, influence each new approach.6,10

The senior health center model presented here uses the Chronic Care Model (CCM)11–13 as a guideline for designing a geriatric-specific primary-care clinic using an interdisciplinary team approach within an integrated healthcare system. Lessons learned in the evolution of the senior clinic have been integrated into the model. This approach was predicated on the assumption that improving the quality of care leads to a more cost-effective, efficient system of care that meets clinical, functional, and preference needs. The following discussion describes a patient/family-focused

From the PeaceHealth Oregon Region Center for Senior Health, Eugene, Oregon.

Development of the Senior Health and Wellness Center (SHWC) began in 1998 with financial support from PeaceHealth capital and operational funds. In January 2001, PeaceHealth was awarded a 4-year grant from the John A. Hartford Foundation Geriatric Interdisciplinary Team in Practice Initiative. Hartford grant funds are being used to support a quasi-experimental, 30-month research study to compare health and organizational outcomes in this practice with traditional models of care. Other aspects described in this paper that are partially supported by Hartford, in collaboration with PeaceHealth, include the training of the SHWC interdisciplinary team and resources for developing quality improvement measurement tools and methods.

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approach to defining the service and clinical needs. Once these needs were defined, quality improvement tools and processes were used to develop the practice within the context of the chronic care model.

THE CHRONIC CARE MODEL

Developed through review of chronic illness management literature and a national expert panel, the CCM offers an organized framework to comprehensively provide the resources and processes needed to deliver evidence-based primary care that supports the interactions between informed, activated patients and a prepared, proactive practice team (Figure 1). Although the CCM has historically been used for persons with a single chronic condition, few have used it to design geriatric care for patients with multiple chronic diseases. PeaceHealth, an integrated healthcare system, explored this concept through development of its Senior Health and Wellness Center (SHWC). An understanding of the local environment and the culture of physician practices within that environment are essential for designing effective chronic care models. A voice of the customer process, modeled after the auto industry’s lean thinking concept, gathered input from a diverse base of informants to obtain a broad perspective. The development team then used an Institute for Healthcare Improvement (IHI) Breakthrough Collaborative on Improving Care for People with Chronic Conditions (IHI Congress, October 1998) to test innovations in a three-physician internal medicine practice using “Plan-Do-Study-Act” quality-improvement methodology. Focus groups (healthy and frail seniors) were used to test concepts and practice innovations. The qualitative data were used to develop a comprehensive business plan that served as a template to provide annual progress reports for executive leadership (Table 1).

THE PEACEHEALTH SWHC

The PeaceHealth SHWC opened in February 2000 and is located in a city of 132,000. The Center serves a countywide population of 322,900 with a senior population of 45,000. The clinic is integrated with a multispecialty clinic that includes family practice, internal medicine, women’s health, pediatrics, physical therapy, behavioral health, health information library, radiology, and medical laboratory.

Functional and Clinical Outcomes

Figure 1. Chronic Care Model components used in development of the PeaceHealth Senior Health and Wellness Center.

Three full-time geriatricians and a nurse practitioner serve a patient population of 1,700 seniors with an average age of 77. Sixty-eight percent are female, and 53% have a high school or greater education. The insurance mix is 45% Medicare Part B fee for service, 35% Medicare preferred provider organization (discounted fee for service), and 20% Medicare health maintenance organization. The majority (90%) of care provided is continuous and longitudinal. Elders from other PCP practices access SHWC resources through referral for ongoing care, consultations, and access to community resource information.

Patients new to SHWC complete a health and risk tool screening questionnaire (Providence Health System, Portland, OR) to proactively address health-management concerns. The SHWC attracts a trailer, higher-risk senior patient than other primary care practices. Approximately 35% are classified as high risk for hospitalization, functional decline, high cost of care, nursing home placement, and death within 12 months. Self-report testing indicates that this group has lower physical function, more depression, worse quality of life, and greater activity of daily living dependency than in other primary care practices.

The SHWC interdisciplinary team includes physicians, nurse practitioners, medical social worker, nurses, receptionists, a pharmacist, and a dietitian. Ad hoc members at weekly team meetings include a chaplain, physical therapist, home health nurse, behavioral health professional, and patient information librarian. A PeaceHealth hospitalist team manages inpatient medical care using telephone, e-mail, and a shared electronic medical record (EMR) to transfer vital information. A geriatrician and four gerontological nurse practitioners collaboratively manage long-term-care patients with community PCPs, see urgent and primary care patients in the SHWC, and participate in weekly care conferences as needed.

PRODUCTIVE INTERACTIONS

Improving the relationship between clinicians and patients/families may be the most important quality improvement activity in medical care. At SHWC, such interactions are supported with quality communication skills and team behaviors.

The interdisciplinary team approach is critical in providing high-quality ambulatory services for older adults, but placing a group of individuals from different disciplines in the same room does not mean that they will function as a team. Most medical professionals are not trained in team skills. Formalized training and ongoing maintenance of team behaviors is required and is grounded by the work of the Geriatric Interdisciplinary Team Training initiative and multidisciplinary team research.

The SHWC selects staff with a team orientation to help ensure that team members are flexible and open to change and value the expertise of their colleagues. To assure optimal team communications, staff participates in facilitated workshops that identify the unique communication styles of each person and how those styles affect staff relationships. Other training includes activities to improve clinician/patient communication skills and adoption of the Principles of Successful Teamwork and Team Competencies (Rush University Medical Center Geriatric Interdisciplinary Team Training Program).
Providing an environment in which team members define their roles through negotiation, define team goals, and continuously reevaluate those roles and goals in a team process has led to higher employee satisfaction. The SHWC staff scored 72 (scale 0–100) on satisfaction surveys, compared with an average of 60 in comparable PCP practices and 61 for the entire organization. SHWC staff satisfaction is consistently among the top 10 organization groupings.

A survey instrument developed to measure teamness within the SHWC work group has identified four domains of team attributes that develop over time: cohesiveness, communication, role clarity, and goals-means clarity. The SHWC teamness score of 71 (scale 0–100) indicates that all four attributes are in place and is higher than the average score of 53 in comparable clinics. A score of 53 indicates that a team does not have roles and goals clarity in place. Providing feedback to the SHWC team on their level of team development has allowed staff to continually improve teamwork abilities.

### MICROSYSTEM DOMAINS

Patients care about front-line productive interactions throughout the health system, and this shapes their impressions about the quality of care received. The CCM provides a framework for ensuring that the domains supporting

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Table 1. Senior Health and Wellness Center Business Plan Review

<table>
<thead>
<tr>
<th>Strategic Focus</th>
<th>Business Plan</th>
<th>Actual</th>
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<tbody>
<tr>
<td><strong>Mission fulfillment</strong></td>
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<tr>
<td>Location underserved</td>
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</tr>
<tr>
<td>Target 40% new non-PeaceHealth Medical Group (PHMG) patients</td>
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<td>67% new non-PHMG patients *</td>
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<tr>
<td>Provide a senior-sensitive environment</td>
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<tr>
<td>Serve 30% high-risk patients</td>
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<td>100% staff trained in senior sensitivity</td>
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<tr>
<td>Provide one-stop shopping</td>
<td></td>
<td>Serve 36% high-risk patients</td>
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<tr>
<td><strong>Access</strong></td>
<td></td>
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<tr>
<td>Identify high-risk patients and provide care team review and care plan</td>
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<td></td>
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<tr>
<td>Provide an Interdisciplinary care model</td>
<td></td>
<td>Enhancing model using John A. Hartford Foundation grant award</td>
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<tr>
<td><strong>Quality</strong></td>
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<tr>
<td>Serve 36% high-risk patients</td>
<td></td>
<td>Services include primary care physician, nurse practitioner, master of social work, dietary, pharmacy review, behavioral health, physical therapy, peer counseling for seniors, laboratory and imaging, anticoagulation clinic, wellness classes, health screenings</td>
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<tr>
<td><strong>Growth</strong></td>
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<tr>
<td>Target 1,715 active patients by end of Year 3</td>
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<td>1,605 active patients</td>
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<tr>
<td>Target n visits (Year 3) 9,043</td>
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<td>313 deceased patients</td>
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<tr>
<td>Increase collaboration with community agencies</td>
<td></td>
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<tr>
<td><strong>Community citizenship</strong></td>
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<tr>
<td>Increase collaboration with community agencies</td>
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<tr>
<td>Provide senior volunteer support in patient care</td>
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primary care at the practice level are adequately addressed. Appendix 1 outlines features of the four SHWC microsystem domains.

Beyond handing brochures to patients, self-management support is a recognition that the patient is ultimately in control and that providers need to inform, motivate, empower, and activate the patient. Each SHWC patient receives a health manual and an explanation of how to use it. Standardized patient information on common geriatric conditions is available in every examining room. The on-site Health Information Center librarian provides personalized counseling for patients about available resources. New strategies for promoting patient self-management are formulated from SHWC patient focus groups. One example is a list of common self-management questions given to patients at every visit by a nurse trained to help patients/caregivers gain access to needed information.

The centerpiece for the SHWC delivery system design is an interdisciplinary team with hour-long weekly care conferences for high-risk, complex patients. Team/ad hoc members make patient selections for care conferencing, which a nurse practitioner and a social worker review. The entire team discusses four to six patients each week using a standardized review process. The patient care plan is reviewed every 3 months.

Several IHI Idealized Design of Clinical Office Practice features were also initiated, including office nurse teams with roles based on function rather than the traditional physician-nurse dyad, incorporating the “do today’s work today” philosophy, using streamlined paperwork management processes, and ensuring appointment availability through continuous monitoring/evaluation of patient demand.

Providing decision support through the integration of evidence-based geriatric medicine into daily practice is a challenge. Geriatric assessment tools, such as mental status, activity of daily living assessment, falls/gait assessment, geriatric depression scale, and nutritional survey have been standardized across the practice. Protocols, including standing orders for immunizations, diabetes care, medication refills linked to laboratory evaluations, and chronic pain management, have been developed. Published American Geriatrics Society guidelines of chronic pain, falls, and diabetes mellitus are used along with practice-developed guidelines for geriatric depression, urinary incontinence, dementia, and osteoarthritis. Each patient’s health-risk status is assessed at the first visit. The risk-assessment process triggers attention to conditions such as falls, incontinence, and depression. It also initiates a nursing process for bringing immunizations up to date and discussing preventive health screening/practices. Such integration of decision support into workflow is critical. Monthly meetings for reviewing evidence-based information presented by geriatricians are available for all staff.

The clinical information system provides timely information about individual patients and populations of patients with chronic conditions. Central to the design process is the EMR, which houses all inpatient and ambulatory records on the same platform. Extension of the EMR into nursing homes and home health/hospice has given colleagues improved communication of vital information across care settings. A registry of high-risk, frail patients is a unique feature that ensures proactive screening and follow-up of common geriatric conditions. Weekly reports identify patients who access the emergency room, hospital, or outpatient surgery. Population-based management of diabetic care is supported through EMR-generated reports. Software tools support business needs as well as clinical needs, such as a reminder system for follow-up and routine appointments.

THE COMMUNITY

Comprehensive and coordinated care requires collaborative relationships and partnerships between community organizations. The SHWC has collaborated with key organizations to ensure that patients receive the services they need. For patients requiring assistance from caregivers, access to local support groups offering individual guidance and care planning is accomplished through on-site patient visits. The SHWC contracts with the local Area Aging Agency to access caregiver support groups and with senior companions to access healthy low-income seniors who provide care for frail seniors. Many patients are residents of skilled nursing facilities that use SHWC physicians as medical directors, bringing geriatric expertise into their facilities. The SHWC staff assists low-income patients in accessing prescription assistance programs, which has saved patients more than $600,000 in annual out-of-pocket medication expenses.

THE HEALTH SYSTEM

PeaceHealth Oregon Region (PHOR) is a nonprofit integrated healthcare delivery system that includes Sacred Heart Medical Center (432 bed tertiary-care hospital), PeaceHealth Medical Group (100-physician multispeciality group), home care services, and other ancillary services. PHOR supports the SHWC through its care coordination service line, which integrates geriatric services, social work, care management, and home care into a common business unit. PHOR also facilitates SHWC involvement in other PeaceHealth improvement strategies and provides measurement, data analysis, and information technology services.

FUNCTIONAL AND CLINICAL OUTCOMES

The bottom line for any innovative care-delivery system is that it improves or maintains the function of older patients. Unlike a single-disease approach, there is no measurable marker for the older patient with multiple, interacting chronic diseases. SHWC uses a quality compass approach using clinical measures, patient satisfaction, function, and service utilization. Other measurement tools include organizational outcomes that measure employee satisfaction, staff turnover rates, and teamness.

Staff participation in continuous quality improvement is a core expectation, and creating a culture of continuous quality improvement is a primary objective. During the annual strategic planning effort, the staff generates a list of major concerns. From a prioritized list using the Pareto Principle (what 20% of issues generate 80% of concern), the team reaches consensus regarding their improvement work that year. Improvement targets are identified, and results are reported to executive leadership. Recent target
An effective model must accommodate continuous improvement in clinical processes/workflow to create a system that reduces waste, eliminates rework, and provides effective, efficient use of staff resources.

Developing a new model without having to redesign an existing clinic has allowed change to occur more quickly and with less staff stress.

A focus on developing and maintaining team behaviors within the clinic workgroup is an important strategy for producing more-effective care delivery and facilitating sustainable process improvement changes.

The involvement of patients in the design process (focus groups and quality improvement activities) and clinical activities ensures clinical relevance and improves patient satisfaction.

THE BUSINESS CASE

A major challenge in developing a senior health clinic model is maintaining financial viability and sustainability. Medicare, oriented toward indemnity insurance, has an acute-care approach to reimbursement. Consequently, innovative models that promote prevention and wellness are not well supported. The PeaceHealth executive leadership needs to know whether an investment in quality improvement will yield a return on investment. Thus, annual reviews of the original business plan focus on those aspects of the business deemed necessary for success (Table 1).

Assessing financial viability is a complicated process, and an operational budget perspective only partially addresses it. In the present reimbursement environment, breaking even operationally could well be a success. Although currently operating at a loss, the SHWC anticipates a system-wide perspective breakeven point in its 6th year based on current financial performance, reimbursement trends, and utilization data. Classified as an outpatient clinic of the hospital, the SHWC leverages existing hospital-based services and bills for some ancillary services. Reimbursement is also optimized through capture of a professional and facility fee that supports ancillary services. PeaceHealth leadership also currently believes that, if the frail, vulnerable population were cared for in the traditional manner, the outcome would be lower quality with less reimbursement.

From a health-system perspective, several aspects of the SHWC model can be seen as contributing positively to financial viability. The SHWC attracts new patients to PeaceHealth, which potentially adds to downstream revenue improvements. Transferring frail patients from other PeaceHealth PCP’s has allowed those practices to accept new healthier patients, thereby improving access to care in a community where such access is limited. Demand for hospital care is sometimes greater than capacity in this community. Outpatient innovations that potentially reduce length of stay, readmission rates, and emergency room rates can improve access for patients needing hospital services. The financial effect of such a perspective is difficult to measure.

LESSONS LEARNED

- The importance of support from top leadership in a health system cannot be overstated.
- Developing a new model without having to redesign an existing clinic has allowed change to occur more quickly and with less staff stress.
- An effective model must accommodate continuous improvement in clinical processes/workflow to create a system that reduces waste, eliminates rework, and provides effective, efficient use of staff resources.

FUTURE IMPLICATIONS

Although the SHWC model provides empirical evidence of improved access and quality of care for seniors, conclusive research indicating that this model will confer clinical and functional outcomes that are better than more traditional models of outpatient geriatric care is lacking. Therefore, PeaceHealth is currently conducting a longitudinal study comparing SHWC outcomes with traditional models. Identification of the model components producing the greatest quality-of-care improvements is expected to help drive changes that will affect future model development. Innovations that have been proven successful, such as Chronic Disease Self-Management Programs and group visits, could easily be integrated into this model.

Involving patients, family members, and caregivers in model development is an important strategy for changing the system of care and assuring that patient needs are addressed. Using a patient-centered rather than a practice-centered approach to redesign care is a promising, although mostly untested, concept. Clearly, this consumer-centered approach will require a transformation in the “culture” of American medicine.

Establishing financial viability/sustainability requires an organizational willingness to absorb initial development costs. A reimbursement system that creates incentives for health systems to participate in innovative improvements and reduce Medicare costs is needed. Understanding what drives the local health system leadership to make decisions is critical. Preferably, quality/process improvement data that recognizes the value at the practice level and the effect on the system guides this. Better methods of measuring the system effect are needed. At the practice level, senior patients prefer to receive their health services at a single convenient site. Geriatric clinics that include a range of health services (e.g., eye care, audiology, and podiatry) can better meet patient needs while providing multiple revenue sources that potentially help support overhead costs.

ACKNOWLEDGMENTS

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REFERENCES


Appendix 1. Microsystem Domain Improvements

Self-Management Support

- Standardized point-of-care geriatric condition-specific handouts
- All patients receive Healthwise for Life education manual
- Clinic office process to inquire about self-management needs at every visit
- Access to health information library
- Access to community education classes
- Include patient participation in quality improvement project
- Diabetic skills training by pharmacist and dietitian

Delivery System Design

- Interdisciplinary team approach
- Office nurse care teams
- Primary and consultative care by geriatricians
- Weekly team care conferences of high-risk patients
- Collaborative nursing home practice with gerontological nurse practitioners
- Collaborative hospital care with hospitalists
- Focused proactive diabetic care by nurse practitioner, pharmacist, and dietitian
- Very important papers process for managing paperwork, faxes, refills, etc.

Decision Support

- Health-risk screening of all patients
- Geriatric assessment toolbox (standardization of assessment instruments)
- Development of evidence-based guidelines and protocols
- Monthly geriatric journal club
- Multidisciplinary team consultation availability on-site

Clinical Information Systems

- Electronic medical record (EMR) with inpatient and ambulatory information in examination rooms
- EMR availability in nursing facilities
- Electronic registry of high-risk, frail patients
- Diabetes registry
- Senior Finding monitoring system: electronic checklist for state-of-the-art geriatric care
- Reminder system for follow-up appointments and routine care
- Business application software


