PHAROS INNOVATIONS®

The Value Quadrant of Healthcare Reform

Finding a Solution to our Healthcare Crisis Through a Technology-Leveraged Chronic Care Management Approach

Pharos Innovations Position Paper Series

More than 133 million Americans, or 45 percent of the population, have at least one chronic condition

Introduction

President Obama has made healthcare — and rising healthcare costs — a priority of his administration and it is easy to see why. The American demographic is changing. Americans are getting older and living longer, healthier and more independently at home. As a consequence, according to the Partnership to Fight Chronic Disease, "Chronic illnesses — ongoing, generally incurable illnesses or conditions, such as heart disease, asthma, cancer and diabetes — are among the greatest threats to Americans' health. More than 133 million Americans, or 45 percent of the population, have at least one chronic condition.

"We spend 2 trillion dollars a year on care, yet one in two Americans suffers from chronic diseases that decrease quality of life and increase healthcare costs. Estimates indicate that close to 200 million Americans alive today will have a chronic illness, and that one in four dollars will soon be spent on healthcare."

Chronic disease is a problem that many physicians see daily in their clinical practices, and one that causes countless unnecessary and avoidable hospitalizations. This problem exists for reasons that largely reflect a lack of simple coordination of information and care processes, as well as a lack of programs and approaches for patients with chronic disease to become more involved in their daily self-care and monitoring of early clinical deterioration.

Unfortunately, the burden of chronic disease falls largely to the elderly and vulnerable, *i.e.*, the Medicare population and large portions of the Medicaid population. In fact, costs of care for the heart failure population alone constitute 40 percent of Medicare costs, and a short list of chronic conditions constitute over 95 percent of Medicare costs and over 80 percent of Medicaid costs. Yet, perhaps as much as 40 percent of these costs is avoidable through better care coordination and collaboration, supported with appropriate technologies and payment incentives.

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The Opportunity

As the prevalence and cost of chronic conditions continues to grow, a large opportunity exists to dramatically reduce healthcare costs in chronic disease populations while improving quality of care and quality of life, using simple, scalable solutions and models that have already been well proven. Achieving near term successes will require the necessary leadership to address financial incentive alignment for Health Information Technology (HIT) implementation, care coordination activities and accountability for healthcare expenditures.

In November 2008, The Agency for Healthcare Research and Quality (AHRQ) released a technology assessment focused on studies of interactive consumer health IT.[1] The assessment described factors influencing the use, usefulness and usability for the elderly, chronically ill and underserved populations. The review concluded that consumers will use interactive technologies if they can see benefit, convenience and integration into daily activities. Specific findings include:

- Engagement (active and ongoing use of healthcare IT) is directly linked to the amount of value consumers perceive the intervention/technology to have.
- Health Information Technology has a positive effect when a complete feedback loop is provided between physician recommendations and patient actions. This loop includes
  - Monitoring of current health status
  - Interpretation of this data in light of established, often individualized, treatment goals
  - Adjustment of the care management plan as needed
  - Communication back to the patient/member with tailored recommendations or advice plus repetition of this cycle at appropriate intervals
- Convenience is critical; engagement is higher when the intervention is delivered via technologies that consumers use every day for other purposes, such as telephones and cell phones.

This technology assessment is in direct alignment with an emerging paradigm of care management. This new paradigm utilizes cost-effective, technology-based solutions that leverage standard technologies for next-generation clinical and financial performance improvement.

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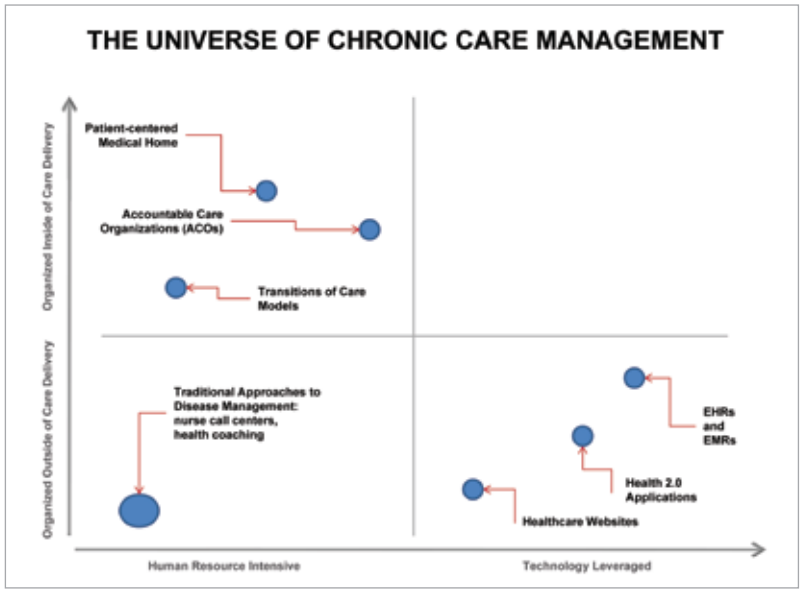
[1] Agency for Healthcare Research and Quality. (2008). Barriers and drivers of health information technology use for the elderly, chronically ill and underserved. Portland: Oregon Evidence-based Practice Center.

We must find ways to smartly and efficiently leverage technologies

The Universe of Chronic Care

Healthcare organizations have been struggling for years to find solutions to our nation's healthcare challenges. We all know that a large opportunity exists to dramatically reduce healthcare costs in chronic disease populations while improving quality of care and quality of life. However, many of the solutions developed over the past 10 to 20 years have yet to find the right formula for addressing delivery system challenges while bridging the complex and largely uncoordinated relationships between patients, physicians and payers.

The Universe of Chronic Care Management diagram below illustrates where we have been in relation to chronic care management. The bottom left-hand quadrant provides a "glimpse in the rearview mirror." By targeting chronic disease at a health plan level, from outside the care delivery system as we have in the past, and utilizing a human resource based-model, such as the traditional disease management call center approach, we tend to see higher cost models with modest impact potential. The jury is still out in terms of how big that impact is, but clearly the models of the past decade set the stage for reform by focusing on better care coordination and chronic disease management.



As we move across the horizontal access, we see an emerging discussion around the potential impact of information technology and a shift away from the human resource-intensive approach to one that is technology-leveraged, proactive and continuous. Early attempts to engage patients with consumer technologies, such as the Internet, and providers with electronic health records are already underway. Delivering this kind of technology-leveraged care will be essential to adapting to the future shortfall of physicians and nurses. We must find ways to smartly and efficiently leverage technologies. Done right, information and telecommunications technologies can also serve to engage patients more directly in their own care, and support better communications and coordination.

On the vertical access, we can see the significant shift in care delivery over the past 15 to 20 years. The "system" of care coordination was once organized outside of the point of care delivery, often falling to health plans to organize, but is now shifting to programs organized by the providers themselves. This also includes a pendulum shift wherein health plans are structuring payment models, such as the Medical Home or Pay for Performance, to incent providers to become better organized around chronic care delivery.

Each of these solutions uses elements of Health Information Technologies and helps advance the quest toward the right solution. However, while these are viable elements of the care coordination mix, many traditional models will fail to deliver dramatic savings without including operational designs that can rapidly deliver results. Additionally, they are not simple enough for scalability within organizations and the existing, highly-fragmented American healthcare delivery system.

The Value Quadrant of Healthcare Reform (VQHR)

Fortunately, proven solutions using technology-leveraged approaches do exist that show more than just a modest impact. There are Medicare and Medicaid programs that are reporting third-party, validated results of 40 percent to 60 percent reductions in hospitalizations of participating chronic care patients and cost savings in the millions. Examples include the Iowa Medicaid Population Disease Management demonstration and Park Nicollet Health Services and Billings Clinic — two of the ten participating groups in CMS' Physician Group Practice demonstration. The Veterans Administration has been using remote patient monitoring technologies for more than five years and just recently published a study showing similar results.[2]

The key to reaching the VQHR is to start with a focus on a short list of chronic conditions, that when better managed, have been seen to represent dramatic cost savings opportunities. By targeting an approach to chronic disease that uses Health Information Technology, the costs of achieving these improvements can be reduced. Formally then, the VQHR is the optimal, technology-leveraged approach to chronic care management that unifies disease registry functionality, care coordination services and remote patient monitoring technology at the point of care delivery for maximum healthcare outcomes and cost savings.

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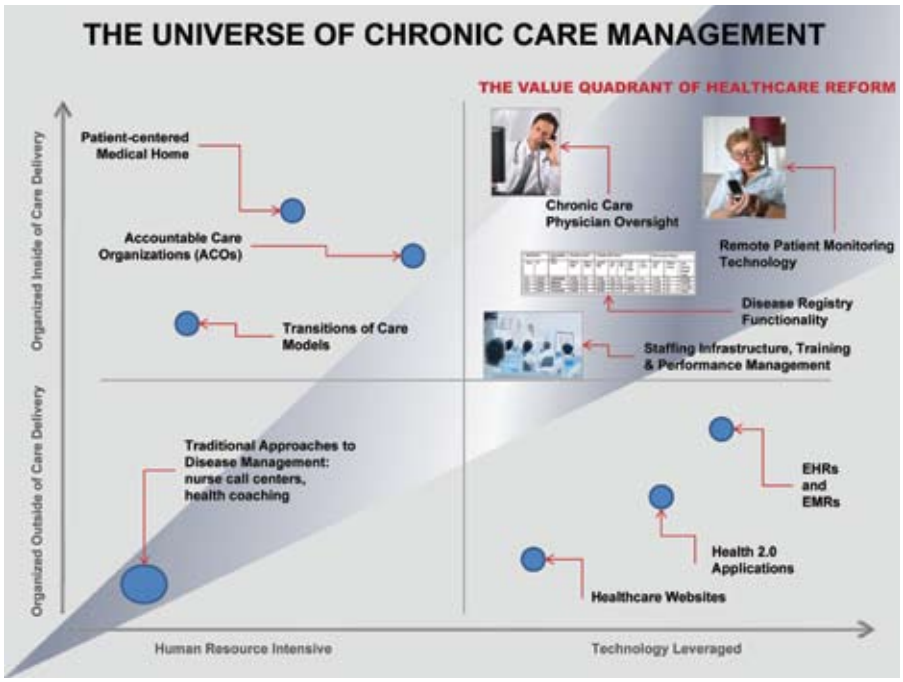

[2] Darkins, A. R. (2008). Care coordination/home telehealth: The systematic implementation of health informatics, home telehealth, and disease management to support the care of veteran patients with chronic conditions. Telemedicine and e-Health, 1118-1126.

The VQHR is composed of four key modular elements:

- Chronic disease registry functionality that provides insight into a population to track chronic care management progress and target interventions to the right individuals within that population
- Home telehealth and remote patient monitoring technology — simple, ubiquitous technology to raise the level of vigilance on individuals with chronic disease and keep them in better contact with their care team
- Care coordination staffing infrastructure, training and performance management
- Chronic care physician oversight, including provider systems that are organized and incented to deliver chronic care management and have the resources to do it

Delivering the kind of chronic care management that resides in the VQHR — technology-leveraged chronic care management within the point of care delivery — will be essential if we, as a nation, are to cope with the anticipated future shortfall of physicians

Conclusion

Because of chronic disease, healthcare costs will only escalate as our population continues to age. Our healthcare crisis will continue to escalate unless we, as a country, change the paradigm of chronic care management. Reaching the Value Quadrant of Healthcare Reform within individual organizations and across our country is an achievable goal. One that can be accomplished using the right combination of proven solutions that are available today — disease registry functionality, care coordination and remote patient monitoring technology at the point of care delivery.

About Pharos

Founded in 1995, Pharos Innovations assists healthcare providers and payers in achieving next generation clinical and financial performance improvement. An innovative, device-free platform, Tel-Assurance,® improves care coordination and drives dramatic clinical improvement and cost savings by remotely monitoring patients and averting unnecessary clinical events. Our enabling technologies proactively involve patients in their care and result in the early identification of clinical deterioration.

Tel-Assurance® substantially expands the reach, efficiency and effectiveness of clients' current health management programs for complex chronic conditions. The Pharos solution is strongly validated to show measured clinical improvement and financial impact, is the recipient of the prestigious American Heart Association National Outcomes award and was selected for the first ever National Institutes of Health (NIH) sponsored evaluation of remote monitoring interventions. For more information visit www.pharosinnovations.com or call (847) 881-8705.

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