

IMPEDIMENTS TO THE ROLL-OUT OF IT HEALTHCARE STRATEGIES

In spite of a continuous spiraling of healthcare costs and reimbursements, it had been difficult to address some core policy issues that inhibit the implementation of cost-effective solutions for our aging services health crisis. Until the advantages of technology-based solution seeking are recognized by policymakers and healthcare professionals, we will not be able to address current problems with a dysfunctional healthcare system in new, practicable & innovative ways.

Many of our current healthcare problems result from our current policy predisposition of responding to diseases when they arise rather than proactively addressing the underlying issues of wellness support and disease prevention:

1) Reimbursement for on-site safety, wellness and healthcare systems and services. Through safety, wellness and telehealth technology seniors can live where they want, remain safe, well and healthy through monitored preventive exercise and wellness programs, early detection of arising health issues and early interventions, including management of chronic conditions. Such in-home devices make it possible to monitor changes in behavior and medical condition without the expense of having health care providers onsite. Living at home is the preferred choice of seniors [1], and as it is considerably less expensive than institutional settings, it should be the preferred choice of policymakers. Such technologies also offer substantial benefit to the general population with the potential for substantial savings to our national health care bill [2]. Studies by the Veterans Administration have shown substantial savings by implementing these technologies in the home. The Veterans Administration, however, has unique alignment of incentives, being the care provider and the payer at the same time. Currently Medicare, Medicaid and private insurance carriers only provide limited support for reimbursement of these types of equipment and services, including a few sparses Medicaid Waivers programs. Many companies have indicated that they do not invest in healthcare and wellness type technologies out of fear of lack of reimbursement; similarly, providers are hesitant to deploy available solutions due to the lack of reimbursement for the services they deliver through these technologies [3, 4, 5]. Moreover, there is no incentive for providers to invest and deploy these technologies, which have a potential for significant cost savings to the payers [2], but little to no return on investment to the provider. Whether it is the private sector or the government, our focus groups and other studies [1] show seniors and caregivers are willing to use technology to remain healthy at home. The “Boomer” generation is the first generation that seems willing to make their own investment in technologies that help them feel younger and healthier. The opportunity exists and is very much needed to have consumers take greater responsibility in managing the costs of their own care. However, incentives to drive them in that direction are important. **Government and private pay insurance companies need to offer incentives to consumers to buy and use these technologies. We also need to ensure that physicians and other care specialists, including long-term care providers, such as home care and health agencies, are reimbursed for services delivered using these technologies.** Through monitoring services and interventions, many of these technologies can help our society save dollars on health care costs through by reducing costly and unnecessary hospitalizations, emergency department visits, and early institutionalizations.

2) Interoperable Electronic Health Records (EHR) & Personal Health Records (PHR) in Long-Term Care. The development of interoperable electronic health record and personal health records is critical to the

success of technology implementation. We support the national initiatives to develop EHRs and encourage work on PHRs. These activities form the foundation for the future vision of how networked healthcare systems will operate between older adults, caregivers, family members and healthcare providers. Seniors, who usually have multiple chronic conditions and complex co-morbidities, receive care from a multitude of providers and transition frequently between acute and long-term care settings, would benefit the most from such networked healthcare system. Key to maximizing the benefits of such networked healthcare system is the inclusion of long-term care settings, such as assisted living, skilled nursing, home health, home care and specialty services providers in the network [6]. **This inclusion necessitates that the standards for such electronic record systems take into account the requirements of the long-term care providers, including functional assessment data and patient summaries, to allow the electronic exchange of critical health information among different care providers, including long-term care providers.** Lack of interoperability is one of the important barriers to the adoption of these technologies [3, 4]

Although analysis of the 2004 National Nursing Home Survey revealed that use of electronic information systems in NH patient care functions is considerably greater than previously thought and actually exceed the adoption rate of physician offices, it is important to point out that in there remains considerable room for improvement [7]; this study clearly points out the role of federal policy in driving some features of electronic information systems utilization in U.S. NH, such as billing and MDS reporting. **More incentives, in the form of grants, tax-credits and low-interest loans, are needed to enable long-term providers to prepare their information and communications infrastructure and deploy new technologies, including Health Information Technologies (HIT) and interoperable EHR systems, and other technologies including technologies for care documentation by direct care workers that improve the quality of care.** Such HIT infrastructure and EHR systems, that are interoperable across provider settings, ensure the continuity of information, and thus the continuity of care, and can lead to reducing medical errors, duplicative procedures and expenditures, while improving care quality, especially for the aging population.

3) Federal funding is needed to support the development of technology for proactive care and outcome-oriented demonstration projects . There is a need for increased funding for specific research on senior care directed to the integration and development of technology for reducing costs and increasing the quality of care. Such technology Research and Development should engage the target users, seniors, caregivers and providers to overcome some of the shortcomings of existing technologies, including usability issues [4, 5]. With flat federal R&D funding, it is important that cost-effective aging solutions receive consideration by NIH and NSF. Unfortunately, proactive care solutions –though vital for controlling future health costs– do not fit into the existing funding structures. NIH funding is ordered by specific disease conditions, technology that focuses on wellness or improved health delivery all-too-often will not receive knowledgeable consideration by NIH reviewers. NSF, on the other hand, does not focus on public health, and its mandate for supporting basic technology makes it difficult to gain support for clinical testing needed to show beneficial health outcomes. It is not unusual for technology-based healthcare proposals to fall into the gap between NIH and NSF funding methodologies. **Both NIH and NSF should create opportunities for cross agency technology-based solutions to aging services and care. NIH should create multi-disciplinary review panels that include experienced technologists to review applications that utilize technology aimed at proactive improvement of senior health and wellness. Both NIH and NSF should dedicate funds that would be jointly administered –and reviewed by multi-disciplinary review committees– to support technology-based solutions for aging services. The onerous process of grant applications and approvals need to be simplified and the review cycles need to be shortened.**

Moreover, funding is needed to conduct outcome-oriented demonstration projects with technologies for seniors, in partnership with technology companies, researchers, services providers and payers, to demonstrate benefits to stakeholders [4]. The lack of awareness of the value and benefits of these technologies is an important barrier to their adoption [4, 5], and such trials and demonstration projects with focus on outcomes and cost-effectiveness are key to the proliferation of such solutions and yielding the anticipated societal benefits. In Europe and the Far East there are much larger trials taking place and outcome data being generated than we see in the United States. Most of this is happening because the governments in those countries are supporting the pilots and demonstration projects. To date the trials and pilots that have taken place generally involve one type of technology, with small population and over short periods of time. We need to be able to support technology trials that involve multiple types of technology applications coming together in a coordinated service, with larger scale and over multiple years. These technologies will only fulfill their potential if we can deal with system integration and operational issues.

4) HUD regulations for senior housing should recognize the need for ‘smart’ cost-effective housing solutions that allow seniors extended stay in non-institutional environments. Keeping seniors in a preferred home environment [1] is also cost-effective. Currently, HUD regulations do not take into consideration the benefits of using technology to make senior housing both safer and more affordable. HUD should encourage that all new and renovated senior housing should include high speed wireless access that will allow for safety, wellness and medical monitoring as well as family & caregiver communications [6]. Special purpose sensors embedded in the housing can enhance resident safety, while other technologies compensate for deteriorating vision, hearing, mobility and cognition. Sensors can passively monitor (for example) whether a stove has been left on, or whether a resident has just suffered a fall. **HUD should allow the pre-approval of plans & specifications that will better utilize technological solutions. HUD should consider requiring that a fixed percentage of total funding for senior housing should be set aside for technology solutions.**

5) Cross-state licensure opportunities for nurses and physicians are needed to gain the benefit of opportunities in telehealth, wellness monitoring and remote care management. The lack of cross-state licensure for physicians and nurses in the U.S. that is needed to allow physician and nurses in “virtual” tele-health and tele-care centers to review the information and provide interventions to remote patients across state borders is currently an impediment to the adoption of these technologies [4]. Professional caregivers must be allowed to participate in the utilization of new technologies if we are to realize the opportunity for seniors to live safely and extensively in the environment of their choosing. Currently, healthcare services are controlled by –and limited to– the healthcare professional societies of each state. As officials of the Mayo Clinic have told us, they may undertake professional consultation and remedial activities between Minnesota and Dubai, but not between North and South Carolina. In addition, the Department of Veterans’ Affairs has made great progress in serving the needs of veterans from multiple sites because –as they acknowledge– they are unencumbered by state licensing laws. There is a compelling need to move more technology into the home if we are to control health costs and meet the desires of our seniors. The European Commission is working now to allow physicians to practice across national boundaries. **Medicare and Medicaid should encourage the development of state compacts that allow health professionals to serve seniors through telehealth opportunities in all states.**

6) Challenges in a global marketplace. The global market opportunities in the field of aging services offer a great opportunity for technology leadership. There have been estimates that place the size of this market as high

as \$140 billion dollars. Unfortunately U. S. companies are falling behind their counterparts in Europe, Japan and South Korea. More and more we are seeing U.S. companies being encouraged through benefits and friendly environments for trials and pilots to set up their research and development outside the U. S. The danger is both the loss of trade opportunities and intellectual capital. While the U. S. has always an export leader in the area of medical and health equipment, the margin of leadership is dramatically shrinking. **Congress should hold hearings to identify what can be done to motivate companies to invest in this growing market as well as what can be done to maintain research and development in the U. S.**

What all these issues have in common is that they require a new outlook on how to confront and resolve the vexing problems of healthcare in the 21st Century. It would be extremely difficult to tackle each problem listed if it were treated as a single issue. What is needed is an overarching idea that will place each issue in the context of the necessary paradigm shift in how we approach healthcare reform. Making this shift will require a high-level buy-in from policymakers, businesses, healthcare professionals and consumers that we have no choice but to change how we offer healthcare services in this country.

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