Written Statement of
Rick Cnossen
President
Continua Health Alliance
"Overcoming Rural Health Care Barriers:
Use of Innovative Wireless Health Technology Solutions"
Hearing before the
House Committee on Veterans' Affairs
Subcommittee on Health

June 24, 2010

Good Morning Chairman Michaud, Ranking Member Brown and Distinguished Members of the House Committee on Veterans' Affairs, Subcommittee on Health.

My name is Rick Cnossen, President of the Continua Health Alliance, is a non-profit, open industry coalition of healthcare and technology companies that are joined to collaborate and improve the quality of personal healthcare. On behalf of the members of Continua, I would like to thank you for the opportunity to present this testimony.

Continua has 237 member companies from around the world that are dedicated to establishing a system of interoperable personal health solutions that fosters independence, empowers individuals and provides the opportunity for truly personalized health and wellness management. Continua is not a standards body – the Alliance selects existing commercially available standards and works test and certify those standards so that personal telehealth solutions are interoperable, ubiquitous and contribute toward improved health management. Additionally, the Alliance writes guidelines on how to use those existing standards to achieve true interoperability across many companies and many devices.

I. Introduction to Personal Connected Health, Telehealth, and eCare

Continua uses the term "eCare" to refer to the class of health information technologies that can facilitate any kind of virtual visit or electronic connectivity outside of traditional office visits among patients, family members, and medical professionals. eCare includes personal connected health as well as telehealth. It can be secure text messaging between a senior patient and their doctor to change a medication dosage, an audio chat, or a full video web cam visit. It can also be personal connected health with an in-home or mobile broadband device that can help providers track and trend data like blood pressure and weight fluctuations that seniors and other patients can take by themselves on a regular basis. eCare may also include using connectivity to help patients remember to take a medication, capture a vital sign, or view customized content sent to them by their clinician to teach them about managing their own disease. eCare expands and extends the efforts of medical professionals by providing information to and from patients without geographic obstacles.

To realize the quality improvement and cost-containment goals of healthcare reform, our nation must harness the benefits of technologies that allow patients and care providers to use real-world, remotely-collected data to make decisions about their health on a continual basis, rather than waiting until a condition has set in that requires them to schedule an urgent office visit or go to the emergency room. By tracking vital signs and other health data on a more regular basis and sharing it through secure systems, eCare offers many beneficial clinical capabilities:

- Empowers patients with tools that help them make sense of —and help manage—their own care;

- Collects real-world biological and behavioral data and trends on a regular basis with alerts for out-of-norm situations;

- Facilitates virtual visits with providers, whenever and wherever appropriate, via a range of electronic media;

- Enables social networking, awareness, and care support from family and friends who are nearby or distant;

- Personalizes care plans and educational content for each individual based on their needs, preferences, data, and capabilities; and

- Triages precious medical resources to enable the right amount of care to occur in the right place and time.

II. Successful Case Studies

These current services and future health information technologies will be the key to improving the delivery of clinical services and healthcare quality, as well as containing healthcare costs. Many studies have shown the value of personal connected health. For example, the New England Healthcare Institute (NEHI) "2008 Research Update, Remote Physiological Monitoring" found that remote patient monitoring resulted in a 60 percent reduction in hospital readmissions compared to standard care and a 50 percent reduction in hospital readmissions compared to disease management programs without monitoring. The same study found that remote patient monitoring has the potential to prevent between 460,000 and 627,000 heart failure related hospital readmissions each year. Based on this reduction in readmissions, NEHI estimated annual national cost savings of up to $6.4 billion dollars.

As our nation looks for ways to improve quality, access, and costs of healthcare, it is important to realize that eCare technologies can save lives and dollars. For example, the Department of Veterans Affairs (VA) examined this issue in its report, "Care Coordination/Home Telehealth: The Systemic Implementation of Health Informatics, Home Telehealth and DM to support the Coordination of Veteran Patients with Chronic Conditions." The VA found that implementing telehealth to coordinate patient care led to a 25 percent reduction in the number of bed days and a 20 percent reduction in hospital admissions. The report showed a cost of $1,600 per patient per annum for the telehealth program compared to $13,121 for traditional primary care and $77,745 for nursing home care. Not only were patients able to avoid readmission and improve their health status faster through telehealth services, but taxpayers also saved money.

III. Role of Personal Connected Health, Telehealth and eCare as Clinical Services and as Improving Health Care Quality in the Patient Protection and Affordability Act (PPACA)

eCare, including personal connected health and telehealth, complements clinic and hospital visits and improves healthcare quality. By monitoring their own data from home, patients and their caregivers become more engaged in self-care and aware of health trends. eCare can also improve consumers' access to care, particularly in rural areas, by easing logistical burdens and reducing or eliminating the need to travel to a provider's office for routine visits. In addition, through the use of personal connected health, providers have more information on a timely basis upon which to make medical decisions that can assist in addressing health problems before they become crises. As eCare

removes geographical restrictions, patients will gain access to needed specialists who may not be local.

Recognizing these challenges and opportunities, the Patient Protection and Affordable Care Act (PPACA) includes numerous provisions designed to promote personal connected health, telehealth, and other eCare services. For example, the Secretary of HHS is required to develop guidelines for a payment structure that provides increased reimbursement or other incentives for: improving health outcomes through quality reports, case management, care coordination, chronic disease management, medication and care compliance initiatives (including medical home); activities to reduce hospital readmissions; activities to improve patient safety and reduce medical errors through the appropriate use of best clinical practices, evidence-based medicine, and health information technology; and wellness and health promotion activities. eCare is at the crux of all of these services. (PPACA § 1311)

PPACA also recognizes that many meaningful physician encounters can occur remotely. Specifically, the Act allows certification or re-certification of a patient for home health services or durable medical equipment to occur through a face-to-face physician encounter or through the use of telehealth. (PPACA § 6407) In another example, a Medicare health risk assessment may be furnished through an interactive telephonic or web-based program that meets standards to be established by the Secretary of HHS. (PPACA § 4103) PPACA also provides for investment in community-based collaborative care networks that expand capacity through telehealth and medication management services that are provided either in-person or through telehealth technologies. (PPACA §§ 10333, 10328) These programs will both encourage the uptake of beneficial health information technologies throughout the healthcare system and address critical shortages of healthcare providers. Expanding the use of eCare will be paramount to providing high quality care for the increasing number of individuals who are living with chronic and expensive health conditions for longer than ever before. Without buy-in across government and private payers, the opportunities for eCare to enhance our healthcare system as recognized in PPACA will not be realized across our healthcare system.

Many of the most promising ideas for healthcare delivery innovation depend on eCare services. PPACA looks to increase the use of eCare services to provide for future improvement in healthcare delivery. For example, the Independence at Home Demonstration Project, designed to improve care for chronically ill Medicare beneficiaries, defines an "independence at home medical practice" as one that "uses electronic health information systems, remote monitoring, and mobile diagnostic technology." (PPACA § 3024) Accountable Care Organizations participating in shared savings programs under PPACA are required to "define processes to promote evidence-

based medicine and patient engagement, report on quality and cost measures, and coordinate care, such as through the use of telehealth, personal connected health, and other such enabling technologies." (PPACA § 3022) Further, the Center for Medicare and Medicaid Innovation created by PPACA may test models that support care coordination through "a health information technology-enabled provider network that includes care coordinators, a chronic disease registry, and home telehealth technology," and may consider whether a model under review "utilizes technology, such as electronic health records and patient-based remote monitoring systems, to coordinate care over time and across settings." (PPACA § 3021)

Without inclusion of eCare, from the beginning, as a clinical service or service that improves quality, our healthcare system will not benefit from or encourage the use of personal connected health or telehealth services. We urge policymakers to look to the future of what healthcare delivery can be through the use of wired, wireless, mobile broadband and whatever new forms of technology may appear to allow our uniquely American healthcare system to benefit from eCare as we know it and as we might know it in the future. eCare truly promises to be a disruptive approach that transforms the way that we provide healthcare and becomes an indispensible tool in the future.

Services that change patient behavior, assist in treatment and compliance, and improve quality are supported by information technologies. These technologies serve as the backbone for the provision of a variety of activities including wellness, disease management, medication management services and illness prevention – all important goals of PPACA. Over time, this infrastructure will need to be improved and augmented in order to support these activities particularly as these services become better integrated into our overall healthcare delivery system. As our reliance on information technology systems grows, they should also be considered a part of those services that improve quality. Without the vital services of eCare, our healthcare delivery system will be limited and not help move healthcare into the 21st century.

Technology is evolving rapidly. The rapid societal uptake of now-commonplace devices from smartphones, to netbooks, to smartbooks, demonstrates the pervasive role of mobile wireless technology in our daily lives and the opportunities they bring to improve our access to healthcare. As we learn and develop "best practices" for eCare—and invest in comparative effectiveness studies to know the right balance of in-home, in-clinic, and eCare consultations for different conditions and needs—these technologies will ultimately help us move beyond a quantity oriented system (e.g., number of visits done or tests or drugs prescribed) to one of quality.

IV. Continua Utilizes Voluntary Industry Interoperable Standards for eCare

Healthcare costs continue to spiral upwards to the point of prompting national mandates for change. Technology has advanced to a point where personal telehealth systems provide viable, cost-effective solutions and represent a very real opportunity to help control costs. In order for deployment to become widespread, an ecosystem of standards-based interoperable components (starting with the consumer-facing device) is essential. The Continua Health Alliance was established to address this need. Technological advances, such as innovations in networking technologies and the rapid increase and availability of wireless internet-connected devices, enable the development of solutions that address user needs in a cost-effective manner. These technologies also allow people to remain safely in their own homes longer. Personal telehealth systems composed of an ecosystem of commercially available standards-based interoperable components are the building blocks of these solutions.[1]

V. Need for Device Interoperability

While there are many challenges associated with the successful design, implementation and deployment of personal telehealth systems, one of the more obvious problems in early telehealth solutions has been the lack of device interoperability which requires broad industry support behind particular standards.

Integrator / Purchaser

Integrators (companies producing eCare solutions made up of components from a number of different vendors) and purchasers (healthcare providers that will be purchasing these solutions and offering them to their patients or members) both require a wide variety of system vendors and components to select from. Interoperability is important as it allows integrators and purchasers to select from a wide variety of personal health devices offered by multiple vendors.

Product Designer

From the perspective of a product designer, device interoperability is essential. If the objective of the product designer is to design equipment that will communicate with a wide range of telehealth peripherals (for example, weight scales, blood pressure monitors, glucose meters), it is very likely that the desired set of peripherals be developed by multiple vendors.Interoperable solutions will

minimize cost, improve design and development efficiencies and enable separation of concerns that device vendors can focus on devices, software vendors can focus on software development, and service providers can focus on service delivery by utilizing well-defined, unambiguous commercial standards and guidelines.

VII. Continua Solution

Approach

Continua Health Alliance was founded in 2006. The Alliance leveraged examples from other solution domains such as home networking (for example, Wi-Fi Alliance and Digital Living Network Alliance) in order to help define its overall approach. The result was the following methodology:

- Select existing, applicable industry standards

- Extend these selected standards where required (to meet user needs identified in use cases and requirements)

- Eliminate ambiguity in interpretation of these standards through a collection of interoperability guidelines

- Develop a certification process that guarantees products meet the guidelines and provide the consumer a high-quality user experience.

Continua put in place a flexible architecture that allows for a common approach but also accommodates regulated and unregulated products from the various application domains. The figure below shows the various components and the interfaces that constitute an end-to-end solution.
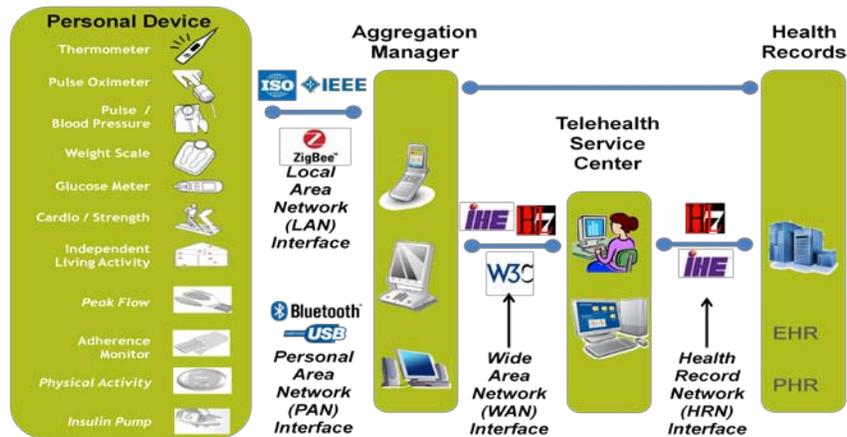
RECOMMENDATIONS FOR ECARE INTEGRATION

Despite the success Continua members have achieved in developing devices and services as assistive technologies for patients with chronic disease and succeeded in making sure that these devices interoperate, significant barriers restrict the integration of eCare into patient care plans. In order to ensure that patients and clinicians have full access for their optimum healthcare, we respectfully submit the following recommendations:

I.   Establish a Federal Organization Focused on eCare:

The U.S. Congress realized the benefits of eCare by including references to technologies for personal connected health in more than 20 provisions in the Patient Protection and Accountable Care Act (PPACA). However, we find that federal agencies may lack a coordinated approach to unlocking the potential of these powerful, cost efficient and life saving technologies. In order to maximize information sharing on an interagency basis, we urge the U.S. Congress to consider the establishment of an "Office of eCare". Much like the Office of the National Coordinator for Health Information Technologies was formed in 2004 by Executive Order to accelerate the use of health IT, the expansion of eCare across various care delivery models is a timely and fruitful objective.

II. Payment Reform for eCare

As noted in the Federal Communications Commission National Broadband Plan, reimbursement reforms are essential to incentivize the meaningful use and widespread adoption of eCare technologies. Simply stated, reimbursement issues are a barrier to the adoption of health IT. The Centers for Medicare and Medicaid Services (CMS) define telehealth services as the use of medical information exchanged from one site to another via electronic communications to improve a patient's health.[2] Electronic communication means the use of interactive telecommunications equipment that includes, at minimum, audio and video equipment permitting two-way, real-time (with limited exceptions) interactive communication between the patient, and the physician or practitioner at the distant site. The definition includes limitations on the types of originating sites of care that can be used, in addition to the requirement that an originating site must be located in either a health professional shortage area (HPSA) or in a county not classified as a metropolitan statistical area (MSA).

eCare reimbursement should be permitted everywhere and at anytime and not limited to geographically rural areas. The limitations on which types of originating institutions and which fields of healthcare are eligible for telehealth reimbursement are outdated. Healthcare management should not be limited to only live encounters, where store-and-forward technologies are perfectly capable of providing reliable, consistent, diagnostic care. Interoperable personal telehealth and remote monitoring of data can be used for disease management, safety, health and wellness. If a Medicare benefit plan covers a service, then that plan should also cover the same service when it is performed via eCare.

III. Establish Blueprints for the use of eCare in states and communities.

We can learn from the successful deployment of 35,000 chronic care patients served by remote patient monitoring through the Department of Veterans Affairs. Although a closed system, the results are for patients with the same illnesses that Americans across the nation face. We need to do the hard work of factoring new payment plans, work flow systems and efficiently using community resources to care for our patients at home. We offer the resources of the Continua Health Alliance to convene the appropriate participants – hospital systems, doctors, technology companies to work with Congress and HHS to design a system that works for all stakeholders.

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[2] See Centers for Medicare and Medicaid Services, "Telemedicine and Telehealth," http://www.cms.hhs.gov/Telemedicine/.

IV.   Incorporate eCARE as part of "Meaningful Use".

The significant investments in HIT infrastructure made through the American Recovery and Reinvestment Act (ARRA) and health care reform are an important starting place for improving our country's capacity to provide high quality and efficient care. Without a national infrastructure—an "electronic highway" for health information—it will be impossible for the United States to deliver quality care to more people at lower costs as the nation ages. With the passage of AARA, our nation took a leap forward in relation to electronic health records (EHRs) by allocating $19.2 billion towards the adoption of HIT. That investment is just one step. eCare is the next step forward, and without its inclusion in the "Meaningful Use" requirements, the significant dollar investment made by the federal government stops short of moving the system beyond just the use of records. eCare can populate electronic medical records with trend data and other timely information to provide a more complete picture of a patient and to empower providers to make clinical decisions that improve the health and lives of Americans. We urge HHS to ensure that a mechanism is in place to allow Personal Health summaries to be integrated into EHRs in a standard fashion (e.g., Continua's Health Record Network standard). Make home broadband adoption for all Americans a top priority following recommendations in the FCC's National Broadband Plan.

V.   Extend Broadband Internet Connectivity to Homes That Have None.

This is especially important in rural parts of the country, to enable new independent living and home health care solutions. Similar to the National Broadband Plan, Continua supports the FCC's notion that a Health Care Broadband Infrastructure Fund should be established to subsidize fixed, wireless and mobile network deployments to augment health care delivery in locations where existing networks are insufficient.