Statement of

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Hearing on
"Advancing Telehealth Through Connectivity"

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Summary

Panasonic Corporation of North America ("Panasonic") has conducted remote patient monitoring pilot studies, and plans to invest in larger, longer-duration ones, in the belief that telehealth technologies that are reliable and accessible to those needing chronic care can help advance American healthcare delivery, improve care outcomes, engage patients in self-care, and contain care costs.

Panasonic will share its experience in this field to date, including the challenges and opportunities of delivering successful telehealth care, and provide some recommendations for Federal policy and practice to encourage private sector investment in this field.

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Good morning, Chairman Wicker, Ranking Member Schatz, and Members of the Subcommittee. My name is Todd Rytting, and I serve as the Chief Technology Officer of Panasonic Corporation of North America. I am honored to have been invited to participate in today's hearing to examine the progress that has been made by the private sector and government entities in bringing the benefits of telehealth to all parts of the U.S.—including rural and remote areas. And I would like to explore with you some of the challenges facing the advancement of telehealth, so our country can meet the objective of ensuring healthcare providers and patients have access to the connectivity required to take advantage of innovative telehealth solutions.

Panasonic strongly supports the effort to transform America's healthcare system through the power of information technology—supported by robust broadband connectivity—and I will describe how our company is actively investing in innovation to help realize this goal. By way of background, Panasonic Corporation of North America ("Panasonic"), based in Newark, NJ, is the principal North American subsidiary of Osaka, Japan-based Panasonic Corporation and the

hub of its branding, marketing, sales, service, product development and R&D operations in the U.S. and Canada. Panasonic operations in North America include R&D centers, manufacturing bases, the award-winning Panasonic Customer Call Center in Chesapeake, VA, business-to-business and industrial solutions companies, and consumer products with sales and service networks throughout the U.S., Canada and Mexico. Panasonic Corporation of North America and its subsidiaries and affiliates employ some 12,000 people in the region.

Panasonic believes that a fully-connected and interoperable health information and communications technology ("ICT") ecosystem will provide the foundation to improve the coordination and quality of care, better health outcomes, and reduced overall costs. We believe such an ecosystem can be designed and operate safely and securely to capture and share patient-generated health data ("PGHD") and electronic health records ("EHRs"), support informed clinical decision-making, and facilitate personal health self-management. Such a secure, interoperable healthcare infrastructure can help improve all aspects of care delivery along the continuum of care—from enabling healthcare providers to make improved diagnostic and treatment decisions, to empowering patients to make healthy lifestyle choices.

One key component of this connected and interoperable system—perhaps the leading edge and one of the biggest opportunities for innovation in healthcare delivery—is the adoption and utilization of telehealth and remote patient monitoring services.[1] Recent advances in technology and modes of healthcare delivery allow patients and providers to connect whenever and wherever care is needed, and enable patients increasingly to engage in management of their own care. Many examples exist to illustrate how remote monitoring is utilized in the medical

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[1] For example, remote patient monitoring – just one aspect of telehealth services – is expected to save $36 billion globally by 2018. *See* Juniper Research, *Mobile Health & Fitness: Monitoring, App-enabled Devices & Cost Savings 2013-2018* (rel. Jul. 17, 2013), *available at* http://www.juniperresearch.com/reports/mobile_health_fitness.

home setting for the most chronically ill, for example, by monitoring intravenous infusions, measuring blood glucose levels, tracking blood pressure, heart rate, and fluid volume in dialysis patients, and even medical-grade weight scale readings from the non-hospital setting to health-care workers, among many other applications. These and other critical information datasets can be sent automatically to medical professionals who can analyze trends and alert physicians or care providers, in order to identify the onset of problems quickly. Today's technologies can also determine the location of ambulances and deploy them efficiently to reduce the time it takes to respond.[2] I should also note that the FCC, who I am pleased to be here with today, has recognized the benefits of remote monitoring for rural and underserved communities in a number of different contexts,[3] most recently through its Connect2Health Task Force.[4]

When enabled by reliable connectivity, telehealth and remote patient monitoring solutions hold great promise. Clinical evidence has demonstrated that interoperable remote monitoring, enabled by connectivity, improves care, reducing the frequency of potentially-preventable visits to medical institutions, in-patient care and re-admissions (thus averting Medicare penalties for hospitals, for example), and helping to avoid complications while improving patient satisfaction, particularly for the chronically ill.[5] Therefore, attention to PGHD through remote monitoring solutions can enhance patient care and raise accountability by

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[2] For example, George Washington University's Heart and Vascular Institute, The Wireless Foundation, D.C.-area Hospitals and D.C. Fire & EMS have partnered to reduce time from onset of chest pain to treatment by equipping D.C.-area ambulances with technology that enables rapid, wireless transmissions of EKGs to both the on-call physician's wireless device and tertiary care hospitals. *See* http://www.newswise.com/articles/view/596059/.

[3] *Technology Transitions, et al.*, GN Docket No. 13-5 et al., Order, Report and Order and Further Notice of Proposed Rulemaking, Report and Order, Order and Further Notice of Proposed Rulemaking, Proposal for Ongoing Data Initiative, 29 FCC Rcd 1433, 1504, ¶ 225 (2014).

[4] Just Around the Broadband Bend, Posting of P. Michele Ellison, Chair, Connect2HealthFCC Task Force, Official FCC Blog, http://www.fcc.gov/blog/just-around-broadband-bend (Feb. 23, 2015).

[5] *See, e.g.*, U.S. Agency for Healthcare Research and Quality ("AHRQ") Service Delivery Innovation Profile, Care Coordinators Remotely Monitor Chronically Ill Veterans via Messaging Device, Leading to Lower Inpatient Utilization and Costs (last updated Feb. 6, 2013), *available at* http://www.innovations.ahrq.gov/content.aspx?id=3006.

healthcare providers while containing costs through preventing the deterioration of chronic health conditions, such as congestive heart failure and diabetes,[6] as well as engage patients in their own care, leading to improved lifestyle choices and improve overall health.[7] There are extensive clinical studies that demonstrate the benefits of utilizing advanced ICT, enabled by connectivity, in such areas as chronic condition management, heart failure, diabetes management, and medication adherence.[8]

Therefore, Panasonic would urge that national policy should reflect the dynamic and transformative nature of advanced ICT solutions, and not inhibit the innovation that holds the promise to continually improve the care delivery system even as it can contain costs. A flexible, supportive approach to such innovation is particularly important within rural—as well as many urban—healthcare settings which face unique population health challenges based on economic, demographic, and other factors that directly affect access to care and the quality of outcomes. For example, telemedicine consultations with specialists, such as pediatric critical-care physicians, have been shown to significantly improve the quality of care for seriously ill and injured children treated in rural emergency rooms.[9]

These positions are not just rhetoric for Panasonic, but reflect our own experiences. In partnership with Jewish Home Lifecare ("JHL"), a New York City sub-acute eldercare network

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6 *See, e.g.*, National eHealth Collaborative (NeHC), *Patient Generated Health Data Introduction and Current Practices: Report to the HIT Policy Committee Consumer Empowerment Workgroup by the Technical Expert Panel Convened by National eHealth Collaborative on behalf of the Office of the National Coordinatorfor Health Information Technology* (Jul. 18, 2013), *available at* http://www.nationalehealth.org/blog/patient-generated-health-data-technical-expert-panel-presents-initial-findings. Note that the NeHC has since merged with HIMSS.

7 *See, e.g.*, Sanjena Sathian, "The New 21st Century House Call," Boston Globe (July 29, 2013), *available at* http://www.bostonglobe.com/lifestyle/health-wellness/2013/07/28/century-house-call/tdupWvOQI6b3dKdKcEgdGM/story.html.

8 Please see a list of these studies appended to this testimony.

9 *See, e.g.*, Dharmar, et al, Impact of Critical Care Telemedicine Consulations on Children in Rural Emergency Departments, Journal of Critical Care Medicine (Aug, 7, 2013), doi: 10.1097/CCM.0b013e31828e98.

serving the greater New York City area, and HealthFirst, a major NY-based Medicare and Medicaid provider, Panasonic recently conducted a formal telehealth pilot study we called "Pathways to Health." The objective of this pilot was to test the efficacy of Panasonic's "SmartCare" Remote Patient Monitoring technology in the chronic care management of elderly patients at high-risk for congestive heart failure re-hospitalization.

Our study—whose results are reported in the attached Panasonic 'white paper'—showed impressive results in the reduction of hospital readmissions (69% reduction for CMS Dual-Eligibles) and Emergency Department visits (74% for CMS Dual-Eligibles). Equally exciting were extremely positive outcomes around medication adherence, and, frankly, glowing patient satisfaction reports. Our Pathways to Health pilot, however, revealed significant challenges as well. The most significant technical challenge, by far, was the lack of reliable Internet connectivity within the patient's home.

While it is easy to state the goal, *i.e.* a connected healthcare continuum of care that fully utilizes innovative telehealth and remote patient monitoring products and services, it may not be easy to successfully navigate the path towards that goal. At Panasonic we are striving to navigate this path, in the realms of technology, business, and public policy, through strategic partnerships and with the aid of numerous industry associations and multi-stakeholder coalitions that serve as key fora for collaboration.

Based on Panasonic's experience, we would like to offer a number of recommendations: some cross-cutting, and others perhaps more agency-specific.

Cross-Cutting Recommendations

Congress and Federal agencies should ensure that their approaches in this space utilize a technology-neutral approach, so as not to "lock in" a limited set of solutions that, while deemed

adequate for today, may fall preclude or impede innovations that are not yet predicted. For certain no industry better illustrates the need for flexibility and technology neutrality than the incredibly dynamic ICT industry. For this reason, the FCC should maintain a technology-neutral approach in its work, particularly in the critical context of healthcare connectivity.

Furthermore, Panasonic believes that the Federal government should recognize that over-regulation can act as a disincentive to investment in new technology, particularly in the healthcare space where well-intentioned regulations can inadvertently inhibit innovation, even potentially short-change or harm the American patient. We would urge that through analysis, oversight and periodic review of rules and guidelines, duplicative or conflicting and unnecessary elements can be removed, and that the government act to evolve continually with the industry, of course, appropriately balancing potential the risk of patient harm with the broad and far-reaching benefits of investment and innovation. Existing program mechanisms that incent innovation should be maintained, while at the same time the means to improve and modify existing frameworks should be explored. The importance of this concept is highlighted in the accelerating convergence of sectors and industries, now giving rise to the forthcoming "Internet of Things."

Finally, we believe there is a need for continued, cross-agency coordinated inquiries into opportunities for wireless broadband allocations that can be utilized by healthcare applications. A great recent example I might note is the FCC's hosting of a March 31, 2015, workshop with the Food and Drug Administration ("FDA") on wireless health test beds, which featured experts from industry, medicine, academia, and government focusing on the role of wireless medical test

beds and their influence on the development of converged medical technology for clinical and non-clinical settings.[10]

Federal Communications Commission

Clearly the FCC has and will continue to play a central role in the connectivity needed to provide advanced eCare. And as I noted earlier, Panasonic fully supports advancing a national communications infrastructure that supports health, safety, and care delivery, and we are committed to working with a wide range of policymakers to promote this concept.

In the Universal Service context, we believe that the FCC's policies should constantly be re-examined for ways to foster innovation in order to "enhance…access to advanced telecommunications and information services" for eligible health care providers.[11] The FCC has been consistent in examining ways to evolve its support of rural healthcare (such as the Healthcare Connect Fund, capped at $400m, created to expand health care provider access, or "telehealth," to broadband, especially in rural areas, and encourage the creation of state and regional broadband health care networks); but, its existing relevant programs only permit funding to service providers to offer discounted wire-line telecommunication services to eligible healthcare providers. This funding does not, but we believe should, extend to services, such as remote patient monitoring, that are provided to patients in their homes.

Some intriguing proposals which contemplate the intent of Congress in the creation of Universal Service have been submitted by key stakeholders that merit careful consideration, such as Christus Health, who has urged the FCC to consider subsidizing under the RHC program the wireless broadband contracts between the healthcare providers and wireless carriers' healthcare

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[10] FCC and FDA Joint Workshop, Promoting Medical Technology Innovation – The Role of Wireless Test Beds (Mar. 31, 2015). Video and materials from this workshop are publicly accessible at http://www.fcc.gov/events/fcc-and-fda-joint-workshop-promoting-medical-technology-innovation-role-wireless-test-beds.

[11] 47 U.S.C. § 254(h)(2)(A).

providers use for remote monitoring.[12] We stand ready to work with the FCC in efforts to improve how it supports rural—and even urban—healthcare moving forward.

Further, the FCC's Rural Health Care (RHC) program, now some 15 years old, remains undersubscribed. Panasonic believes there is a need for heightened efforts to increase awareness of the RHC through a public-private partnership model, such as the approach reflected in the FCC's Connect2Health Initiative. We look forward to exploring ways to ensure that Universal Service funds dedicated to rural healthcare are maximized.

Since 1985, the Lifeline program has provided basic phone service connectivity at a discount to qualified low-income consumers. Recently, the Commission has taken significant steps to modernize Universal Service across its programs, while improving accountability. We believe that the FCC should also give appropriate consideration to the opportunities to integrate broadband telecommunications costs with the delivery of public services, such as eHealth, to low-income consumers. Building on the ongoing work of the Commission within the Universal Service context, we believe there is a significant opportunity to utilize the Lifeline fund to support these services for low-income consumers by adding support for broadband connections—both wired and wireless—that are specifically used for providing eHealth and remote patient monitoring.

Finally, in order to advance a national communications infrastructure, close and constant coordination will be needed between the FCC and other Federal agencies as it continues to make frequency management decisions that directly impact opportunities for mobile broadband allocations that can be utilized by healthcare applications. The solutions needed for a fully

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[12] *See* Ex Parte of CHRISTUS Health, CC Docket No. 02-60 (filed Mar. 30, 2015), attached.

connected healthcare system must be able to utilize both licensed as well as unlicensed spectrum, as be permitted to operate with appropriate sharing arrangements.

Mr. Chairman and Members of the Subcommittee, thank you again for inviting me to participate today; and I would be pleased to answer any questions you may have about Panasonic's healthcare activities and issues which can affect the implementation of a robust and affordable connected telehealth system.

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