Keynote Remarks of
Commissioner Mignon L. Clyburn
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Broadband Powering the Next Generation of Health and Care:
A World of Connected Health

Thank you, Dr. Graham, and allow me to express how grateful I am, to the Cleveland Clinic and the Global Center for each year, hosting such an important conference and convening this impressive group of luminaries to advance our thinking when it comes to health care.

As the license plate says, there really is "so much to discover" in Ohio, which is one reason it is so fitting that a summit on innovation in health is being held here. For it was here, where two brothers - bicycle repair and manufacturing shop owners - not traditional players in the aviation efforts of the day dreamed of human flight. Their vision was not only to offer a new mode of transportation. It was to transform imaginations and enable a new set of possibilities. As Orville Wright once said: "If we all worked on the assumption that what is accepted as true is really true, there would be little hope of advance."

Broadband connectivity is very much like that. It is transforming our imaginations and expectations. Just a decade ago, it was unthinkable to remotely share a patient's own information — those notes, tests and charts. Now, it is unthinkable not to do so. That chart can follow the patient instead of the patient chasing the chart. This is the transformative power of connectivity and technology at work.

It may come as no surprise that an FCC Commissioner would extol the virtues of technology, but what I always add, is that this is also about the individual, the consumer, the patient, *not* just the connections, the devices or the apps. It is about how technology is meeting the needs and improving the lives of people.
If you remember only two points, take away these: One, the real power of connectivity is in what it enables in health. And, two, let us view connectivity as disruptive and transformative, not simply as a tool, because looking at it just as a tool may only bring about different, limited and incremental benefits.

Enabling Network Benefits

Let me share an example. Physicians working with the C2H team tell us that many of our brain functions are dependent on how regions of the brain are connected. Our memories, thoughts, and visions of the future -- these are all consequences not only of individual neurons, but their connections. More importantly, these connections occur in specific ways that help enable meaning, give emotional weight, and provide a sense of logic.

Connectivity in the real world shares a lot of commonalities with the brain. There are elements: individuals, computers, sensors, and devices. And there are broadband connections between these elements: your computer and that remote server or a sensor and your smart phone. Just like in the brain, the true power of connectivity is what those connections enable.

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Imagine a little girl with asthma (one of nearly 25 million with this condition). She uses her puffer at least three times a week. It has a sensor that logs geospatial and temporal data about her usage.

That data is then transmitted to a connected device, which can also pull in data from other sensors around her home and her environment – data like temperature, humidity, and air particulate matter.

This connected system of devices and sensors could use machine learning and other analytic tools to identify patterns of puffer use, environmental triggers, and risk factors. Now what if that data were analyzed and connected in a feedback loop to actually adjust the physical environment? What if this virtual world were interfaced with the physical world and if the data established that the dry, cold air is a risk factor for her asthma, the humidity and temperature in her room could be automatically raised or lowered. This is the kind of dynamic adaptation that may be possible through connectivity. "Smart" care systems like this could be personalized to our specific needs and risks.

Now, it is important to recognize that achieving this network of networks, or system of systems, will take more than connecting to care environments or to online communities. It will take more than connecting to a physician, a social worker, or to a friend. This vision of interconnected health must link people to the information and resources they need – when they need them to get well and stay healthy. It takes ubiquitous and pervasive broadband connectivity to make all this this possible, which is why I am here and why the FCC is engaged.

And there is no time to waste. By 2030, one in five persons will be over the age of 65 and we know that one in five over the age of 65 has four or more chronic conditions. And while demands on healthcare are expected to increase the supply, when it comes to health care professionals, is not expected to keep pace. This is not just about aging in place or physician shortages. Health disparities between populations are also based on geography, environment, and socio-economic status.

Broadband: Innovating Solutions & Innovating Innovation

Connectivity, however, can bridge chasms of quality and outcomes. Innovating in a connected ecosystem brings together knowledge, expertise, and nontraditional players in ways that can enable disruptive models of care. Simply put, a connected world can dramatically change what and how we innovate. When we use connectivity to link traditional systems to nontraditional players, lab research to patient experience, and communities to ideas and 21st century resources, then the future -- when it comes to health and wellness care -- is more bright.

It's About People, Not the Tech

I had a chance to review the agenda and saw where a panel will discuss how IT can have a transformative impact on healthcare. But we must never lose sight of the people who are at the center. We must always ask: How can this innovation expand human aspirations? How can it motivate and drive the individual? How can it help us dream new things in new ways? All of this starts with the individual, who must be enabled, engaged, and empowered along with what our team calls the 3Cs of innovation in this connected ecosystem: connection, collaboration, and centralization.

Connection with the end-user, the consumer, the patient. Connection with their world, their experiences, their aspirations. Connection to your world, to the data they shared with you, and tools to make it meaningful for them. Through connectivity, collaboration with consumers and competitors is part of a joined system where no innovation is an island. It is about integrated solutions fitting around fulfilling the needs of the consumer.

And finally, centralization. At the end of the day, from a consumer's perspective, each innovation proposed or adopted needs to be in the context of *their* lives. It must be part of a seamless system that is smart enough to both shift and optimize the health needs of each consumer it serves.

For years, the FCC has worked on the infrastructure side of the house. We are ensuring that the Internet remains fair, free and open, so that there are fewer technological barriers to care. We are updating our universal service programs to ensure that everyone has a digital pathway when it comes to delivery of information, services, and care. We are finding new ways, to work more closely with our sister agencies, to expedite the speed of getting connected devices to market for care. In sum, we recognize that a siloed approach to policymaking and regulation will net expensive, inefficient and isolated outcomes. All our efforts, therefore, must maintain an eye toward connecting, collaborating, and centralizing to guarantee that the excitement and benefits that innovation brings are realized by us.

Thank you very much, and I look forward to the remainder of an exciting program.