PNWER Working Group Session Report

Working Group: Healthcare Innovation  
Meeting Date/Time: 9:15am, Monday, 7/23/2018

Agenda Items and Speakers:
1. Welcome, Introductions, Opening Remarks and Overview of WWAMI
   - Dr. Darryl Potyk
2. Biomedical Research; How do governments ensure the region continues to lead in biomedical research
   - Dr. Alan Winter, PhD, Innovation Commissioner, Ministry of Jobs, Trade, and Technology
   - Dr. Mary L. (Nora) Disis, MD, Director, Tumor Vaccine Medical Oncology, Uw Department of Medicine, Division of Oncology
   - Marc Cummings, Vice President of Public Policy & External Affairs, Washington Life Sciences
3. Telemedicine’s role and benefit for the region
   - Dr. John Scott, Director of Telemedicine, University of Washington Medicine
   - Jennifer Stoll, Vice President, Government Relations and Public Affairs, OCHIN
   - Melissa Sassi, Senior Project Manager, Airband Initiative, Microsoft
4. Opioid impacts and role of legislators
   - Dr. David J. Tauben MD, Center for Pain Relief at UWMC-Roosevelt

Summary of Meeting:

Dr. Darryl Potyk: Introduction
Dr. Potyk provided us with a brief introduction to this session and outlined what would be discussed within it before introducing the first group of speakers and inviting them to the head table.

**Panel 1: Biomedical Research; How do Governments Ensure the Region Continues to Lead in Biomedical Research**

**Dr. Alan Winter: PhD, Innovation Commissioner, Ministry of Jobs, Trade, and Technology, British Columbia**


Dr. Winter provided context on advances in biomedicine and telemedicine - and where the PNW, particularly BC and WA, can be involved in this change-, what he described as the digital world and the biological world coming together. He stated that we must use new technologies - including social media - to focus primarily on the patient rather than on the hospital or the insurance agency. In addition, older people, who are already established in the health industry, need to bring in and listen to younger people who are more open to change. However, we do not know where technology is going, and therefore must make an effort to standardize the technology we currently have. This new era of health includes an increased emphasis on the social determinants of health. Transparency must also be increased in the health system for innovation to continue.

Dr. Winter then went on to describe where British Columbia fits into this puzzle. BC has not always been completely connected to innovation around the world, and the Canadian public health system has sometimes acted as a barrier to innovation. But today, BC is establishing a number of programs in the Cascadia region to connect it to innovation cross the world, especially in the US and UK, as part of Canada’s “digital supercluster.” Over 5-10 years, BC intends to put 8-10m dollars into data visualization, data analysis, and data collection in the health industry. This is part of a Silicon-Valley style reorganization of the health industry into “precision health/medicine,” in which gains the tech industry will be used to aid the health industry. The “digital supercluster” and “Canadian innovation corridor” will keep the PNW at the head of the innovation in health.

**Dr. Mary L. Disis, Director, Tumor Vaccine Medical Ontology, UW Department of Medicine, Division of Oncology**


Dr. Disis prevented us with a view of healthcare innovation from the perspective of a public research university. She stated that while the narrative of health innovation often focuses on big pharmaceutical companies, this is no longer true- 20% of all new FDA-approved drugs now come from public research institutions. The University of Washington, and the broader PNW,
lead the way on this trend. Today, the line between public and private research is also starting to blur, and public institutions help set up small start-up’s that often drive health innovation through programs like the Technology Transfer and Innovation program at UW Medicine.

Another one of these innovation drivers has been the Institute of Translational Health Sciences, which seeks to link schools in the WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) region, as well as in Canada, with innovation stemming from its UW headquarters. This is done by providing resources that other WWAMI schools may not have, including biomedical informatics, biostatistics, and Data and DSafety Monitoring. One of the most interesting of these areas is the Gene and Cell Therapy Lab at UW, where the goal is to increase the support of local Cell Therapy, making this research available to companies and start-ups who wish to go into clinical trials. Another organization is the Drug and Device Advisory Committee- a pharmaceutical “shark tank” where experts will evaluate and support start-ups, like PVP Biologics, that advance pharmaceutical research. Overall, the Institute of Translational Health Sciences has had a massive impact on healthcare in general and the PNW in particular, from preserving hearing during the treatment of infections, and innovation in the PNW has increased more in the past 10 years than in any other time in history.

Mark Cummings, Vice President of Public Policy and External Affairs, Washington Life Sciences

Mr. Cummings noted that Washington State has always been one of the top 5 regions for healthcare innovation because of a combination of public institutions, non-profits, and private companies. But Washington is also too focused on the software model of development. In software, the funding and development cycles generally run their course in a few months, while in the healthcare industry, funding and development can take years or even decades to reach completion. Because of this, Washington has recently faced a lack of investors interested in funding the middle point of the research process, causing the state to Washington is currently slip in the rankings of major research areas.

Questions

Q: “On the topics of genomics and genetic research, how do we guide the process towards Chimeras and telemetry for abortion?”

Marc Cummings: We need to have funding that does not only consider the science of the medicine, but the ethics of it as well, like what was done with the Human Genome project. We should not be able to use Genomics for things like identifying human beings, and those limits should be worked out in advance- in the PNW, we often want to push the science as far as we can, and we must put limits on ourselves beforehand to stop this

Dr. Disis: We need to institutionalize biomedical ethics, especially in fields like CRISPR. Regulation is important, but often just publicizes the issue to the general public, things
like the University of Washington’s Department of Bioethics are necessary to prevent science from going too far. This must be done with increased transparency to the public.

Panel 2 - The Telecommunications Revolution

Dr. John Scott - Director of Telemedicine, UW

Dr. Scott led the panel through ways that private companies and the healthcare industry are looking for ways to use the telecommunications revolution to increase access and decrease waiting times. Though many companies, especially investors like Boeing, are looking for ways for their employees to receive healthcare services without leaving work, the benefits of telemedicine do not end there. Telemedicine will allow face-to-face consultation in rural communities, increased storage and forwarding of information, remote monitoring of patients, and case-based teleconferencing in which multiple doctors will be allowed to instantaneously consult with their patient. Currently, as cost is concerned, Telemedicine, and telehealth more broadly, are based primarily on reimbursement, including through Medicare and Medicaid.

Dr. Scott noted that a number of interesting telemedicine programs are currently in being tested. One of these programs is eConsult. eConsult will allow patient data to simultaneously be transferred to different specialists, who will provide advice and diagnoses simultaneously to patients. Without hiring additional doctors, access will be increased by 30%, while not only being cost-effective, but cost-saving, to the tune of $500 per patient through the avoidance of unnecessary testing. Telemedicine has also been utilized in the form of mobile apps. This includes Focus, created by Dror Ben-Zeev. Focus primarily works for patients with a high proportion of psychological problems, especially within minority groups. These patients have been found to communicate and share more with the app than they would a regular doctor. Another app is mPOWEr, created by Heather Evans and Bill Lober. mPOWEr allows patients to upload pictures of their wounds from their smartphones so that a connected doctor can remotely flag them for infection.

Another exciting program in the field of telemedicine has been tele-antimicrobial stewardship, which allows experts to remotely meet with nurses and pharmacists in critical access hospitals to get them certified for new Medicare requirements.

Jennifer Stoll, Vice President of Government Relations and Public Affairs, OCHIN

Jennifer Stoll spoke of how OCHIN has provided a unique model of care through connecting over 500 different safety-net providers together, focused especially on providing care to rural America. OCHIN has been able to grow a health IT company from Portland to the size where it exchanges data across the country, creating the largest repository of safety-net information in
the country, with over 75 million patients. Currently, they are especially focused on ensuring that communities have access to the infrastructure necessary for this information to flow—particularly high-speed internet.

Ms. Stoll then discussed the barriers that impact greater utilization of telehealth, along with 2018 state policy trends. Access to high-speed internet remains the most important barrier. In addition, most telehealth policies are currently set at the state level, creating differences in how companies must approach telehealth. However, the federal government is currently pushing a lot of money onto the states to adopt, or increase access to, telehealth, with schools as the “originating sites.” At the same time, the federal government also believes an increase in telehealth will increase costs. This perception must be overcome, as well as the perception that virtual care is not actual care. States must ultimately work to look at all of the bills regarding telehealth to develop a comprehensive regulatory/legislative package, including a common method of reimbursement.

Melissa Sassi, Senior Project Manager, Airband Initiative, Microsoft

Melissa Sassi detailed the private sector’s contribution to making telemedicine more accessible. Microsoft’s Airband initiative is based on providing better internet access to the 1 billion people around the world with no or poor internet connection. This includes both urban and rural areas. To do this, Airband partners with already existing telecommunications companies, and does not seek to become a telecommunications company in its own right. Airband originally began in Sub-Saharan Africa, but soon realized that there was also a significant broadband divide in the United States. In turn, this divide was increasing other forms of inequalities. In Arizona, 66% of people in rural communities lack access to reliable internet connection. 61% of people on tribal land have no connection, and over 1/3 of rural America has no connection. The increased access to the internet provided by Airband also increases access to cloud services, machine learning and other services—but these people also need to gain the skills not only to use the internet but to create things for the internet. This includes basic digital literacy like password management. In many rural communities, Microsoft is also investing in using “TV White Spaces”—using unused TV channels instead of fiber cables to increase access to the internet.

Questions

Q: “What are the barriers on the Doctor’s side to telehealth?”

Jennifer Stoll: Payment remains a major problem—though several bills that mandate coverage in the WA state legislature have helped.

Dr. Scott: Doctors tend to be fairly conservative, which impedes access to new technologies.
Melissa Sassi: The cost of broadband for rural clinics, in addition to the lack of awareness for subsidies, has created a huge problem.

Q: “How does Microsoft plan to get older Americans to use some of this new technology?”

Melissa Sassi: The AARP is currently embracing telehealth very strongly, and their data does not suggest the age divide is as strong as people think. Many older people are on a fixed income, and also do not have the skills needed or the internet, so when there is a choice between rent and internet, they choose rent. In addition, Microsoft wants to give digital literacy to everyone, regardless of age.

Q: “How do businesses plan to use telehealth?”

Dr. Scott: Many manufacturers, such as Boeing in Washington, contract with telehealth providers, which has aided employers and increased job satisfaction.

Q: “How do we integrate different EHR’s into the telehealth system while also protecting privacy?”

Jennifer Stoll: In the US, they are looking at a lot of different policies to create “interoperability” between systems, which is behind but growing, though federal barriers in the US are currently being reduced. The EPIC system, which is used in Seattle, is good for Seattle, but not so good for more rural areas.

Q: “Can you delve deeper into reimbursement?”

Dr. Scott: Many of the telemedicine visits are follow-up visits, which helps with payment. However, the different groups involved in telemedicine, like doctors and insurance companies, disagree on how best to pay, especially in rural communities that need it. Technically, in Washington State, there must be parity for telemedicine, though true parity, especially between urban and rural communities, are a long way off.

Q: “Why have studies found people are more comfortable with telemedicine?”

Dr. Scott: Patients can stay in their own home. It creates a sense of intimacy - studies show people will say things through the computer that they will not way in real life.

Q: “Can TV white space support live video? If so, how can we use this to increase connectivity for things like training on devices like smartphones?”

Melissa Sassi: Microsoft achieves the minimum broadband speed as defined by the FCC. Currently, Microsoft has projects such as using TV white space to provide kids with digital homework access. However, only unused TV channels may be used for TV white space, and providing limits to the use of this technology.
Panel 3: Opioid Impacts and the Role of Legislators

Dr. David J. Tauben, Center for Pain Relief, UWMC-Roosevelt

Dr. Tauben believes that the current opioid crisis is actually two crises at once: the crisis of opioids itself, and a crisis of the illusion of pain. Pain is ultimately an illusion created by the brain. If you’re thinking about pain, the pain is going to be worse - a doctor asking how bad the pain is is only going to make the pain worse. In addition, the higher the number of adverse childhood experiences - such as an alcoholic or imprisoned family member - the more likely these conditions are to occur - which is ultimately a form of PTSD accentuated by poverty and social disadvantage. A 10/10 on the pain scales means that “nothing else matters” - they are not seeking opioids, but simply pain relief. Opioids are just the method doctors are using to treat the existential problem of pain. Therefore, the most effective treatments of pain are self-management techniques. Doctors in some places in Washington have been able to treat pain without using pills, but doctors continue to prescribe opiates that foster a cycle of dependency. The fact that only prescriptions were covered by many insurance plans encouraged many doctors, in rural America, to use pills instead of alternative treatments for pain. This has created additional problems for those hoping to deal with the opioid crisis, ¼ of all prescriptions are not taken by the people they are prescribed, including by teenagers who take them from their parent’s medicine cabinets - but the State of Washington has recently pushed a new policy to decrease the number of pills given to patients.

Currently, doctors will be able to use new technology to better provide patients with information on pain solutions. One method of connecting people will be through TelePain program, which connects anesthesiologists and other pain experts to people throughout the PNW. Opioids can at best reduce pain intensity by 30%, and non-opioid drugs can also only do 30%, while things like CBT or mindfulness can reduce it as much as 50%, without any risk of an overdose, all while better dealing with things like childhood trauma that can negatively affect pain. The Center for Pain relief is involved in lowering barriers for these kind of treatments through “prepared patient-centered visits,” which greatly increase the follow-up rate of addiction patients. In conclusion, Dr. Tauben restated his belief that we cannot reduce social-economic determinants by medicating people.

Nicole Macri, Washington State Legislature

Nicole Macri has been working outside the legislature with people with long histories of homelessness, disabilities, and behavioral issues, the highest cost/highest risk population when it comes to opioid abuse. She believes that we need to balance the need of many patients for opioids with restricting access to those who are addicted. This involves action in a number of different areas, including preventing unnecessary prescriptions, and increasing access to treatment connected to other support services patients may need. The next question legislators
must face is “how do we stop overdoses and save lives?” This involves increasing access to things like Naloxone, but also collecting, understanding, and applying more and better data.

In the previous session, a massive number of bills were introduced in the WA legislature regarding opioid abuse, and the legislature made significant investments to areas they believe are already having positive impacts. Rep. Macri then detailed some of the bills that have either passed the legislature or have been introduced

**HB 1427 (2017- being implemented):** This bill makes it easier to implement medication-assisted treatment, including methadone, which has high evidence behind it but often has high barriers to access. It also calls on providers to update their prescription practices to minimize the prescriptions of unneeded opioids. To aid this, it asks for research into how to make better use of the WA prescription monitoring program, RPMP, to alleviate the pressure of monitoring on doctors while simultaneously providing them with more information in a timelier manner. This allows doctors to better understand broader trends, using anonymous data, on drug use.

**HB 1047:** Creates a program for prescription medicine takeback(currently under judicial review). ¼ of medicine in the US is sitting in medicine cabinets, and this makes it easier for people to return those medications. Puts in over 100 million dollars towards combating the opioid epidemic. Also creates a number of Governor’s office programs. These include a health plan waiver that looks at integrating health-care delivery systems with support systems that target the social determinants of health, targeted for specific regions of Washington. Another program compels better coordination between various health departments in Washington.

**Omnibus Bill HB2489** (passed the House but did not pass the Senate): Allowed pharmacists to do partial fills of medication. Allowed the department of health to have a standing order for naloxone. Established a prescription monitoring program and increasing education on the PMP to ensure doctors use it for the best effects of patients. Requires that patients have face-to-face communication about both the risks and rewards of opioids

Rep. Macri ended her discussion with a plea to deal with the social determinants of health

**Questions**

**Q:** “Does the requirement for face-to-face discussions include telehealth?”

**Rep. Macri:** Yes

**Q:** “Should marijuana be used to lessen opioid abuse?”

**Dr. Tauben:** The data is not yet clear on whether marijuana reduces pain less than opioids- previously, doing studies with marijuana had been difficult. While cannabis is definitely safer, it still is medication, and does not deal with the social-economic determinants of pain.”
Q: “Is it currently difficult, with current regulations, to share drug and alcohol data?"

Dr. Tauben: Yes, data generally can only be easily shared if you reasonably suspect that harm will occur.