

Henry Schein/Medpod response to FCC proposal for Broadband to support Virtual Care Services. WC 18-213

**A grant-funded program to provide telemedicine-enabled urgent care and remote monitoring made an enormous difference for 2000+ individuals with Intellectual and Developmental Disabilities (I/DD) in New York. The grant was one of several awarded by the NY Department of Health, with a goal to increase access to care, improve health outcomes and reduce unnecessary utilization among this underserved Medicaid population. The 3-year, $6 million project was the largest and the only one to feature connected care enabled by remote monitoring and telemedicine. It was extended twice based on successful outcomes. The grant program ran from August 2014 through September 2017. The responses provided here are based on the experiences and published results of that grant. Supporting documentation is attached.**

Starting on page 8:

Paragraph # 17. *Improving Health Outcomes Through Broadband Access*. We first seek comment on the goal of using broadband to increase access to telehealth services and thereby improve health outcomes among participating low-income patients. How can the USF best support this goal?

The Commission’s existing work on telehealth has produced maps that show the correlation between low-income communities, poor health outcomes, and lack of broadband access. We thus view the Connected Care Pilot Program as a way to help address this identified issue.

**Broadband is critical to the ability to provide connected care in rural and even urban areas. During the DOH grant program, “tele presenters” carried into the patient’s home a video-enabled telemedicine roller bag that required wifi or cell connectivity to connect the bag’s medical devices with a remotely located physician. The traveling “tele presenters” had a lot of difficulty making the connection in areas as diverse as the East End of Long Island, NY, and Queens, NY. In some locations, no connection was ever possible. In one case on Long Island, the patient had to be examined on their driveway, as it was the only way to achieve a signal. While most people think of eastern Long Island as the wealthy Hamptons, it contains rural areas that are designated Health Professional Shortage (HPSA) areas. Broadband access that covers the HPSA area as well as “urban dead zones” would make life-saving and cost-reducing telemedicine services possible for individuals living there.**

**The Henry Schein Inc. (NASDAQ – HSIC) partnership with AT&T can help facilitate broadband access to telehealth services.**

Paragraph #18. We also seek comment on the role of broadband in improving health outcomes generally. To that end, we ask that commenters provide data regarding the current state of the remote telehealth and connected care market, specifically data on the types of telehealth services that use broadband connections, the bandwidth required for such services, and any relevant market trends. Have certain types of remote telehealth services been shown to produce better health outcomes than others?

**During the above mentioned DOH funded grant, telemedicine virtual visits provided the greatest outcome, resulting in more than 86% reduction in ER visits across 253 visits. The grant used Henry Schein/Medpod MobileDoc telemedicine roller bags. Use of AMC remote patient monitoring devices left in the home also produced results: 25% reduced risk of cardiac events and 37% reduced risk of stroke. Biometric devices were left in the home or residence to capture daily readings of vital signs for the most severely diastolically and systolically hypertensive individuals. For those monitored for blood glucose, improvement translated into a 48% reduced risk of microvascular complications, 56% reduced risk of peripheral vascular disease and 21% reduced risk of heart failure. Henry Schein/Medpod has since introduced remote monitoring equipment that is integrated with its MobileDoc product for offering a complete envelope of care.**

**See DOH Grant Telemedicine Evaluation Report and Henry Schein/Medpod MobileDoc Use Case.**

**Regarding the bandwidth required:**

* **The architecture of the Medpod network allows for bandwidth optimization and can be used on both broadband and mobile networks, thus allowing for a high degree of portability and flexibility.**
* **The Medpod client will use up to 2 Mbps up and down, minimum 700 Kbps for acceptable quality for each video stream.  For example, if 2 streams are activated, e.g. main video and a video scope the bandwidth requirements is 1.4 Mbit/sec to 4 Mbit/sec.**
* **Total usage is 1GB/hour (at average 2Mbit/sec) in each direction, for total bidirectional usage the application could use as much as 2 GB/hour.**
* **For acceptable quality:  packet RT latency not more than 200msec, jitter not more than 100msec, packet loss maximum 5%.**
* **Optionally, for Remote Control additional 2Mbit/sec is required for acceptable performance, and up 8 Mbit/sec for the best performance (e.g. minimum mouse pointer lag).**

#18 Continued: What types of benefits can consumers derive through increased access to these broadband-enabled telehealth applications?

**During the grant, participants experienced 50% Faster access to care with telemedicine visits. An average visit to the ER takes 195 minutes, inclusive of travel and wait time. The average telemedicine visit took 98 minutes from the time of the call to intervention. Average visits to an Urgent Care Clinic are about the same, but with a telemedicine visit there is no disruption to the enrollee or house, no enrollee travel, no extra staff needed, no behavioral outbursts in the clinic. Availability was extended into off-hours and weekends.**

**Also, use of telemedicine and remote patient monitoring produced significant impact on the lowest activated, highest acuity enrollees. The Grant team developed a segmentation model to identify enrollees with the highest acuity and lowest activation scores – i.e., the sickest individuals needing the most support. There is evidence that high need enrollees naturally gravitated toward the grant program’s services. Looking at patient activation scores alone, there was significant improvement in the baseline scores of the lowest activated individuals who used the services of the grant. The average patient activation score change among Level 1’s was 68% improvement, and 42% improvement for Level 2’s, indicating a higher level of patient engagement with their health.**

#18 continued: What are the costs associated with increased use of these telehealth services?

**Telemedicine net savings alone could have covered the entire cost of the grant. Projections of potential savings associated with the 218 telemedicine visits that averted ER and in-patient admissions range from just over $550k to over $2M, depending on the assumptions used in the estimates. Although the telemedicine component was available only for the final 8 months of the program; savings projections indicate that had telemedicine been in use throughout the entire 3 years of the program, it would have more than paid for cost of the $6M grant in net savings.**

**Overall reductions in highest cost utilization. By the end of the first 12 months of their enrollment in the program, utilization by individuals decreased 26% on medical inpatient services and 20% on behavioral health inpatient services, compared to the comparison group.**

Paragraph #19. We further seek comment on how the pilot program can improve health outcomes by focusing on particular demographics or geographical areas. Are there particular populations or demographic groups that are more likely to benefit from increased access to and use of broadband enabled telehealth services? Do low-income households in certain areas of the country or certain segments of the population experience greater challenges in accessing high-quality health care and achieving good health care outcomes than other groups?

**The grant supported 2,000 individuals with Intellectual and Developmental disabilities living in New York. These individuals are more likely to visit the ER than the general population and are 2X more likely to be admitted to the hospital from the ER. This is due in part to the lack of availability of quality care from population-knowledgeable providers, lack of transportation to medical appointments, and the policies and practices of group homes in which many individuals with I/DD live to default to an ER visit for most complaints. In other circumstances, individuals with I/DD do not receive care when they should, as a result of low availability and limited access to quality care. This can be true irrespective of the rurality of the geography.**

Paragraph # 20. Additionally, should the pilot program focus on particular health conditions, areas of medicine, or health crises? We seek comment on these and any other issues commenters believe are relevant in determining how to most effectively allocate the pilot program’s resources.

**One goal of the Urgent Care Program was to identify innovative ways to become more effective and efficient in providing services to a low income, complex population. The program team believed it would be useful to create a model to segment the enrollee census based on three characteristics: their acuity (types and degrees of illness or conditions), their activation (how capable and motivated they are to adjust behaviors to achieve health outcomes) and their residence type (with nursing and supportive care, or without). A matrix of these characteristics could be applied to a population in order to create the appropriate plan of care for each individual, with the most “touches” directed to those individuals most at risk. Though the Grant Urgent Care Program was primary a reactive program initiated by a call to the call center, the team was interested in applying the segmentation model to the census, then seeing utilization patterns. The team identified 255 individuals (13% of the enrolled population) considered at highest risk.**

**For comparison purposes, over the course of the 3-year grant, 25.9% of all enrollees contacted the call center while slightly more -- 27.4% -- of the 255 high risk enrollees noted above called the call center. Among the 255, however, 42% of those with the highest acuity scores, or the most identified health concerns (i.e. the sickest of the sick), contacted the call center. Using a similar segmentation approach for a broad Medicaid population the goal to increase resources to those most in need can be met.**

Paragraph #21. *Supporting the Trend Towards Connected Care Everywhere*. As discussed above, there is a movement in telehealth beyond connectivity within and between physical health care centers and towards a connected care everywhere model. This trend has shown promising results for patients, communities, and the health care system. We therefore seek comment on using the pilot program to support the current movement towards direct-to-consumer health care, and ensure that low-income Americans can realize the benefits of this trend. What are the costs and benefits of the shift towards ubiquitous connected care?

Paragraph #22. *Reducing Health Care Costs for Patients, Facilities, and the Health Care System*. We seek comment on using the pilot program to help reduce the rising health care costs faced by consumers and health care facilities. How can the pilot program improve health care affordability for low-income Americans and counteract the burdens of increasing out-of-pocket expenses, including transportation costs for rural and remote patients?

How can the pilot program reduce health care expenditures for participating health care providers and their qualifying patients? Can support for telehealth services for low-income patients create savings for Medicaid, and in turn, lessen burdens for taxpayers?

**Yes, telemedicine and virtual care can dramatically reduce the cost of providing health care services for low income people and other populations. (See the Telemedicine Impact Report) In the DOH grant, 253 telemedicine visits were conducted for 161 unique individuals over 6.5 months. Projected ER/IP savings for these visits range from $564,075 to $2,381,105. Given that the all-in program cost per person per month is $100, the cost to serve these 161 individuals during this 6.5 month period was $104,650. Using the most conservative estimate of $564,075, the telemedicine component generated net savings of $459,425 ($564,075-$104,650) in 6.5 months. Telemedicine net savings alone could have covered the entire cost of the $6 million grant.**

#22 continued: To the extent that remote patient monitoring and connected care technologies more generally continue to reduce the overall costs of healthcare in the country, what steps can be taken to incentivize payors in the healthcare system to more fully support the long-term deployment and use of these technologies?

**CMS and Medicaid need to clearly articulate reimbursement fees for Fee For Service and Managed Care providers, and provide enough reimbursement to make it financially motivating. For example, see the attached document written to the NY State Office For People With Developmental Disabilities (OPWDD) written to provide the foundation necessary to make the effective use of telehealth and telemedicine a reality for the 127,000 people OPWDD supports. Care delivered via telemedicine for the I/DD population can be so much more than just the use of devices to extend the capacity of providers, or provide services after-hours. Care delivered through telehealth and telemedicine – particularly if delivered by their familiar primary care provider -- can wrap around the individual to enhance safety, security, health and well-being, promote independence and reduce the cost of care for people with intellectual and developmental disabilities. This can be applied across a broad Medicaid population.**

Paragraph #24. Other federal agencies have also established programs to support telehealth. For example, the Veterans Administration’s Home Telehealth program collects information about symptoms and vital signs from the patient’s home. The Department of Health and Human Services (HHS) also has various initiatives to promote telehealth, including initiatives focused on providing telehealth services for rural, veterans, and Tribal populations. We seek comment on methods to use or leverage these and other government-run telehealth programs. Which programs have been the most successful at improving health care outcomes? Are there aspects of other programs we should seek to emulate in the pilot program? We also seek comment on how the pilot program can complement existing telehealth initiatives by these federal agencies. How can we avoid duplicating existing programs? Should the Commission coordinate with HHS or other federal agencies in administering and developing the pilot program? **See the attached OPWDD paper referenced above as an example of working in concert with a government agency.**

Paragraph #27. To the extent the pilot program would additionally increase adoption of broadband service among non-adopters, we believe program participants could also gain from the many other benefits of broadband subscription, and that these benefits should be accounted for in evaluating the pilot program. We seek comment on this view. The 2012 Lifeline Order noted that one of the benefits of increasing the availability of broadband for low-income Americans is that of the network effects of widespread subscribership. How could this pilot program help to bridge the digital divide? What externalities might the pilot program produce for the economy and society?

**People can move from RPM to BYOD (bring your own device) if broadband subscriptions are more widely available to low income individuals. As evidence of this, note the following:**

**“To scale a program up and get into the population health management level,**

**we needed a vastly reduced cost per unit. The only way to do this is to leverage**

**what the patients already have, which is “Bring Your Own Device” (BYOD).**

**BYOD will enable us to take the program from a few thousand patients**

**at high-risk to move into the population health space. It will also allow us to**

**monitor patients for a longer period of time, because you can’t keep everybody**

**in a fully-loaded kit all the time. When a patient gets better, you can offload them**

**from a fully-loaded kit onto BYOD. The BYOD person gets sick, you can get them**

**back into the fully-loaded kit.” *-- taken from “A New Vision for Remote Patient Monitoring” A special report based on a 2018 Healthcare Intelligence Network (HIN) webinar hosted by Melanie Matthews, HIN executive vice president and chief operating officer.***

Paragraph #28. We seek comment on designing the Connected Care Pilot Program to fund a limited number of projects that would promote the use of broadband-enabled telehealth services to low-income consumers, including low-income veterans, with a focus on such services delivered to patients beyond the doors of brick-and-mortar health care facilities. More specifically, we could permit up to 20 health care providers that serve primarily low-income populations to partner with at least one facilities-based broadband service provider and apply for a maximum of $5 million in universal service funding for supported services that would be used to deliver these connected care services to eligible low-income patients We seek comment on this structure generally and on a number of specifics regarding how to design the pilot program, including (1) the size of the program budget; (2) the application process and the types of broadband-enabled telehealth projects that should be selected; (3) eligibility criteria for participating health care providers, broadband service providers, and low-income consumers; (4) the broadband services and other communications services and equipment that should be supported; (5) the number of projects that should be selected, the amount of support, and how it should be disbursed; and (6) the duration of the pilot program. We also seek comment below on any federal, state, or local regulatory barriers to telemedicine that we should consider, on how to ensure that pilot program funds are used responsibly, and on how to ensure that patient information is protected. Finally, we seek comment on how lessons learned from past Commission pilot programs should inform the structure of this pilot program.

**Regarding designing a pilot program:**

**Take into account key success factors that will directly influence an applicant’s ability to develop, implement and operationalize a comprehensive virtual care program capable of sustained performance and ability to deliver results.**

**Key success factors include:**

1. **Access to the target population. Do they have a large pool of potential enrollees to make the program worthwhile and statistically significant?**
2. **Demonstrated ability and/or a resourced strategic plan for enrolling the population into the virtual care program or clinic. This can be quite challenging as the DOH grant revealed. However, in the end the patients and their caregivers/residential nurses gave the program a 98% satisfaction rating and wanted it to continue post-grant.**
3. **Relationships with providers and clinical partners who are experienced with telemedicine/virtual care or biased toward innovation in the practice of medicine. The DOH grant experience revealed that it took nearly 3 years to get the providers and house nurses comfortable with using virtual care protocols and technology.**
4. **Relationship between current care offerings and new virtual care. Is the new virtual care going to extend the same services to additional hours, such as evening or weekends? Will it enable the provider to offer new categories of services such as post-operative transitional care, at-risk pregnancy care, urgent care, chronic care?**
5. **Clearly articulated implementation plan, a team, a project manager with project management skills and executive support – all of this is necessary to take a concept through to operationalization**
6. **Change Management / Communication plan – as was experienced in the DOH grant, key constituents (patients, administrators, providers, payors) require attention and lots of two-way communication in order to be brought on board and engaged in making a successful program**

**Regarding duration of pilot: the DOH grant program duration was initially 18 months. At that point, encouraging results had been achieved that led to an extension of funds for another 12 months. Nearing that deadline, telemedicine kits had just been deployed, so the grant was extended an additional 6 months to gain telemedicine experience and outcomes. This deadline/extension process was challenging for all parties, and consumed a lot of management energy and attention. The best mitigation is a strong liaison relationship between grant recipient project management and the grant authority oversight.**

**Regarding types of broadband health projects, here is an example of a project in which new construction low-income is taking connectivity into account:**

**The Vital Brooklyn project is an example of how low income individuals in the Brooklyn, NY area could be served, even though they do not live in a rural community. They still have difficulty getting access to care, which telehealth can overcome by eliminating the temporal and physical barriers of accessing care. In the case of Vital Brooklyn, new construction that is “telemedicine ready” is being contemplated, which is a complement to wide dissemination of broadband services. See the attached document: “Community Based Virtual Care for Vital Brooklyn Housing -- “telehealth ready”**

31. We seek comment on the application process for participants in the pilot program. We expect that an eligible health care provider would need to submit information such as: (1) a description of its proposed pilot project, including how the project will enable care to be delivered directly to patients beyond the walls of physical health care centers; (2) a description of the low-income population that would benefit from the project; (3) a description of how the health care provider will evaluate the results of its proposed pilot project (e.g., improved health outcomes, cost savings, etc.); (4) the name of the broadband service provider(s) with which they would partner; and (5) the supported services that partner would provide. What additional types of information should applicants be required to submit and how much detail should they be required to supply regarding their proposed pilot projects and the supported services for which they are seeking funding? We seek comment on these and any other issues that commenters believe we should consider in developing an application process for the pilot program.

**(also mentioned in #28)**

**Consider asking providers for information regarding their readiness to develop a successful virtual care program. These are the success factors which the DOH grant experience highlighted:**

1. **Access to the target population. Do they have a large pool of potential enrollees to make the program worthwhile and statistically significant?**
2. **Demonstrated ability and/or a resourced strategic plan for enrolling the population into the virtual care program or clinic. This can be quite challenging as the DOH grant revealed. However, in the end the patients and their caregivers/residential nurses gave the program a 98% satisfaction rating and wanted it to continue post-grant.**
3. **Relationships with providers and clinical partners who are experienced with telemedicine/virtual care or biased toward innovation in the practice of medicine. The DOH grant experience revealed that it took nearly 3 years to get the providers and house nurses comfortable with using virtual care protocols and technology.**
4. **Relationship between current care offerings and new virtual care. Is the new virtual care going to extend the same services to additional hours, such as evening or weekends? Will it enable the provider to offer new categories of services such as post-operative transitional care, at-risk pregnancy care, urgent care, chronic care?**
5. **Clearly articulated implementation plan, a team, a project manager with project management skills and executive support – all of this is necessary to take a concept through to operationalization**
6. **Change Management / Communication plan – as was experienced in the DOH grant, key constituents (patients, administrators, providers, payors) require attention and lots of two-way communication in order to be brought on board and engaged in making a successful program**

**Additionally, a census segmentation section in the application would require providers to think carefully about how to create relevant plans of care utilizing available virtual care technologies. For example, this means potentially increasing patient touches and increasing line of sight to patients with higher acuity, lower patient activation and less support, and decreasing these things for high activated, lower acuity patients and those with supportive care.**

35. Should we consider location as a factor in selecting participating clinics and hospitals? If so, should the pilot program prioritize participating clinics and hospitals in rural areas? Or should it seek geographic diversity by including clinics in both urban and rural locations? How should “rural” and “urban” be defined for purposes of the pilot program?

**While rural areas and Health Professional Shortage Areas are valid and valuable targets, many urban areas face equal challenges in ensuring that residents can access care. Traffic, congestion, dangerous intersections, safety issues, lack of transportation and lack of parking can make it difficult for frail elderly, homebound, the chronically ill and other low income, at-risk Medicaid recipients to get access to providers and services.**

Should the pilot program include at least one partnership involving clinics or hospitals located on Tribal lands?

36. We seek comment on any additional criteria that participating clinics or hospitals should be required to meet and how we should define that criteria. For example, should we limit the pilot program to clinics and hospitals with established telehealth programs, and if so, how should we define that criterion? Or should we consider factors such as the average income, population density, and/or broadband adoption rate in the area where the clinic or hospital is located? If so, what would be the appropriate geographic level (e.g., municipality, county, etc.) for determining average income, average population density, and/or average broadband adoption rate?

5. Eligible Low-Income Subscribers

39. We seek comment on requiring participating health care providers to use the pilot program benefits exclusively for low-income patients. Specifically, we seek comment on limiting the participating health care providers’ use of the pilot program funding to Medicaid-eligible patients, as well as veterans who qualify based on income for cost-free health care benefits through the Department of Veterans Affairs (VA). We believe that focusing on Medicaid patients and veterans who qualify for cost-free health care through the VA based on income would ensure that pilot program funds are appropriately targeted to low-income individuals, while also relieving participating hospitals and clinics of the burdens that would otherwise be associated with determining whether individual patients receiving broadband services funded by the pilot program qualify as low-income. We seek comment on this view and on any alternative requirements.

**The DOH grant revealed the important role virtual care can play in providing a genuine envelope of care: i.e., preventive, episodic, urgent, chronic and transitional care. The Henry Schein/Medpod integrated set of medical devices/software make it possible for a provider to**

1. **monitor ongoing chronic conditions such as diabetes, temporarily monitor at at-risk pregnancy or hospital discharge using remote monitoring devices left in the home,**
2. **respond to an alert created by a remote device reading, with a real time video call (e-consult) between the provider and patient,**
3. **Escalate the intervention by sending a telemedicine rollerbag to the patient residence for a full examination, diagnosis and treatment**
4. **Conduct a follow-up e-consult with the patient**
5. **Send a mobile lab or mobile x-ray tech to the residence, and respond to a question while the tech is on-site**
6. **Provide nutrition counseling, psychiatry and other services via e-consult**
7. **Schedule e-consults to supplement in-person visits to deliver more touches, or to replace periodic face-to-face visits**

**While all individuals would benefit from this level of integrated care, the savings generated from the Medicaid population, which is statistically sicker and more likely to experience higher cost utilization, make this an ideal place to start.**