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**LEGISLATIVE BUDGET COMMITTEE
TESTIMONY**

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Good afternoon Chairwoman McGinn, Vice Chairman Waymaster, and Members of the Committee,

The COVID-19 pandemic forced many healthcare providers to stop, limit, and alter clinical operations as part of the strategy to mitigate the spread of the virus. The changes over the last five months, while necessary during a pandemic, exacerbated existing healthcare conditions for many Kansans. The University of Kansas Health System (TUKHS) recognized that the pandemic provided an opportunity to expand access to individuals across the state using digital, telehealth technology. With temporary changes in policy at the Federal and State levels, the services we currently offer are financially viable in the short term. However, we and most providers lack the capital resources to expand quickly to support urban and rural populations at scale, notwithstanding the potential receipt of grants from either Federal or State government.

To highlight the need and desire for telehealth services, we only need to look at the impact of COVID-19 on telehealth services at TUKHS. Since March 2020, we have completed more than 87,000 telehealth visits, and now average 800-1,000 telehealth visits daily. During the month of April, TUKHS saw 1,766 new patients via telehealth with 1,048 of those patients being Kansans. From April to June, 5,413 new patient visits were made via telehealth, including 3,326 Kansans. The top 5 counties, outside of the KC Metro area, to engage in telemedicine through new patient visits were Shawnee, Douglas, Sedgwick, Riley and Geary. The immediate response to the provision of COVID-19 driven telehealth services is a strong indicator of the growing demand for high quality healthcare via telehealth. However, we can only realize the full potential of telehealth services if there is the technological infrastructure to support it, and a high-speed broadband service across the state is at the essential core of that infrastructure.

We envision a comprehensive digital health experience, available across the state, serving patients and providers. The digital health platform would provide direct and immediate support to those most affected by COVID-19 and help to mitigate or avoid any restrictions on access that may occur in the event of a future wave or pandemic. By leveraging a comprehensive suite of digital technologies in support of all patients, including those without COVID-19 symptoms or a positive test, we can improve the health of patients with new or existing conditions.

To help this body understand the possibilities, we offer the following vision of a University of Kansas Health System Pandemic Digital Health Platform and Command Center

The platform includes the following integrated channels of care delivery:

- **Hospital at Home** – an innovative approach to the care of high-acuity, chronic co-morbid patients in the home. Hospital at Home provides a virtual temporary hospital to the homes of high and medium acuity patients with common medical diagnoses (E.g., Chronic Heart Failure, Chronic Obstructive Pulmonary Disease, pneumonia). The impact of Hospital at Home on the patient is to provide a full recovery from the medical episode, reduction of unnecessary admissions to the hospital freeing up needed capacity, and the creation coordinated handoffs to at-home post-acute care needs. Home treatment for these patients enables hospitals to focus on the more complex and demanding cases, while providing the same levels of care. Research shows that patients recover more quickly at home and are less isolated when close to family or caregivers. The Mayo clinic launched a hospital at home platform in June.
- **Next Generation Augmented Reality/Virtual Reality (AR/VR)** platform for remote monitoring, patient consults, remote imaging, and diagnostics. AR/VR technology, combined with smartphones, enables providers to consult and advise remotely as if they were in the hospital room with another provider or with the patient in their home. Digital images can be imported and reviewed and can link to EMR. The technology enables both provider/patient interactions, and provider to provider interactions. Technology for a next generation AR/VR platform includes point of care ultrasound devices as well as AR/VR headsets.
- **Community-Based Kiosks.** An expanded network of telehealth-enabled, community-based kiosks to provide remote monitoring, care management advice, and education to populations without access to primary care or broadband access at home – for example in the grocery or “big box” store. A state-wide network of kiosks providing messaging and education on COVID-19 or other important medical needs, information on how to access virtual and physical care, enables patients to complete screening assessment and programs for cardiovascular disease and diabetes, screen for social determinants of health issues, and to register with a clinician and to share data. The kiosks also provide an opportunity to conduct biometric testing (heart rate, blood pressure, weight, and Body Mass Index (BMI)). Kiosks are an essential part of the platform, providing access to telehealth to patients who do not have a smart phone, or who have limited access to broadband, or who simply do not wish to own a smart device.
- **Video Visits.** An expanded service for video visits and consultations via provider offices, mobile clinics, and community health worker visits. This has been the “bread and butter” of our pandemic response. We now offer ambulatory video visits for all services and specialties across the health system. Physicians, nurses, dieticians, social workers, and more can conduct video visits with patients. Video visits require cellular data or Wi-Fi connectivity for patients. We offer multichannel and multiplatform access for patients – including PCs, tablets, and smartphones. We have integrated the secure Zoom video platform with our electronic medical record Epic in order to streamline workflows and enhance the provider, patient, and staff experience surrounding video visits. Additionally, we seek to add

additional Interpreter Services to video visits in order to meet the needs of patients who do not speak English, including Hispanic, Vietnamese, and Somali and a variety of other languages and dialects spoken by our patients across the state, specifically in Southwest Kansas and Wyandotte County.

- **Digitally connected home devices.** TUKHS is piloting the use of a range of digitally connected wearable and nearable devices that enable providers to closely monitor patients at home. One relevant example during this pandemic is the Masimo Fingertip Pulse Oximeter¹ that would allow for oxygenation monitoring at home to help identify points in time where an admission may or may not be needed.
- **Digitally connected Care Car (home visits) and Mobile Medical and Dental Clinics for the underserved populations.** Providers can deploy a combination of digitally connected Care Cars and mobile medical and dental clinics to provide access to primary and preventative care for remote/disadvantaged populations, including those without access to transportation and the homeless. A combined fleet of Care Cars and mobile clinics could provide access to primary care for remote/disadvantaged populations, including the homeless who do not have access to a smart device, have no access to transport, or are unable to travel to a provider's office². While telehealth provides access to healthcare to populations that own or have access to smart devices and internet connectivity, there are disadvantaged populations that do not have smart devices, or access to a remote monitoring kiosk. Some populations also lack access to transport. For this reason, digitally connected Care Cars and mobile clinics form an integral part of this delivery model. They will provide access to primary care, care coordination, wellness, diagnostics, and testing, which are essential elements of our response to COVID-19³. The integration of Wi-Fi to the units will expedite testing and facilitate video consultations that might be needed.
- **Enhanced broadband infrastructure in Care Collaborative members.** The UKHS Care Collaborative members' patients will benefit from patient to provider access, chronic disease management, and communications facilitated by enhanced broadband access. The existing broadband infrastructure in Care Collaborative member locations is limited due to lack of funding and lack of infrastructure. Although the Care Collaborative was able to provide short-term ZOOM (telehealth consultation) licenses to assist rural health clinics in the immediate pandemic response through a one-time federal grant, some rural patients lacked the basic connectivity necessary to allow telehealth visits. Others lacked the equipment, or even a smartphone, to connect with their physician. To date, twenty-seven rural hospitals and clinics across Kansas have identified broadband improvement needs. Although technology solutions vary by location, from fiber to mobile infrastructure, these will greatly facilitate the ability of

¹ <https://www.masimopersonalhealth.com/products/mightysat-fingertip-pulse-oximeter-with-bluetooth-le-rrp->

[pvi?variant=19892736786494&utm_medium=cpc&utm_source=google&utm_campaign=Google%20Shopping&gclid=CjwKCAjwjLD4BRAiEiwAg5NBFmEsS-Hj7YJl6UOTg1otQ1XcY8J-ZEEYr1Xojtdv8j1V5hhrs3M_IRoCloMQAvD_BwE](https://www.masimopersonalhealth.com/products/mightysat-fingertip-pulse-oximeter-with-bluetooth-le-rrp-pvi?variant=19892736786494&utm_medium=cpc&utm_source=google&utm_campaign=Google%20Shopping&gclid=CjwKCAjwjLD4BRAiEiwAg5NBFmEsS-Hj7YJl6UOTg1otQ1XcY8J-ZEEYr1Xojtdv8j1V5hhrs3M_IRoCloMQAvD_BwE)

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5629787/>

³ <https://www.laboit.com/health/medical.html>

providers to communicate with other providers, and to communicate and support their patients. The funds will also help to provide telehealth equipment in the provider locations, and to those patients identified by their physicians as in need, but without telehealth access.

- **Digital Command Center.** The Digital Command Center (DCC) provides a central connection point for the foregoing modalities. A DCC provides 24/7 telehealth support for patients and providers across the continuum (from home monitoring to critical care, device monitoring, calls/texts/email messages responses, and monitoring routine health system functions such as patient flow, transfers, ED capacity, and staffing/scheduling. Research shows that while many patients recognize the value of telehealth and remote monitoring, they are more receptive to the technologies when assured that a human remains in the loop and accessible to the patient. The DCC provides the vital link between a patient across the continuum and provider. Remote monitoring via the DCC enables, for example, the discharge of comorbid patients suffering from congestive heart failure, chronic pulmonary disease, urinary tract infections and possibly dialysis to home, while still receiving the appropriate level of care. The DCC also consolidates the data interfacing needs in an efficient, secure, and reliable manner.

An advanced digital model of care delivery, enabled by fast, reliable, secure broadband connectivity produces a proactive approach to reduce the risks to non-COVID-19 patients whose acute or chronic conditions, if left unchecked or unmanaged, will worsen and place an additional burden on the patients and on their healthcare providers. The approach also protects caregivers from exposure and allows quarantined staff to continue to provide care from home. The ability to provide optimal care virtually also decreases the risk of unnecessary patient transfers, keeping patients closer to home, further reducing exposure risk to the patient, medical staff, and EMS, while simultaneously preserving limited supplies of Personal Protective Equipment (PPE). Additionally, non-COVID-19 patient populations who are most at risk for increased morbidity and mortality by nature of pre-existing and new onset chronic illness such as diabetes, obesity, heart failure, cerebrovascular disease, and chronic lung disease, will be able to access care virtually to minimize their risk of exposure or worsening of their condition.

The opportunity to expand broadband and connectivity to Kansans will have an immediate impact on those who lack access to healthcare due to geography, income inequality, or other social determinants of health. We encourage the committee to think of broadband as more than a network of cables and lines. Broadband is the essential element that provides connectivity. Connected patients can communicate with their care providers, whether using personal devices or equipment in their home or kiosks provided by health systems and located within their local communities. Connectivity enables care providers to visit patients when necessary. Digital connectivity enables wellness checks, care management, post-operative care, rehabilitation, and continuous monitoring and communication. In summary, broadband is the essential element that enables healthcare providers to maximize the potential of digital technology. Access to broadband helps

mitigates the requirement for expensive cellular data plans, and ensures continuous access to healthcare resources, and continuity of care.

The University of Kansas Health System acknowledges its responsibility to facilitate access to high quality healthcare to all Kansans. The nexus of COVID-19 and inequalities of health care access in our state provide an opportunity to make a significant impact on the healthcare of all Kansans in general, and particularly those in underserved and disadvantaged communities.