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Julia Shaver

Telemedicine was underused and understudied until the COVID-19 pandemic, during which reduced regulations and increased payment parity facilitated a rapid increase in telemedicine consultation. Telemedicine literature to date suggests that it holds benefits for patients and health care providers, may result in outcomes not inferior to in-person care, and has cost-saving implications. Future research should investigate which conditions are best suited to assess and treat via telemedicine (including physical exam elements), what techniques improve telemedicine communication, how to help patients equitably access telemedicine, and how to best educate the future health care workforce.

Asynchronous Telehealth  531
Jennifer Stephens and Grant M. Greenberg

Asynchronous telehealth provides a viable option for improving access in a convenient and timely manner to patients seeking care as well as for physicians seeking subspecialty consultation. Access to technology, clear guidelines, standards, and expectations is required for this innovation to function well. Limitations in access due to patient and technology factors is an area that requires attention. Positive impact on access and quality has been demonstrated. Rapid development continues and was enhanced with the Sars-CoV-2 pandemic.

Applications of Remote Patient Monitoring  543
Robert Kruklitis, Matthew Miller, Lorraine Valeriano, Steven Shine, Nadine Opstbaum, and Victoria Chestnut

Remote patient monitoring programs collect and analyze a variety of health-related data to detect clinical deterioration with the goal of early intervention. There are many program designs with various deployed devices, monitoring schemes, and escalation protocols. Although several factors are considered, the disease state plays a foundational role when designing a specific program. Remote patient monitoring is used both in chronic disease states and patients with acute self-limited conditions. These programs use health-related data to identify early deterioration and then successfully intervene to improve clinical outcomes and decrease costs of care.
### Virtual Access to Subspecialty Care

**Matthew B. Mackwood, Ameet S. Nagpal, Joyce Yuen, and Ramon S. Cancino**

Telehealth programs existed in many subspecialities before the COVID-19 pandemic, and the public health event motivated many subspecialties to reflect on how current technologies could be leveraged to benefit patient outcomes and increase health-care access. This article reviews the history and current state of telehealth access in many areas of subspecialty care. Primary care physicians (PCPs) may be unaware of the telehealth services and options local subspecialists offer. To best serve patients, PCPs could partner with subspecialists to develop processes to link patients to the right subspecialist at the right time and in the right visit type.

### Telehealth and Medical Education

**Aleksandr Belakovskiy and Elizabeth K. Jones**

As telehealth continues to evolve, there is a subsequent need to develop efficient and effective teaching models in this realm. Primary care is well positioned to teach telehealth because of the breadth of medical conditions treated. It is crucial that learners and medical educators are prepared for learning and educating in this growing paradigm. This article offers an organized approach to education in telehealth that includes preparation, observation, assessment, and feedback.

### Use of Telehealth in Pediatrics

**Andrea B. Buchi, Debra M. Langlois, and Rebecca Northway**

This article discusses the use of telehealth in the role of pediatric health care. Management of common pediatric complaints and concerns are discussed in the context of a virtual setting. Benefits, as well as limitations and challenges, and the future of telehealth within the care of pediatric patients are reviewed.

### Telehealth Considerations for the Adolescent Patient

**Laura Heinrich, Anita K. Hernandez, and Anna R. Laurie**

Recent rapid expansion of telemedicine services has included delivery of those services to adolescents and young adults. Telemedicine can be used to provide a wide array of health services to adolescent and young adult (AYA) including the treatment of mental health and substance use disorders, gender-affirming services, contraception, acute care, and health education. Special attention to minor consent laws which vary by state and country should help inform the health system and practice decisions for patient portal access, delivery of confidential care, and care for which the consent of a guardian or parent is required. For AYA with limited transportation options or who are geographically distant from specialty care, telemedicine helps expand access to those services.

### Prenatal Care via Telehealth

**Alison Shmerling, Molly Hoss, Naomi Malam, Elizabeth W. Staton, and Corey Lyon**

During the COVID-19 pandemic, providers and patients explored the use of telehealth on a wide and rapid scale. Reflecting on how prenatal
providers and pregnant patients used telehealth during the pandemic and afterward, we review existing and new lessons learned from the pandemic. This article summarizes international and national guidelines on prenatal care, presents practice examples on how telehealth and remote patient monitoring were used during the COVID-19 pandemic, and offers lessons learned and suggestions for future care.

**Telehealth and Hypertension Management**

Robert J. Heizelman

The article summarizes the current state of hypertension management via telehealth. Included is information about diagnosis and management of hypertension in general, the role of telehealth regarding hypertension management, a description of self-measurement blood pressure monitoring, billing and coding for hypertension management via telehealth, and a discussion of hypertension quality metrics.

**Telehealth and Diabetes Management**

Erik S. Kramer, Jill VanWyk, and Heather Holmstrom

The care of patients with diabetes is complex and longitudinal. Improved management of diabetic risk factors can decrease long-term complications such as cardiovascular disease, renal failure, vision impairment, and amputation. A variety of telehealth options are available which may improve patient access to needed care as well as a provider understanding of the challenges for an individual patient. Health care teams must be thoughtful about how best to incorporate telehealth into the care of patients with diabetes.

**Virtual Care for Behavioral Health Conditions**

Christina S. Palmer, Shandra M. Brown Levey, Marisa Kostiuk, Aimee R. Zisner, Lauren Woodward Tolle, Rebecca M. Richey, and Stephanie Callan

The COVID-19 pandemic has highlighted the urgent need for behavioral health care services. A substantial portion of mental health care transitioned to virtual care during the COVID-19 pandemic, remains virtual today, and will continue that way in the future. Mental health needs continue to grow, and there has been growing evidence showing the efficacy of virtual health for behavioral health conditions at the system, provider, and patient level. There is also a growing understanding of the barriers and challenges to virtual behavioral health care.

**Telehealth in Geriatrics**

Tracy Johns, Charisse Huot, and Julia C. Jenkins

Telehealth is commonly used in the care of geriatric patients; however, it requires special considerations for effective implementation. Although available evidence suggests that this model of care is useful and feasible, interventions should be carefully designed with the unique needs of geriatric patients in mind. Further, more research is needed to determine the most effective telehealth interventions in this population, which will assist in determining cost-effectiveness and reimbursement policies.
Urgent care as a distinct clinical care entity began in the 1970s to treat low-acuity conditions. Virtual urgent care (VUC) can be provided by the primary care physician (PCP) or home health system of the patient, and many commercial direct-to-consumer (DTC) companies have emerged to provide this service. Quality of care continues to be evaluated, but some studies suggest that DTC providers prescribe antibiotics at a higher rate than PCPs. VUC has been proposed to improve equity and access to care, but early evidence is mixed. New utilization owing to convenience may lead to overall higher health care costs.