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NOTES FROM THE FIELD

Development of Telemedicine Infrastructure at an LGBTQ+ Clinic to Support HIV Prevention and Care in Response to COVID-19, Providence, RI

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COVID-19 presents a local and global challenge. At the time of writing, prevalence estimates for the state of Rhode Island (April 24, 2020) are 6256 confirmed cases and 189 deaths [1]; for the United States, 828,441 confirmed cases and 46,395 deaths [2]; and globally, 2,626,321 confirmed cases and 181,938 confirmed deaths [3]. Individuals at risk for or living with HIV nevertheless need ongoing prevention and care services and may be at higher risk for acquiring COVID-19. Clinic closures attributed to the COVID-19 crisis may place them at greater risk for poor HIV and COVID-19 outcomes [4, 5].

Public Health Opportunity: Telemedicine for HIV Prevention and Care

Prior research shows telemedicine has been effectively utilized in HIV care, and has been associated with high rates of patient satisfaction [6, 7]. Telemedicine is feasible and acceptable for use in HIV-infected persons and is an effective way to expand HIV care, particularly in rural or remote settings [6, 7] and among hard-to-reach populations, such as those who are incarcerated [8]. Telemedicine can reduce transportation barriers in urban areas, including traffic, long travel distances, or limited access to transportation; and, improve engagement in care and medication adherence, resulting in reduced HIV viral load [6, 8]. Telemedicine can also allow providers to increase patient volume providing access to care for more patients [6, 9]. Telemedicine also has the potential to extend the reach of LGBTQ-affirming care more broadly, particularly for those who are less likely to seek in-person care because of concerns about disclosure, stigma or parental notification [10]. Despite a robust and growing evidence base for telemedicine for HIV care, telemedicine has not previously been scaled for HIV care in most settings. However, the COVID-19 crisis has prompted more widespread adoption of telemedicine, including for HIV prevention and care visits. In this paper, we review a new LGBTQ + clinic's transition to telemedicine and implications for providing HIV prevention and care services via telemedicine during COVID-19.

Open Door Health: Rhode Island's First LGBTQ Health Clinic

Open Door Health (ODH) is the first clinic dedicated to providing primary and sexual health care to the Rhode Island LGBTQ + community. ODH opened on March 2, 2020, one day after the first confirmed case of COVID-19 was announced in Rhode Island [1]. In addition to providing HIV screening, treatment, and prevention services, ODH provides adolescent and adult primary care, gender affirming care, Hepatitis C screening and management, and STI screening and treatment.

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Open Door Health Transition to Telemedicine

At the onset of the COVID-19 crisis, ODH instituted an incident command system (ICS) emergency response system in which the clinical and leadership team meets daily to address care delivery during the course of the pandemic [11]. Most clinical services immediately transitioned to telemedicine and in-person appointments were reserved only for those deemed medically necessary (Fig. 1).

Open Door Health now uses *Zoom for Healthcare* for patient encounters, but also offers telephone visits when patients have technological challenges with videoconferencing. Patients are scheduled over the phone, receive a text message with a Zoom link prior to their visit, check-in with front desk staff on Zoom, and then meet with providers in a private Zoom room. Patients complete pre-appointment paperwork in the electronic medical record patient portal; this includes consent forms, demographic information, and social and medical histories. Providers conduct encounters as they would in office, but substitute physical exams with visual assessments, patient self-exams and self-collected vital signs. Patients also submit pictures via an encrypted email connection if images are required for assessment or treatment. Telephone-based encounters are

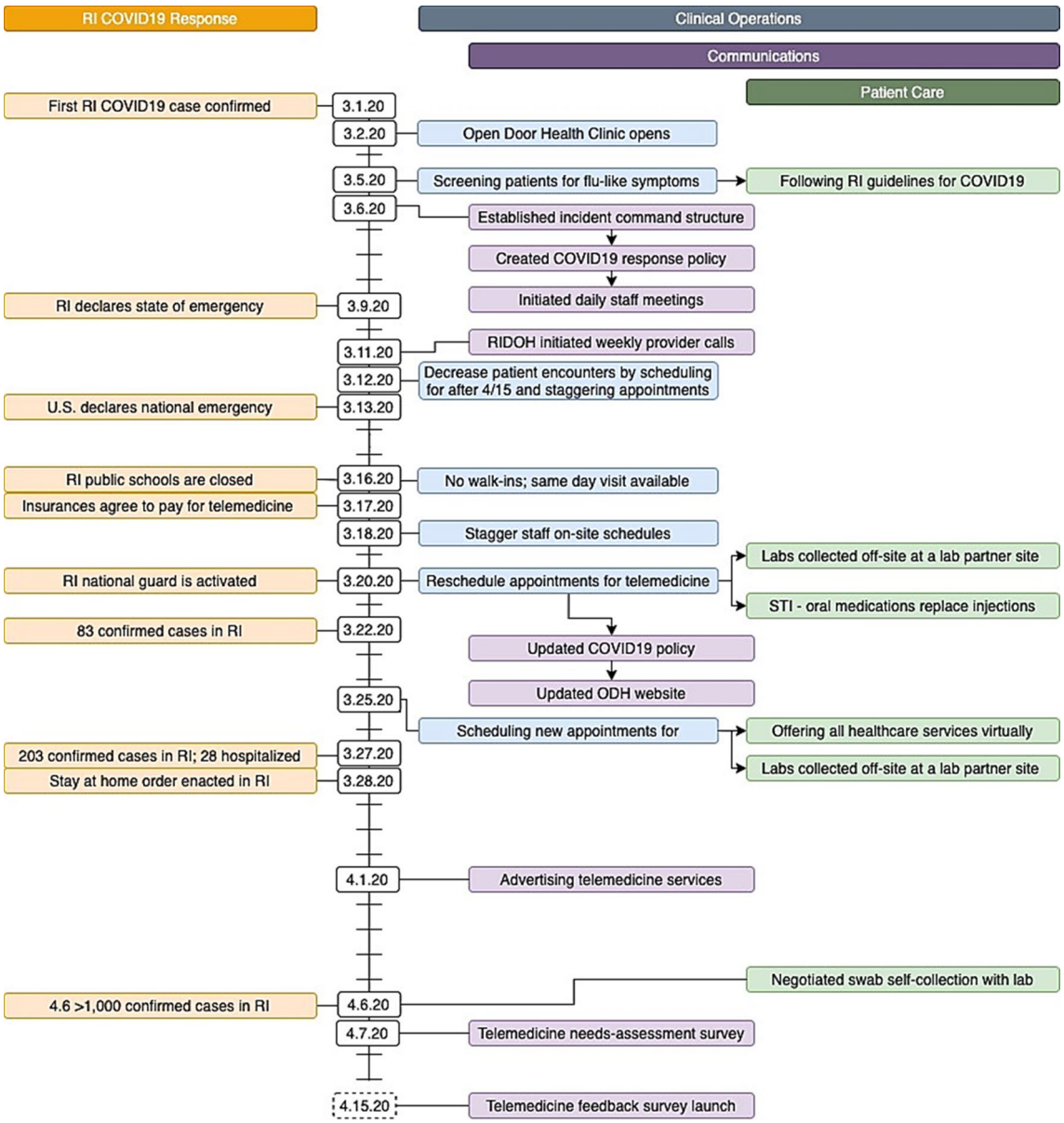

Fig. 1 ODH COVID-19 response timeline

similar but exclude visual assessments. Patients who have acute needs are seen in person.

We refer patients with urgent laboratory needs to our laboratory providers, and we have suspended non-essential laboratory testing for HIV + patients with stable viral loads. For HIV care, the clinical team reviews cases for complexity and designs care plans accordingly. Most cases have been appropriate to see via telemedicine at 3 to 6 months intervals, though we anticipate that complex cases may require more frequent in-person care. These decisions are consistent with current guidelines and best practices. The U.S. Department of Health and Human Services recommends testing HIV viral load and CD4 for HIV patients on antiretroviral treatment (ART) regimens every 3–4 months [12]; however, data suggests extending care visits to 6 months or 12 months has no significant impacts on 12-month viral suppression for patients who are virally suppressed, report good adherence, and have no other comorbidities [13].

Open Door Health also continues to offer PrEP care visits. While current PrEP guidelines recommend creatinine testing to monitor kidney function prior to PrEP initiation [14, 15], data and prior experience suggests that PrEP can be initiated pending creatinine testing for younger people without significant comorbidities [16]. During the COVID-19 crisis, providers are ordering laboratory testing and concurrently writing prescriptions for PrEP. Patients reporting unprotected anal intercourse who are at low risk for renal function problems are encouraged to initiate PrEP once prescriptions are filled.

These clinical decisions and processes are presented in the formalized telemedicine workflow protocols (Fig. 2).

Anecdotes and Lessons Learned

Perhaps the greatest barrier to scaling telemedicine in Rhode Island was lifted when the health commissioner and governor of Rhode Island established payment parity for telemedicine appointments [20]. This policy change and relaxation of HIPAA guidelines has allowed ODH to bill for telemedicine services at more sustainable rates. Additionally, payers and the Ryan White HIV program have allowed patients to obtain 90-day supplies of critical medications, such as ART and PrEP [21, 22]. These structural adjustments have dramatically enhanced access to clinical services and essential medications for HIV prevention and care.

Anecdotally, patients and providers reported positive experiences with telemedicine. Providers appreciate the opportunity to care for patients who may have more difficulty making it to in-person visits. No-show rates have declined dramatically; few patients have missed their telemedicine visits. Providers appreciated opportunities to observe patients in their homes to provide more context for their social circumstances. Some patients appeared more relaxed and comfortable at home than in a clinical setting. On the other hand, physical exams are more limited, and a few patients have experienced technological challenges and privacy concerns related to telemedicine visits.

PrEP initiation was relatively smooth. To date, no patients' laboratory results received after PrEP initiation prompted changes in their PrEP care. Adjustments to laboratory protocols for PrEP initiation allowed us to successfully initiate PrEP for patients at high risk for HIV acquisition during the COVID crisis.

Technology has presented challenges for several vulnerable patients. One provider conducted a visit with a homeless patient residing in a shelter. The patient took the telemedicine call outside to avoid disclosing his HIV status to others. The provider was ultimately able to respond to the

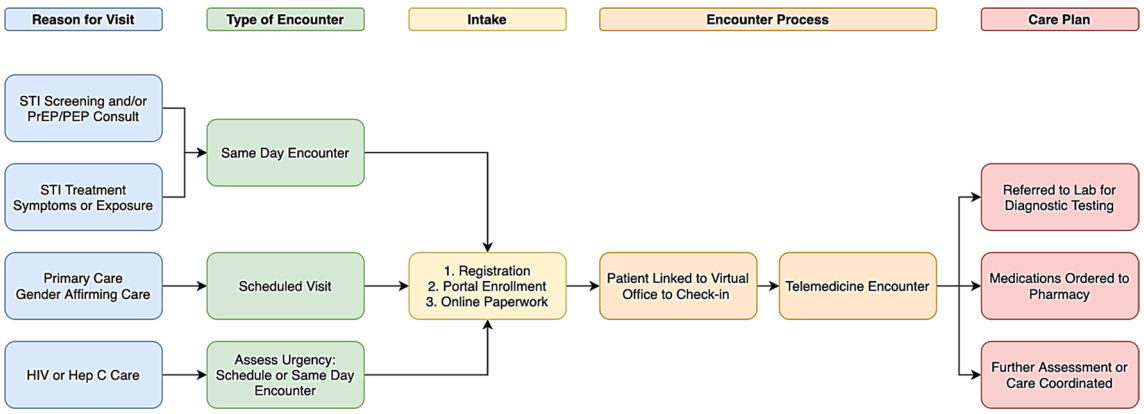

Fig. 2 Telemedicine workflow

patient's health needs and the patient is retained in HIV care; however, the patient's cell phone nearly died, and ultimately, the patient and provider felt rushed.

Another elderly patient faced challenges using Zoom on his cell phone. The provider had to call the patient multiple times to coach him through the technical aspects of the appointment, thereby detracting from the clinical visit. One potential solution for these types of challenges to have clinical receptionists troubleshoot technological challenges with patients prior to transferring patients to providers. In any case, these cases represented outliers rather than the norm; we were able to overcome most technological obstacles by talking to our patients through Zoom installations or using telephone calls in lieu of videoconferencing.

In a third situation, disclosure of transgender identity without parental consent presented challenges. Open Door Health has developed algorithms for hormone initiation via telemedicine. However, one college-aged patient who would have otherwise initiated gender-affirming hormones decided to delay initiation to avoid disclosing their transgender identity to their parents. While this was a suboptimal outcome, telemedicine facilitated a clinical encounter for a patient who would not have otherwise received care, and the patient will likely be able to initiate hormone therapy at a later date.

These challenges to telemedicine implementation are not unexpected; HIV disproportionately impacts marginalized and vulnerable populations who may have limited access to requisite technology [17]. In spite of concerns that telemedicine might exacerbate existing disparities among HIV affected and LGBTQ + populations [17–19], we did not observe exacerbations in disparities; to the contrary, we found that we were able to overcome nearly all barriers.

Continuing Quality Improvement for Telemedicine

In order to promote continuing quality improvement in our services, we collect patient feedback informally during visits, and recently launched a patient satisfaction and exit survey that patients receive immediately after their visit. Twenty-two individuals have responded to the survey. Respondents in age from 23 to 56 years, and 50% were under 30 years. All respondents identified as a sexual minority, and 32% were transgender or non-binary. Over 75% reported interest in telemedicine outside of the COVID-19 pandemic. Approximately 25% of respondents reported interest in receiving HIV care via telemedicine, and 50% of patients were interested in STI screening and treatment.

Overall, respondents were optimistic about the benefits of telemedicine, including greater accessibility to healthcare providers and more convenient access to healthcare generally. However, several expressed concerns about privacy, data breaches, billing, and insurance challenges. Data that emerge from our ongoing patient satisfaction survey will inform subsequent quality improvement activities with our telemedicine operations.

Conclusion

The rapid implementation of telemedicine has allowed Open Door Health to continue providing affirming HIV and LGBTQ + care during the COVID-19 pandemic. Patients appreciate continuity in their health care during a time when there is reduced access to clinical services, particularly for HIV prevention and care. Both patients and providers report high levels of satisfaction with telemedicine, and providers can overcome most obstacles to providing clinical services. Whether telemedicine for HIV services will be sustained may be determined by whether payers continue reimbursement parity after the COVID-19 crisis ends.

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