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## Low-barrier buprenorphine during the COVID-19 pandemic: A rapid transition to on-demand telemedicine with wide-ranging effects

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### ABSTRACT

Low barrier addiction clinics increase access to medications to treat substance use disorders, while emphasizing harm reduction. The Harm Reduction and BRidges to Care (HRBR) Clinic is an on demand, low barrier addiction clinic that opened in October 2019. In the first three months of operation (November through January 2020), HRBR saw steadily increasing numbers of patients.

Oregon saw its first case of novel coronavirus in February, and declared a state of emergency and enacted a formal “Stay at Home” order in March. That same month, the DEA announced that patients could be initiated on buprenorphine through telemedicine visits without an in-person exam. Within a week of being granted the ability to see patients virtually, HRBR had transitioned to over 90% virtual visits, while still allowing patients without technology to access in-person care. Within four weeks, the clinic expanded hours significantly, established workflows with community harm reduction partners, and was caring for patients in rural areas of the state.

In response to the COVID-19 crisis, the HRBR clinic was able to quickly transition from in-person to almost completely virtual visits within a week. This rapid pivot to telemedicine significantly increased access to care for individuals seeking low-threshold treatment in multiple contexts. Overarching institutional support, grant funding and a small flexible team were critical. HRBR's increased access and capacity were only possible with the Drug Enforcement Agency loosening restrictions around the use of telehealth for new patients. Keeping these altered regulations in place will be key to improving health and health care equity for people who use drugs, even after the pandemic subsides. Further research is needed in to whether addiction telemedicine impacts medication diversion rates, continued substance use, or provider practices.

### 1. Background

Patients seeking medications for substance use disorders (SUDs) often encounter significant barriers to care, including long wait times, counseling requirements, and complex intake processes. Low threshold or “bridge” models of care have emerged as a powerful way to provide patients with opioid use disorder access to life-saving medications. While models vary, most provide quick intake processes, brief wait times, and flexible or drop-in hours (Jakubowski & Fox, 2019). In addition, low threshold programs generally prioritize harm reduction, do not require counseling and do not exclude patients from treatment if there is ongoing drug or alcohol use (Jakubowski & Fox, 2019). Low barrier addiction clinics have been shown to facilitate prescription of

evidence based pharmacotherapy as well as reduce substance use and improve treatment retention (Lee et al., 2019; Wiercigroch et al., 2020). Patients report positive experiences at these clinics and appreciate the emphasis on harm reduction (Snow et al., 2019).

Recognizing a dearth of low threshold SUD treatment services in Oregon, Oregon Health & Science University (OHSU) in Portland, Oregon opened the Harm Reduction and BRidges to Care (HRBR) clinic October 28th 2019 (Robinson, 2019). HRBR is a low threshold substance use disorders clinic that adheres to all the above principles: offering same-day, walk-in access to medication for substance use disorders Monday through Friday. The clinic is currently funded by a grant which covers staff salaries, clinic supplies, and clinic visits as well as medications for non- or under-insured patients. The clinic bills insurers in

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instances where patients have active insurance. The HRBR care model is lean, including a licensed independent practitioner (LIP), a care transition coordinator (CTC) who welcomes new patients and connects established patients to ongoing care when it is desired, and a peer recovery specialist. HRBR patient demographics can be seen in Table 1.

A noted limitation of the clinic is its physical location at OHSU where there is limited space available for new clinics, and which is not easily accessible to drug users in many other areas of the city. As a partial solution to these issues, when it first opened, HRBR operated from 4 PM to 8 PM, when clinic space was available.

In the first three months of operation (November through January 2020), HRBR saw steadily increasing numbers of patients, most from the Portland metro area, many reaching the clinic by city bus. On January 21st, 2020 the CDC confirmed the first case of Coronavirus in US (Centers for Disease Control and Prevention (CDC), 2020). Subsequently, on January 31st, 2020, the Secretary of the Department of Health and Human Services declared a public health emergency (US Department of Health and Human Services, 2020).

1.1. COVID-19 in Oregon and timeline for change

(See Table 2 for timelines, number of new patients seen, number of patient visits and percentages.)

Oregon saw its first case of novel coronavirus on February 28th, 2020, and declared a state of emergency on March 8th, 2020 (Oregon Health Authority, 2020). On March 16th, OHSU declared mandatory telework for all employees who were able, and the DEA announced that patients could be initiated on buprenorphine through audio and visual telemedicine visit (virtual visit) without an in-person exam (Drug Enforcement Agency - Diversion Control Division, 2020). HRBR completed its first virtual visit on March 19th, while continuing to remain open to walk-ins between 4 and 6 PM. The clinic transitioned to more than 90% telehealth (virtual visits and telephone-only visits) visits by March 23, 2020 when Oregon's governor ordered shelter-in-place. Because virtual visits do not require exam rooms, by March 25th, the clinic was also able to expand hours, opening at noon and closing at 8:00 pm. On March 31st, the DEA further relaxed regulations for initiation of buprenorphine-naloxone in new patients via telephone-only visits (Drug Enforcement Agency - Diversion Control Division, 2020). This change in regulations allowed HRBR to further collaborate with a local needle exchange and local harm reduction outreach workers, performing the first virtual visit coordinated by a harm reduction worker with a patient on the street on April 6th and the first virtual visit with a patient at the needle exchange on April 10th. Finally, HRBR saw the first patient from rural Oregon on April 14th. The clinic continues to see patients at the needle exchange, via harm reduction outreach workers and in rural parts of the state.

In sum, within a week of being granted the ability to see patients virtually, HRBR had transitioned to over 90% virtual visits, while still

Table 1  
HRBR patient demographics.

Gender	Male	62.0%
	Female	37.1%
	Transgender	0.9%
Substance use disorder prevalence	Opioid use disorder	98.2%
	Alcohol use disorder	6.7%
	Methamphetamine use disorder	19.1%
	Cocaine use disorder	0.9%
	Benzodiazepine use disorder	1.8%
	Other (Kratom, marijuana, etc.)	8.5%
Payor mix	Medicaid	64.1%
	Medicare	10.3%
	Private/Commercial	19.3%
	Self-Pay/Uninsured	6.3%

allowing patients without technology to access in-person care. Within four weeks, the clinic had taken advantage of increased regulatory flexibility to expand hours significantly and establish workflows that allowed patients previously unable to access care anywhere to access medication for SUDs at the HRBR clinic.

2. Discussion/lessons learned

In response to the COVID-19 crisis, the HRBR clinic was able to quickly transition from in-person to almost completely virtual visits within a week resulting in the following lessons learned.

2.1. Pivot to telemedicine significantly increased access to care for individuals seeking low-threshold treatment

Telemedicine allowed HRBR to increase access to treatment for people with SUDs by expanding the clinic hours, even without the availability of additional physical space, and by expanding access to the populations that the clinic was able to serve. With telehealth, HRBR could see patients from remote parts of the state which would have previously required a 5-hour drive for an in-person visit. Telehealth also allowed HRBR to connect with patients within the city who normally would have difficulty getting to the clinic due to its physical location and their lack of resources.

2.2. Strong community partnerships enabled patients without technology to access telemedicine

HRBR staff had strong relationships with community partners prior to COVID-19, though many of the most vulnerable individuals served by those partners were unable to access the clinic due to lack of transportation. As soon as telehealth was allowed, HRBR worked with community partners Outside In (OI) and Portland People's Outreach Program (PPOP) to rapidly develop new workflows. OI's Injection Drug Users Services is one of the oldest needle exchanges programs in the US (Levander et al., 2021). PPOP is an all-volunteer organization that provides need-based syringe and harm reduction services, often via bicycle outreach (Levander et al., 2021). New patients were able to engage with HRBR via technology offered by those partners at both the exchange and during mobile outreach.

2.3. A small, flexible team within a supportive institution was critical to the ability for rapid change

HRBR was able to quickly transition from in-person to almost completely virtual visits, in part because of the support from a large institution. OHSU was moving toward increasing virtual visits before the COVID-19 pandemic, which made implementation a matter of online training for providers, and which meant that appropriate equipment already existed. However, although relying heavily on the institution to quickly transition to virtual visits, having a small team allowed for quick implementation – only 3 providers needed to be trained ensuring everyone was onboard within days. Furthermore, the HRBR coordinator's ability to adapt quickly to the new clinical context and then coach patients through technological challenges or confusion was critical to a successful transition. If other health care systems seek to replicate aspects of the HRBR clinic model, those systems should consider recruiting staff who not only bring the appropriate clinical skills but who also have some comfort with telemedicine platforms and the rapidly changing technological landscape.

2.4. Grant funding allowed financial flexibility for rapid transition to telemedicine and expansion in clinic hours

HRBR is currently funded through State Opioid Response funds. This funding allowed the quick transition from in-person visits to mostly

**Table 2**  
HRBR visit numbers in 2020.

	January	February	March	April	May	June	July	August
Timeline	- 21st: CDC confirms first case of COVID-19 - 31st: DHHS declares state of emergency	28th: First case of COVID-19 in Oregon	- 8th: Oregon declares state of emergency - 16th: DEA allows initiation of buprenorphine via virtual visit - 31st: DEA allows initiation of buprenorphine via telephone-only visit	- 1st: Expanded hours - 6th: First harm reduction outreach patient - 10th: First needle exchange patient - 14th: First rural Oregon patient				
Total provider full time equivalent (FTE)	0.8	0.8	1.0	1.4	1.4	1.4	1.4	1.4
Number of providers on payroll	3	3	3	3	4	4	4	4
Total new patient visits per month	23	46	43	33	35	42	34	32
# of new patient visits done via virtual visit <sup>a</sup>	0	0	10 (23.3%)	21 (63.6%)	26 (74.3%)	31 (73.8%)	24 (70.6%)	21 (65.6%)
# of new patient visits done via telephone only visit	0	0	0 (0.0%)	10 (30.3%)	9 (25.7%)	11 (26.2%)	10 (29.4%)	11 (34.4%)
Total patient visits per month (new & follow-up)	74	95	135	139	125	170	179	179
# of visits done via virtual visit <sup>a</sup>	0	0	37 (27.4%)	79 (56.8%)	88 (70.4%)	108 (63.5%)	109 (60.9%)	112 (62.6%)
# of visits done via telephone only visit	0	0	7 (5.2%)	51 (36.7%)	35 (28.0%)	58 (34.1%)	66 (36.9%)	65 (36.3%)

Abbreviations: HRBR – Harm Reduction and BRidges to Care Clinic, CDC – Centers for Disease Control and Prevention, DHHS – Department of Health and Human Services, FTE – Full Time Equivalent, LIP – Licensed Independent Practitioner.

<sup>a</sup> Defined as secure audio-visual communication.

telemedicine visits without the concern of varying reimbursement rates for telemedicine encounters. This support, in hand with billable visit revenue, made it possible to increase provider full time equivalent (FTE) and expand clinic hours from 4 h a day to 8 h a day very quickly. This expansion was accomplished by asking current part-time LIPs to increase their FTE. HRBR continues to pursue long-term financial sustainability by offering expanded services (e.g. hepatitis C treatment), increasing visit numbers, and working with the state Medicaid insurer (the primary insurer of HRBR patients, see Table 1) to develop enhanced case rates to account for non-billable services that the clinic offers. The clinic is also working closely with OHSU's Population Health Program to determine the effect of engagement with HRBR on patients' subsequent rate of hospitalizations and ED visits, thus furthering an argument for increased institutional support. More research is needed to study the impact of telemedicine reimbursement and long-term financial sustainability in the absence of outside funding.

**2.5. Significant benefits and barriers to addiction telemedicine remain**

Potential benefits of addiction telemedicine include fewer barriers and improved access. HRBR has noted continued growth and expansion in the number of patient visits completed and the breadth of the patients served.

One notable limitation to telehealth visits in HRBR is that many of the most vulnerable patients do not have access to a phone, wireless connection or data plan. It is important to note that many HRBR patients who were not able to participate in care via virtual visit, were able to borrow a phone to complete a telephone visit. The use of borrowed phones resulted in added complexity around privacy and ability to contact patients, but was a viable option for some.

Telemedicine visits also both limit and expand the clinical

information available to providers. Without in person visits, it is difficult to complete an accurate physical exam, draw screening labs or send urine toxicology. However, providers were often able to gain a more intimate understanding of a patient's living environment and social context by seeing the patient over video connection. In general, HRBR patients receiving care via telemedicine did not complete urine toxicology testing. In the rare case that a provider felt that urine toxicology was needed, patients were asked to follow up in-person or sent to the lab. Further research is needed in to whether addiction telemedicine impacts medication diversion rates, continued substance use, or provider practices.

Furthermore, it would be remiss not to note that HRBR could not have transitioned to nearly all virtual visits without the Drug Enforcement Agency loosening the previous restrictions limiting the use of telehealth for prescribing controlled substances. Keeping these altered regulations in place will be key to improving health and health care equity for people who use drugs, even after the pandemic subsidies.

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#### Declaration of competing interest

The authors have no conflicts of interest to disclose.

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