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# Rapid, Successful Adoption of Virtual Outpatient Cardiology Care During the COVID-19 Pandemic

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## Background

- Preventable cardiovascular disease death unrelated to COVID-19 has increased during the COVID-19 pandemic due to delays in seeking medical care<sup>1,2</sup>.
- The pandemic has posed significant challenges to access to outpatient cardiovascular care due to state public health mandates, as well as concerns about infection risk to patients, staff, and providers.
- In response to the COVID-19 pandemic, Providence Heart Clinics (PHC) rapidly adopted tele-medicine modalities to deliver virtual cardiology care.

## Objective

Our objective was to evaluate adoption of tele-medicine during COVID-19, with the over-arching goal of considering sustainability for future models of care.

## Methods

- We retrospectively evaluated changes in care delivery in a large, integrated cardiology practice with 22 sites in the Portland, Oregon metro region, from January to December 2020.
- Following stay-at-home mandates from the state of Oregon in March 2020, PHC made swift operational changes to implement virtual (telephonic and video) platforms to ensure access to new cardiology patient consultations as well as provide ongoing care to established patients.
- After the mandate lifted in June 2020, PHC continued to provide hybrid care to accommodate patients' clinical needs, personal preferences, and technology access.
- Video, telephonic, and face to face encounters were tracked to evaluate the shifting trends of care delivery and overall clinic throughput.

# Rapid adoption of telephone and video visits successfully mitigated outpatient clinical cardiology care during the COVID-19 pandemic.

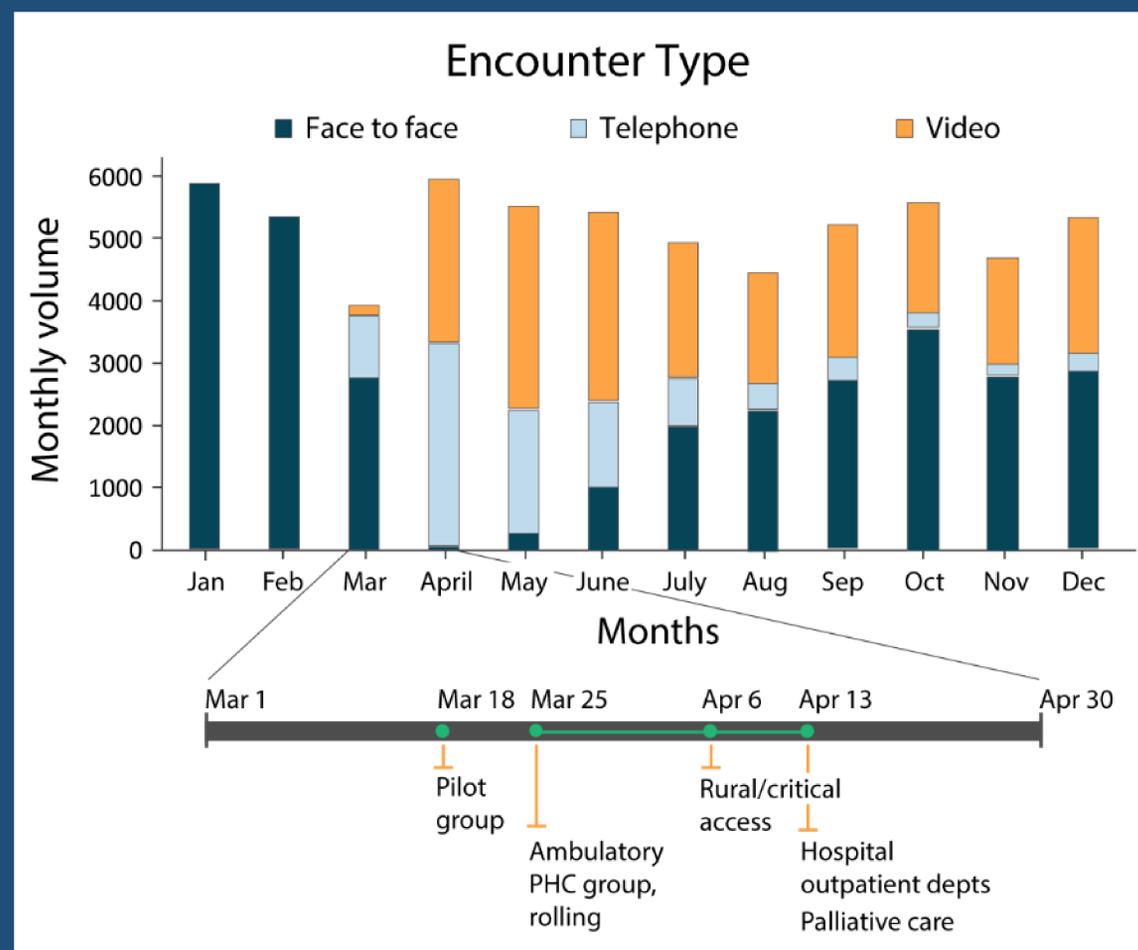


Figure: Monthly volume of PHC encounters in 2020, with timeline of tele-medicine encounter go-live for various provider groups

## Implementation

- PHC rapidly adopted tele-medicine modalities to deliver virtual cardiology care through phased rollout (Figure timeline), to accommodate regulatory constraints, reimbursement rules, patient care needs and the limitation of training resources.
- Standard reference guides and Zoom provider accounts were provided by our parent health system, Providence St. Joseph Health (PSJH).
- PHC conducted centralized training for providers and staff to ensure consistency in implementation.
- PHC created standard visit templates for video and telephonic consult notes, incorporating required documentation per CMS tele-medicine state of emergency waiver rules.
- During initial implementation, converting face-to-face appointments to tele-medicine required more staff resources than traditional face-to-face appointments.
- Medical assistants, front desk staff, and re-deployed program staff were cross-trained to contact patients and provide technical education on how to access the tele-medicine platform. This freed scheduling staff to focus on rescheduling appointments that were deferred during the initial shut down, converting existing appointment to tele-medicine, and filling providers' schedules.

## Results

- Our virtual platform transition was effective and successful, with only a slight decline in total encounter volumes observed in March, which subsequently recovered in April (Figure).
- Virtual visits went from 0% prior to March to 99% in April.
- PHC stabilized the hybrid model with >30% virtual care in the months after the mandate lifted.

## Conclusions

- Tele-medicine modalities successfully mitigated care disruption during the COVID-19 pandemic.
- As one of the first cardiology clinics in the U.S. to be recognized as a Patient Centered Specialty Practice, PHC was well positioned to quickly respond and adapt to the care delivery crisis brought on by a global pandemic.
- Rapid adaptability cannot be taken for granted. Reasons for success included strategic vision, the learning organizational culture, and the ability to apply design thinking and critical making to seek novel solutions to unexpected challenges.
- PHC has adopted a hybrid care model, in particular video visits, as a potential long-term option to ensure access and efficiency of cardiology care, enabled by new federal regulations, reimbursement rules and technology platforms.

**References:** 1. Wu J, et al. Place and causes of acute cardiovascular mortality during the COVID-19 pandemic. *Heart* 2021;107:113-9. 2. Einstein AJ, et al. on behalf of INCAPS COVID Investigators Group. International Impact of COVID-19 on the Diagnosis of Heart Disease. *J Am Coll Cardiol.* 2021 Jan 19;77(2):173-185.

**Disclosures:** None.