

# UVM ScholarWorks

## Telemedicine Quality Improvement

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# TELEMEDICINE Quality Improvement



*determining what is working in the era of pandemic primary care*

**Isidora Beach** *(working with Alex Kuzma)*

mentors Drs. Whitney Calkins & Kathy Mariani

*family medicine clerkship ~ October 2020*

*South Burlington Family Practice*

# PROBLEM IDENTIFICATION

- The COVID-19 pandemic transformed the delivery of healthcare overnight
  - Zoom has been used in the office for medical appointments since March 2020
- **~60% of all office visits are now conducted over zoom, with ~40% in-person**
- Essential portions of the office visit are missing on zoom: vitals, physicals exams, even visual assessment of the patient if telephone visits are used
- Little assessment of the quality of care delivered via this platform! What do our patients think? How do they perceive their healthcare via telemedicine?



# PUBLIC HEALTH COST

- **Telemedicine visits expand access to healthcare** for those who struggled with transportation before
  - Access to reliable transportation is associated with increased access to healthcare regardless of socioeconomic status<sup>1</sup>
  - Transportation is a barrier to healthcare: a 2019 community project at SBFP showed that at least 19% of patients live 30+ miles from the office and have difficulty commuting to visits, causing them to be more likely to no-show<sup>2</sup>
- A 2006 study showed that as many as many as **15.5 million Americans are at risk for missing care because of transportation barriers** in a given year – this is not just a Burlington problem<sup>3</sup>
- Vermont offers some public transportation assistance, but it is imperfect
  - VTrans identifies the need for people to be able to “request medical trips on shorter notice, travel outside of transit system operating hours (early morning, late evening, and weekends), and take trips at the day and time requested instead of needing to negotiate trips,” all of which are not possible currently and pose barriers to healthcare access<sup>4</sup>
- Missed primary care appointments leads to increased trips to the E.D. and more unnecessary hospitalizations
  - A 2017 study found that primary care **telemedicine visits reduced unnecessary hospitalizations** by 6.7%<sup>5</sup>
- The cost of 16 iPads for the South Burlington office would be anywhere from \$1,440-&12,800, depending on version – an amount that may be less than even one unnecessary trip to the emergency department
  - IT support at UVM is already a robust service that requires no additional cost and is readily accessible by phone

# Community Perspective & Support for Project

South Burlington Family Practice was interested in hearing their patients' opinions of the Zoom experience.

INTERVIEWS WITH DRs. **KATHERINE MARIANI** & **ROBERT LEUBBERS**

Overall, are telehealth visits more or less satisfying to you as a provider than in-office visits?

KM: **Less satisfying**

RL: **Less satisfying**

Overall, do you think patients are more or less satisfied with their care when using telehealth as opposed to in-office visits?

KM: **Less satisfied**

RL: **Less satisfied**

How often do you find yourself frustrated with the limitations of telehealth?

KM: **Frequently frustrated with technology issues**, but infrequently frustrated with lack of physical exams, as **visits are triaged** so those requiring physical exams are more likely to be in person

RL: About **half of the time**. Seems like there are **more no-shows** at telehealth visits than at in-office visits

For patients that are struggling with telehealth, what do...

...you feel is the biggest obstacle to their care?

KM: Being **overwhelmed**. Covid-19 is already overwhelming, telehealth seems like it's just adding one more thing. Seems to **disproportionately affect those of lower SES\***, who have more barriers to things like good Wi-Fi, platforms for zoom, and private spaces

RL: **Technology issues** are an obstacle, and seem to be **more so for older patients** less familiar with using zoom and devices in general

Do you feel you have enough support with using telehealth technologies?

KM: No, it's a bit chaotic. Would run more smoothly with an **iPad in each room** (at least 16 iPads total)

RL: Yes, but this was my **first time using zoom** and we **didn't get much instruction**. I also bring my own iPad to work in case there are issues with the ones in the office

\*SES: socioeconomic status

# INTERVENTION AND METHODOLOGY

- 6-question survey sent to patients (via zoom chat or email) after telemedicine visits
  - Below survey collection done by Isi Beach and Alex Kuzma
- Responses collected from patients with zoom visits in September & Oct. 2020
  - Continuation + expansion of surveys administered by students Ambrose Orr & Adrian Berg
    - Prior surveys excluded room for patient comments

1. Were all of your concerns addressed over video chat?

Yes

No

If no, what else would you have liked to discuss?

2. Did the doctor schedule a follow-up appointment **in the office** for your concerns following this video chat?

Yes

No

3. Did you have any technology issues when logging into the video chat?

Yes

No

If yes, please describe the issue(s) below

4. Do you have a private location with internet access to get on the video chat?

Yes

No

5. After this visit, would you be willing to see the doctor over video chat again?

Yes

No

If you answered no, why not?

6. What, if any, do you see as the drawbacks to telemedicine video visits?

# RESULTS *and* RESPONSES

- 16 survey participants
- Overall, most (**93%**) patients reported that **all of their concerns were addressed** over video chat
- Most (**71%**) telemedicine visits **did not require a follow-up** in-office visit
- No patients reported technical difficulties with logging into the chat
- **All patients** responded that they did have **access to a private location with internet** for the call
- **All patients** indicated they would be **willing to see the physician again** via telemedicine

## Perceived **DRAWBACKS:**

- “not able to physically inspect for issue”
- less “one-on-one time with the doctor,” less “direct personal contact,” less “hands-on approach”
- “lack of physical proximity to do on-the-spot examination & tests”

## Perceived **BENEFITS:**

- “convenient and thorough”
- “seems like a good option for consults”
- “definite savings in time and transportation”

# Limitations & Effectiveness

- Study limitations:
  - Potential for sample bias in results
    - Sample group of patients technologically skilled enough to do survey makes it less likely they would answer “yes” to having tech difficulties with zoom. *Interpret 100% “no” answer to tech issues with caution*
  - Small survey response rate – difficult to administer
    - Zoom itself is a barrier to administering the survey
      - Limited time for full survey instructions. Survey link disappears when zoom visit ends and email can be unreliable
- **Evaluation of effectiveness:**
  - This is a continuous, self-evaluating project. Patient comments should be shared with the staff at SBFP at regular intervals (ideally, once per month) and announcements should be made with recommendations based on perceived patient satisfaction and need
  - SBFP should make adjustments based on patient feedback, then continue administering the survey and making similar announcements at the end of each interval period to assess effectiveness of changes
  - Continuous survey administration allows the office to ensure patient preferences are considered

# Recommendations for Future Interventions

*“depending on the health issue sometimes I would like an in-office visit”*

- Zoom is an excellent option for some patients and visits, but is **not a one-size-fits-all!**
- **Triaging** reason for visit is exceedingly important. Things to consider during triage:
  - patient’s familiarity levels with zoom prior to visit
  - patient’s ease of access to the office – would they be able to get to an in-office visit?
  - severity of symptoms and possibility of need to assess by physical exam
- Do not make zoom appointments for physical injuries or issues that require examination (ex. musculoskeletal complaints, BP monitoring in patients with no cuff at home)
- Zoom visits are a great option for follow-ups that do not require examinations, such as medication changes, psychiatric visits, new patient visits with no specific complaints

## References

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