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Taylor Wolfgang
University of Vermont

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The Implementation of TeleHealth at Brookfield Family Practice in Brookfield, CT

A Survey of Perceived Patient Barriers and Suggestions for Increasing Patient Participation

By: Taylor Wolfgang, MS III University of Vermont College of Medicine

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Mentor: Dr. Robert Mascia MD, Kathleen McCoy APRN

Problem Identification:

- TeleHealth is the secure and private remote delivery of healthcare services using technology such as I pads, I phones, tablets and computers. Western Connecticut Health Network recently implemented the use of TeleHealth. Brookfield Family Practice is the first location in the network that is piloting the TeleHealth services.
 - Multiple studies have found clinical outcomes of TeleHealth services to be no different or better than in-person office visits alone. One meta analysis showed results indicating that “TeleHealth had moderate, positive, and significant effect on clinical outcomes, even among different patient populations.” ¹
 - More than half of US hospitals currently have a TeleHealth program. ²
 - As of August 2015, Congress has 26 bills pending that could affect TeleHealth across the country. ²
 - The projected number of patients using TeleHealth will increase from less than 350,000 in 2013, to up to 7 million in 2018. ³
 - TeleHealth is a **proven beneficial service** that **will continue to grow** in US healthcare, providing opportunities to **improve patient outcomes and access** to care. It is essential that **perceived patient barriers are addressed** in order to **increase patient participation and ultimately improve patient health outcomes.**
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Public Health Cost:

- TeleHealth makes up nearly **one fourth of the health IT market**, which was valued at \$15.6 billion in 2014. It is expected to grow to **\$20 billion by 2019**. ⁴
- **As of January 2016 only one state does not require coverage for TeleHealth services.** Of the 49 remaining, 30 are covered by both Medicaid and private payers, and 19 are covered by Medicaid only. As of now, Medicare does not cover TeleHealth services. ⁵
- A report by the CT State Office of Rural Health sites one example of the **beneficial cost** of a telemonitoring device : “The purchase of one device can serve approximately 6 clients per year. The reduction of one hospital re-admission at average hospital cost per stay would support the purchase and operation of at least five (5) telemonitoring units that could serve up to 30 patients per year – improving their health outcomes, quality of life and reducing costs”. ⁶

Community Perspectives:

- “There are two main goals of implementing TeleHealth into Western Connecticut Health Network. The first is enhanced patient access to healthcare. The second is to keep patients within their medical home. Insurance companies are now offering TeleHealth to our patients, and when patients chose to use these services instead of our own, we lose continuity of care. This can ultimately have a negative impact on patient health outcomes.” -**Dr. Andrew Keller MD, Chief Medical Officer and Chief Medical Information Officer of Western Connecticut Medical Group**
 - Patients have been so happy with their TeleHealth experiences. It is easy and convenient for them, and for me. Going forward I hope to encourage patient participation and keep increasing the number of TeleHealth appointments each week. -**Kathleen McCoy, APRN at Brookfield Family Practice**
 - “On a day like today, when I can't see out of one eye due to pink eye, being treated over TeleHealth is great. I am very satisfied with the explanation of what is being done for my medical concern.” -**Anonymous patient at Brookfield Family Practice**
 - “Both times I have seen an online doctor it was about the RX, not about how I'm feeling. It is an effective, but cold experience.” -**Anonymous patient at Brookfield Family Practice**
 - “My TeleHealth appointment made it possible for me to be seen by a provider, and not take time off from work. I was able to have my medical concern taken care of during my lunch break, without having to spend the time and money traveling to the office.” -**Anonymous patient at Brookfield Family Practice**
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Intervention and Methodology:

- Brookfield Family Practice recently implemented the use of TeleHealth into their practice. One of the identified limitations was patient interest and participation. I chose to examine the perceived barriers preventing patients from using the service.
- A 10 question survey in the waiting room was offered to patients. This survey asked questions about level of interest in TeleHealth services, perceived barriers to using this service, as well as perceived benefits.
- A 5 question survey was asked at the end of TeleHealth appointments via the TeleHealth technology to ask about patient satisfaction, interest in repeat use of this service, and comments were collected.
- Results were analyzed and used to create an informational flyer that can be displayed in provider offices which show the results of the survey, and offer patient perspectives of their TeleHealth experiences at Brookfield Family Practice.
- Results and recommendations were shared with the office.

Telemedicine Survey

Telemedicine is the remote delivery of health care services using telecommunication technology such as I pads, I phones, tablets and computers. For specific medical complaints, at site appointments can be replaced by video appointments between you and your provider over electronic devices.

1. Gender
Mark only one oval.

Male
 Female
 Other

2. What is your age
Mark only one oval.

18-29
 30-39
 40-49
 50-64
 65+

3. Are you being seen today for any of the following: seasonal allergies, cold symptoms, rash, diarrhea, pink eye, skin infections/insect bite, depression/anxiety/Attention Deficit Disorder (ADD), urinary tract infection?
Mark only one oval.

Yes
 No

4. Where you aware telemedicine is an option currently being offered by this office?
Mark only one oval.

Yes
 No

5. How interested are you in using telemedicine?
Mark only one oval per row.

Not at all interested	Minimally interested	Moderately interested	Very interested	Extremely interested
<input type="radio"/>				

6. If you are interested in using telemedicine, why are you interested?
Check all that apply.

No travel required
 Quick access to care
 Shorter wait time
 Ease of use
 Reduced costs (compared to those associated with an office visit: transportation, time off from work, etc...)
 High quality of care
 Other: _____

7. What are your biggest concerns considering the use of telemedicine?
Check all that apply.

No in-person interaction with a provider
 Use of technology
 Lack of physical exam
 Quality of care
 Security / Privacy
 Insurance coverage
 Cost
 Other: _____

8. Would you consider using telemedicine if:
Mark only one oval.

The co-pay was \$20 (equivalent to current office visit co-pay)
 The co-pay was \$50

9. Do you have access to a computer with a camera, Ipad, tablet, or smartphone?
Mark only one oval.

Yes
 No

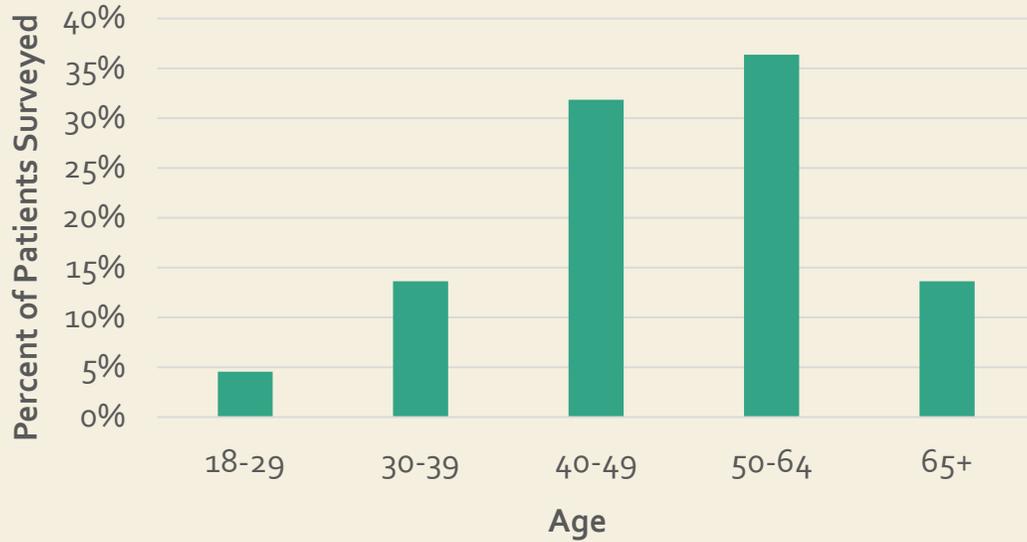
10. Is there any additional information you would want to know before considering the use of telemedicine?

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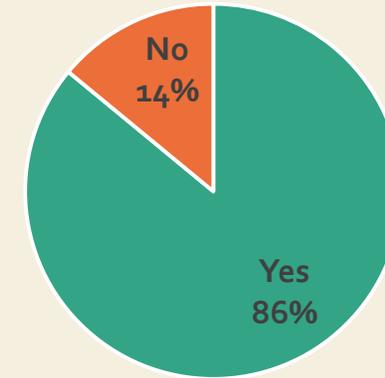
TeleHealth Interest Patient Survey

Results:

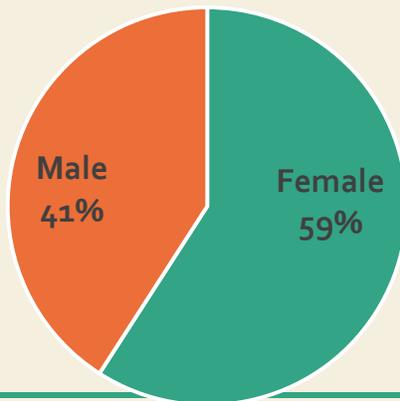
Age Distribution



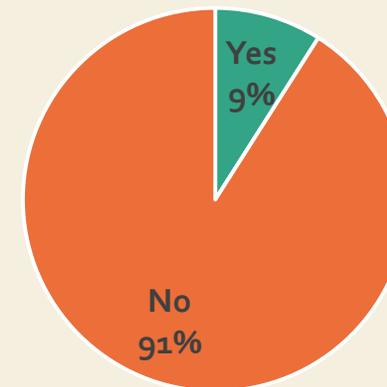
Access to a Computer with Camera, iPad, Tablet, or a Smartphone



Gender Distribution



Aware that TeleHealth is an Option Currently Being Offered



Largest identified barrier was limited patient knowledge of existing TeleHealth service.

N = 22

Results:

Interest in Using TeleHealth, Distributed by Age

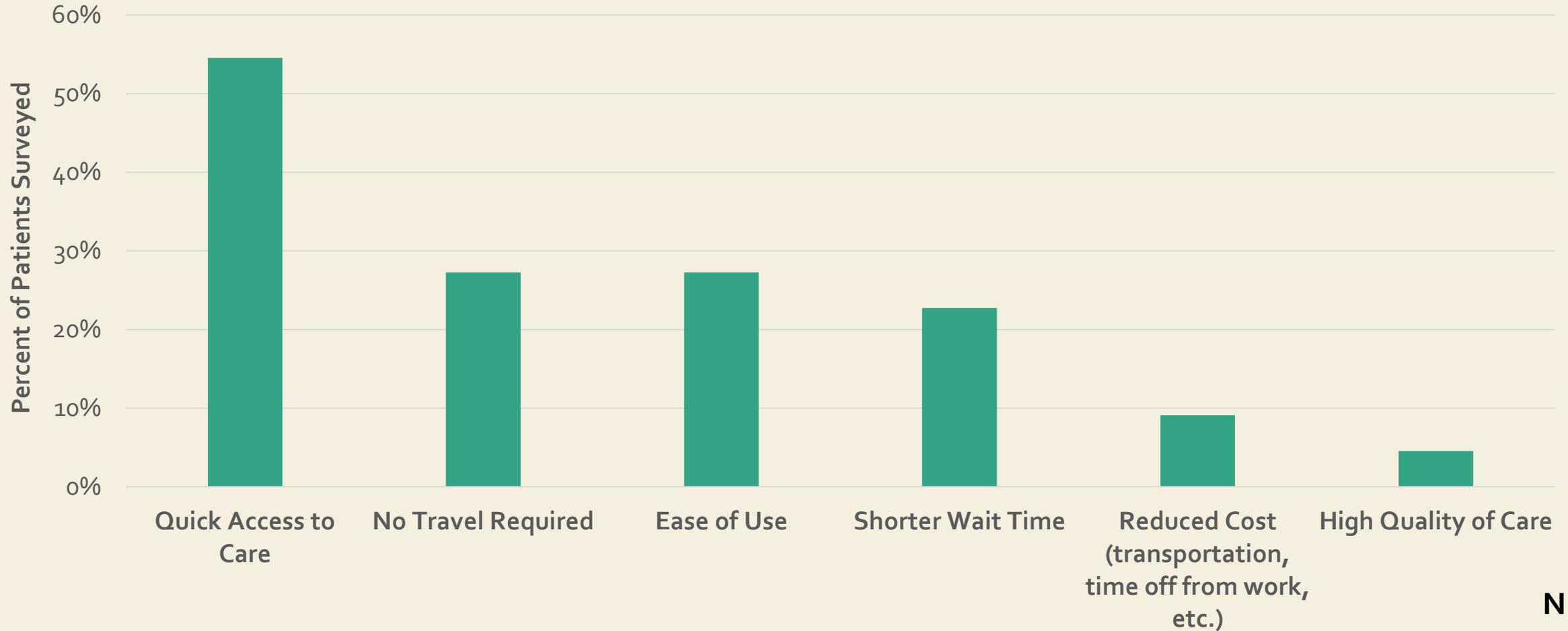


N = 22

There is wide range of patient interest in using TeleHealth services, and this interest does not seem to be dependent on age.

Results:

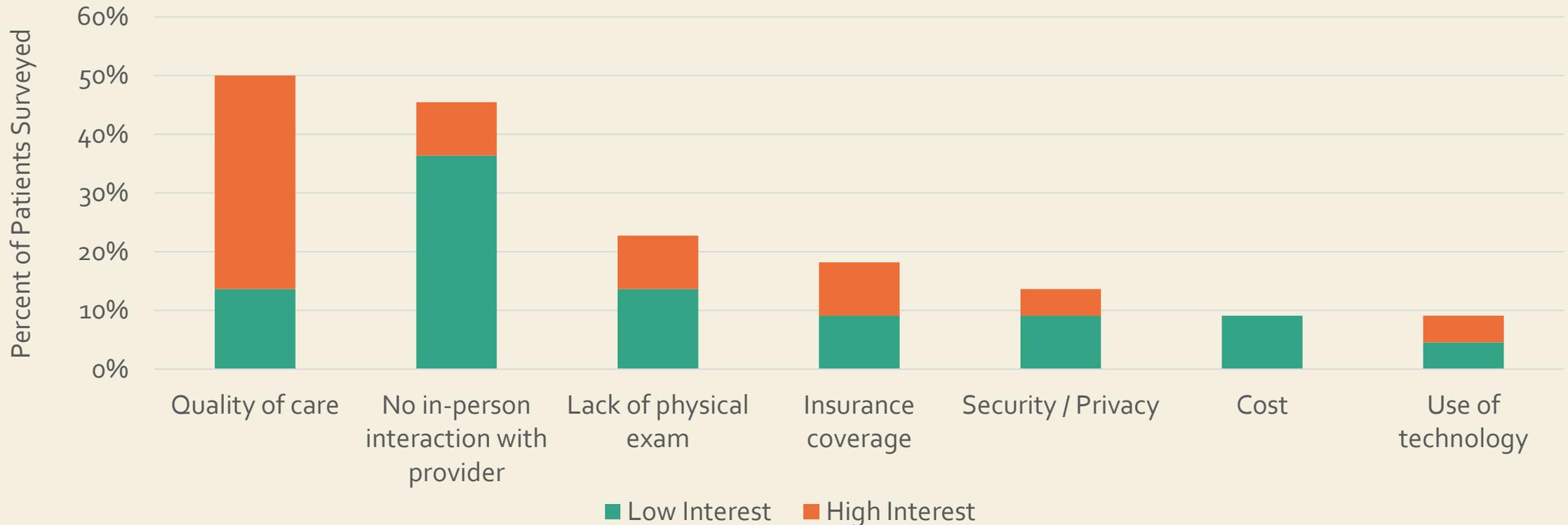
Why are you Interested in Using TeleHealth?



Quick access to care is the main reason patients are interested in using TeleHealth.

Results:

Concerns About the Use of TeleHealth, Distributed by Overall Interest in the TeleHealth Service



N = 22

Patients are most concerned about quality of care and no in-person interaction with their provider. Among these two concerns, patients expressing low interest in using TeleHealth are more concerned with lack of in-person interaction, and patients expressing high interest in using TeleHealth are more concerned with the quality of care they will receive.

Results:

Patients that participated in the survey at the end of their TeleHealth appointment (n=5), were overall very satisfied with all aspects of their appointment, and prefer a combination of both TeleHealth and on-site appointments to fit their medical needs.

Telemedicine Appointment Feedback

1. Why did you decide to use telemedicine?
Check all that apply.

- No travel required
- Quick access to care
- Shorter wait time
- Ease of use
- Reduced costs (compared to those associated with an office visit: transportation, time off from work, etc...)
- High quality of care
- Other _____

2. Based on your telemedicine experience, how would you rate the following factors listed below:
Mark only one oval per row.

	Very Dissatisfied (1)	Dissatisfied (2)	Neutral (3)	Satisfied (4)	Very Satisfied (5)
Ease of setting up appointment	<input type="radio"/>				
Ease of using the telemedicine technology	<input type="radio"/>				
Quality of visual image	<input type="radio"/>				
Quality of the audio sound	<input type="radio"/>				
Ability to converse with provider	<input type="radio"/>				
Explanation of what is being done for your medical condition	<input type="radio"/>				
Met your medical care needs	<input type="radio"/>				
Overall quality of care provided	<input type="radio"/>				

3. Which do you prefer?
Mark only one oval.

- Telemedicine
- Provider appointment on site
- A combination of both to fit my medical needs

4. Will you consider using telemedicine again in the future?
Mark only one oval.

- Yes
- No. If no, why? _____

5. Do you have any suggestions for improving future telemedicine appointments?

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Google Forms

TeleHealth Appointment Feedback Form

Effectiveness and Limitations:

- **Effectiveness:** I believe the survey results offer a unique view into the patient perspective of TeleHealth services being offered at the office. The information can be used to specifically target and address patient concerns in order to increase participation in the TeleHealth service. As TeleHealth is expanded within the Western Connecticut Health Network, this information can offer insight into developing successful TeleHealth programs at those other offices.
 - **Limitations:** The largest limitation was the number of survey responses. Due to the limited number of TeleHealth appointments during my time at Brookfield Family Practice, I only received 5 survey responses for the TeleHealth appointment satisfaction survey. I therefore chose to use the quotes I received from the surveys, rather than analyzing the responses. While I received 22 responses to the TeleHealth interest survey, the results would have benefited from a wider range of patient number and ages.
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Recommendations for the Future:

- **The largest barrier identified is informing patients that TeleHealth is an available option.** Because the implementation is new, this may just take time as telemedicine becomes a more widely offered option throughout the Western Connecticut Health Network. As more and more physicians start participating in the service, patients will have the option of seeing their own doctor via TeleHealth, this will greatly increase patient interest and participation.
 - Of patients that are moderately to very interested, their largest concern is quality of care. This can be targeted by increasing the dialogue between patients and their providers about the TeleHealth option. Patients trust their doctors. **Hearing first hand that their physicians are supporting and participating in TeleHealth will have a more impactful effect than a poster in the waiting room or a letter in the mail.**
 - Patient's specific interests in TeleHealth, as well as their concerns, can be addressed by sharing some of the data gathered from this project, or projects like it. As an example, **an information flyer was constructed that can be put in practitioner's offices with results of the surveys, and quotes from patients that have participated in the TeleHealth service at Brookfield Family Practice.** Showing this information is a direct link between the patient sitting in the office waiting to be seen, and the patient who made the decision to use TeleHealth. **Providing this information to patients is a way to inform them about TeleHealth, highlight it's value, validate their concerns, and provide perspectives from patients just like themselves.**
 - Lastly, further and larger scale studies are recommended, as this data would benefit from increased number of survey participants. Further encouraged is the **standardization of patient feedback collection about their TeleHealth experiences, to ensure continued patient satisfaction and outcomes.**
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