Virtual Health Possibilities Throughout the Patient Journey

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Virtual Health Defined

Virtual Health connects the care team (including the patient) through technology, improving access to healthcare services and enabling a seamless experience regardless of distance, location or time.

The principles of Virtual Health are:

- Patient centered care
- Remove barriers to access
- Integrate care delivery
- Connect patients, providers, and care teams

The benefits of Virtual Health are:

- Improve patient centered experience
- Improve the health of populations
- Engage staff and physicians
- Reduce the cost of health care by focusing on quality, safety, and efficiency

Virtual Health can be incorporated in all steps of the patient journey. The Fraser Health Authority (FHA) Virtual Health team has collaborated with numerous clinical teams and enabling support services to implement Virtual Health at various points throughout the patient journey.

Two examples of these collaborations are the Intensive Care Unit (ICU) Virtual Rounds for Intensivist Support and Speech Language Pathology (SLP) Follow Up Visits.

This poster aims to describe these implementations and identify lessons learned applicable to the scale and sustainability of Virtual Health services.

Acute: ICU Virtual Rounds for Intensivist Support

Aim: Virtual rounds will expand the knowledge and capacity of the Chilliwack General Hospital (CGH) Intensive Care Unit (ICU) team creating opportunity to support quality patient care and reduce, for mechanically ventilated patients, their ICU length of stay (LOS) by 20% and reduce the number of inter-facility transfers to a higher level of care.

Context: CGH has a 6 bed community ICU, staffed by Internists and a multi-disciplinary care team, that provides Intensive, High Acuity, and Cardiac care.

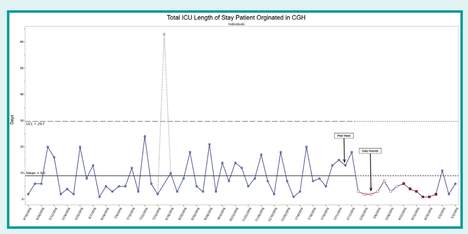
Problem: Community ICUs care for a variety of complex patients and have historically operated with limited resources. The intensive care specialty is evolving rapidly with new techniques and an ever-changing understanding of optimum management of these patients.

Intervention: For a period of 6 months, a tertiary Intensivist remotely attended (via Skype for Business [SfB]) daily rounds for mechanically ventilated patients and offered advice and management strategies for these patients to the CGH Internist and ICU team. The specific changes made were:

- Consistent timing and attendance in daily rounds
- Integration of Tele-Intensivist as a team member in rounds

Effect: Staff survey results (n-31) showed 100% of CGH Registered Nurses (RNs) felt virtual rounds improved patient safety and increased access to an Intensivist.

Measurement:



Mean ICU LOS:
Pre Intervention = 9.0 days
Post Intervention = 3.8 days

58% reduction in ICU LOS

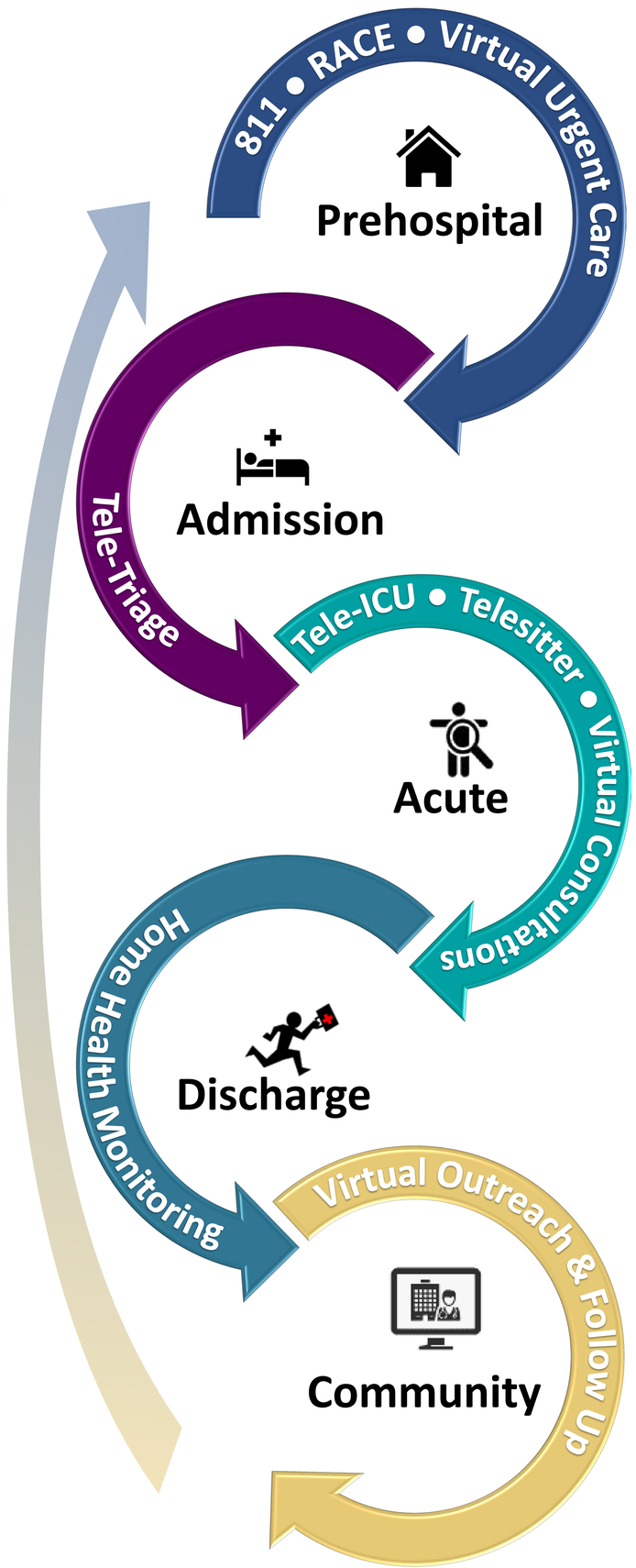
Figure 1. Total ICU LOS Patient Originated in CGH

Lessons Learned:

- Voice quality through technology is variable in a noisy ICU.
- Variable levels of staff comfort with virtual rounds.

Scale, Sustainability & Next Steps: Factors that affect scale and sustainability include physician funding, technical support and infrastructure limitations (e.g. not all ICUs have Wi-Fi). The CGH ICU is working to secure additional physician and equipment funding to expand to the other three community FHA ICUs.

The Patient Journey
Virtual Health Possibilities



Community: SLP Virtual Follow-up Visits

Aim: Virtual consultations will expand the efficiency of service delivery and increase patient access to care for Speech Language Pathology (SLP) outpatient follow up visits at Surrey Memorial Hospital (SMH).

Context: SLP patients often have other chronic health issues such as degenerative disease, stroke, brain injury or head/neck cancer that pose various challenges to their access to outpatient services.

Problem: The challenges faced by SLP clients include reliable and affordable transportation, client fatigue and multiple medical appointments requiring travel. These challenges may result in client cancellations which negatively impact the client's recovery and access and flow within the health care system.

Intervention: Clinically appropriate clients were given the option to receive SLP follow up visits virtually at home using Skype for Business (SfB).
Developments and specific changes were made to:

- Clinician workflow
- Client inclusion criteria
- Client technology terms of use
- SfB clinical use policy

Effect: The option to receive SLP therapy at home reduced caregiver burden to transport the patient and eliminated client travel and parking costs. Appointment cancellations were reduced and the frequency of patient contact increased.

Measurement:

"It saves a lot of travel time and opens up availability for appointments. It's kinda neat." -Patient

"It's an excellent option for expanding clinician services!" -Clinician

Qualitative Data Based on the Clinician and Patient Satisfaction Surveys

Benefits	Outcomes
• Increased patient centered care (e.g. additional treatments of a shorter duration)	• 3 patient visits/week
• Increased clinician productivity	• 3 patients seen/hour
• Less re-scheduling	• Decreased cancellations

Table 1: Benefits and Outcomes

Lessons Learned:

- Variable levels of clinician and client competency and comfort with technology.
- SfB is not supported on all mobile devices.
- A quiet environment is necessary for successful virtual health consultations.
- A technology support model for clients is needed to preserve clinicians' time.

Scale, Sustainability & Next Steps: Factors affecting scale and sustainability are technical education and support for users and the availability of appropriate technology and infrastructure. The SLP team is exploring the use of other virtual health platforms to better meet client and clinician needs.

Lessons Learned for Scale & Sustainability

Virtual Health has the opportunity to positively impact both the patient and clinician experience throughout the patient journey.

Lessons learned from the two example projects can be applied to any Virtual Health service to address key considerations for scale and sustainability.

Overall Lessons Learned

- Clinical need must drive the implementation of any technology
- Variable clinician and client competency and comfort with technology
- Appropriate technical infrastructure and support models for both clinicians and clients are needed

Considerations for Scale & Sustainability

- Change management and adoption must be the focus of Virtual Health service implementation
- Data collection mechanisms and evaluation plans must be in place
- Technical education and support is needed for clinicians and clients
- Successful implementation of Virtual Health services requires the collaboration of multiple enabling groups including: Clinical Teams, IMIT, Privacy & Security, and Professional Practice

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