2022 Hospital Medicine Updat
May 11-14

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Hospital Telemedicine

Rodney Bates, DO, FACOI
Primary Care Chair- ICOM
Assistant Professor of Internal Medicine

Disclosures

- None

Objectives

- Discuss the changing landscape of delivering healthcare via telemedicine
- Predict the future of telemedicine in the care of the hospitalized patient
- Explore potential models for utilization of Telehealth services in transitional care

Case

Landscape of Inpatient Telehealth

- Advancements during Pandemic
  - Conserve PPE
  - Free up from donning/doffing
  - Decrease exposures
  - Pulm exam not that beneficial in most cases
  - Provider/Staff engagement
  - Minimize surges
  - Easy transition to Remote Patient Monitoring (RPM) on discharge

Inpatient Landscape (continued)

- Patient interaction benefits
- Avoid PPE use
- Avoid nosocomial spread
  - Patients
  - Staff and clinicians
- Develop clinician expertise rapidly
- See a larger number of patients

Virtual Care Center

Tele-hospitalist rounds on COVID inpatients

Virtual Hospitalist- current state

Endpoint Total Touches

9,368

Virtual Hospitalist

"What we did was essentially take a hospitalist who worked in one of our large hospitals and spread them across multiple sites. Currently, about 12 telehospitalists (due to great interest, there's a waiting list) do cross-cover calls, admissions, and medical consults."

Providence

Sanford announces $300 million for rural health care access

Gift launches medical education, community sports & virtual hospital initiatives

A gift to Sanford Health includes establishing a virtual hospital to provide affordable care in rural and underserved areas of the Midwest. The virtual hospital will serve people from all over through the health system's network of hospitals, clinics and long-term care locations. (Architectural rendering by Sanford Health)

Written by Paul Heinert.

March 19, 2021

8 min read

1 Comments

Join the Conversation

Implementation?

- Patient-centered
- Shovel-ready
- Sustainable
- Addresses hospitalist and system issues

Virtual Hospitalists in the Virtual Care Center

- Tele-hospitalist rounds on inpatients
- Oversees APP rounding of observation patients at one hospital

Virtual Hospitalist Outcomes?

- Short term measurable:
  - Reduce transfer times
  - Support surging hospital sites
  - Free rounding teams of triage work
  - ?- Reduce burnout

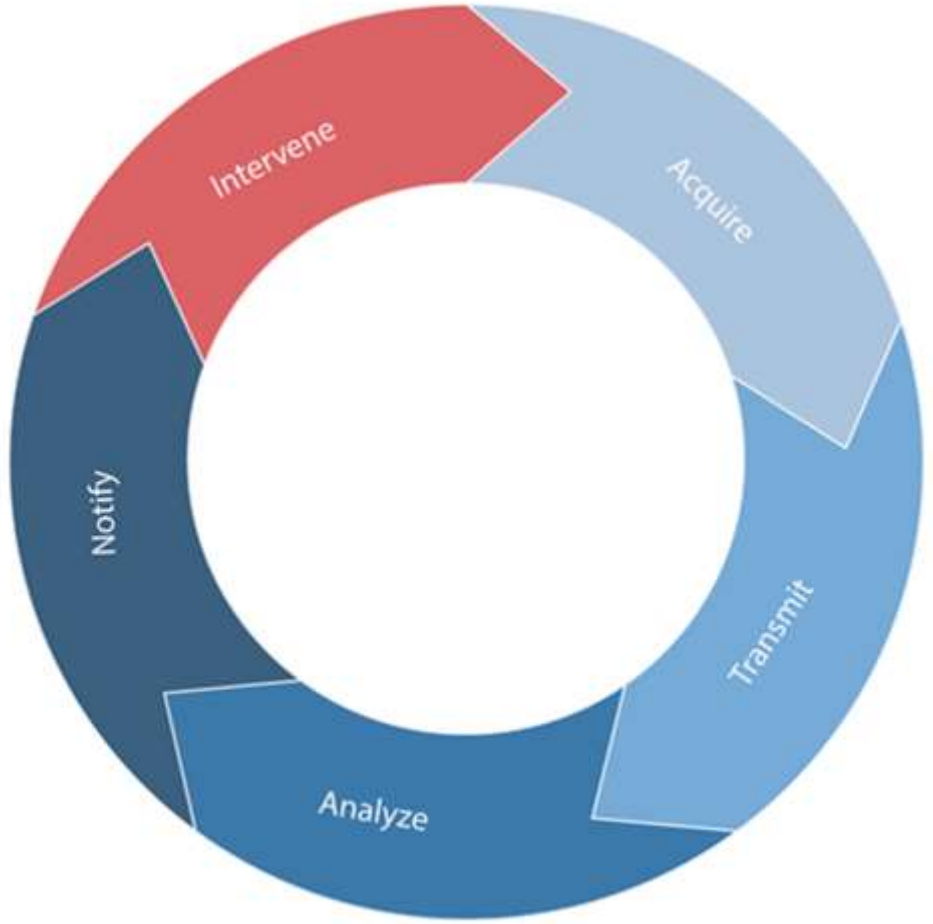
Virtual Specialty Outcomes?

Topic	Outcome (KQ)	Number of Studies (N)	Main Findings	Strength of Evidence (Insufficient, Low, Moderate, High)
Inpatient remote ICU	ICU Mortality (KQ1)[a]	11	Lower ICU mortality RR 0.69 (95% CI 0.51, 0.89)	Moderate
	Hospital Mortality (KQ1)[a]	12	Lower hospital mortality RR 0.76 (95% CI, 0.60, 0.95)	Moderate
	Cost (KQ1)	6	Unable to summarize across studies: different methods and inconsistent results.	Insufficient
	ICU LOS (KQ2)[a]	12	No significant difference in ICU LOS Mean difference (days) -0.39 (95% CI -0.99, 0.15)	Moderate
	Hospital LOS (KQ2)[a]	12	No significant difference in hospital LOS Mean difference (days) -0.14 (95% CI -0.96, 0.63)	Moderate
	Harms (KQ3)	0	None reported in identified articles	Insufficient

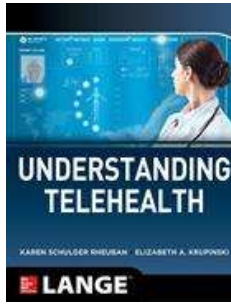
https://effectivehealthcare.ahrq.gov/sites/default/files/cer-216-telehealth-evidence-summary.pdf

Near & Future applications?

- Hospital at home models
  - RPM
    - Smart home (elderly)
    - Integrated systems
- Reimbursements
  - Value-based care models
  - Outcomes monitoring
  - Preventative services



Source: Karen Schulder Rheuban, Elizabeth A. Krupinski: *Understanding Telehealth*



COVID-19 Remote Patient Monitoring

- Avoid patient isolation
- Create hospital capacity
- Maintain intensive monitoring for decompensation
- Home BID RN monitoring, MD/DO backup

RN
In-home

RN
In-home

RN
In-home

In-home PRN services

- Phlebotomy
- Radiology
- Pharmacy eg infusions
- Physical Therapy
- Occupational Therapy

Virtual Care Center

Tele-hospitalist rounds on all cases with in-home RN

Other Wearables?

- Wrist-watch with multiple capabilities?
- Head band for brain-wave analysis?
- Mobility monitors?
- Etc…

Current outcomes Data?

- RPM:
  - Chronic medical conditions
    - Monitoring (Vitals, BS, daily weights, activity, etc.)
    - Communication and counseling services (diet, educational)
    - Reduced readmission rates (up to 40%)
  - Psychotherapy
    - Behavioral health applications

https://effectivehealthcare.ahrq.gov/products/telehealth/technical-brief

Drivers & Barriers to RPM adoption

Karen Schulder Rheuban, Elizabeth A. Krupinski+
Table 11-2.
Drivers and Barriers to Adoption of Remote Patient Monitoring

Drivers for RPM Adoption	Barriers to RPM Adoption
•Increased costs	
•Aging population	
•Increased burden of chronic disease	•Implementation costs
•Provider shortages	•Lack of third-party reimbursement
•Access disparities	•Concerns about privacy
•Need to reduce inefficiency	•Cultural resistance
•Technological advances	•Need for more robust evidence of benefit
•Readmission penalties	•Lack of EMR integration
•Payment models rewarding cost containment/risk sharing	

Resources

- https://accessmedicine-mhmedical-com.icom.idm.oclc.org/book.aspx?bookid=2217(Rheuban K, Krupinski EA. eds. Understanding Telehealth. McGraw Hill.)
- https://pubmed-ncbi-nlm-nih-gov.icom.idm.oclc.org/35147510/(Vilendrer S, Sackeyfio S, Akinbami E, Ghosh R, Luu JH, Pathak D, Shimada M, Williamson EE, Shieh L. Patient Perspectives of Inpatient Telemedicine During COVID-19: A Qualitative Assessment. JMIR Form Res. 2022 Jan 27. doi: 10.2196/32933. Epub ahead of print. PMID: 35147510.)
- https://www.degruyter.com/document/doi/10.1515/jom-2020-0131/pdf
- https://effectivehealthcare.ahrq.gov/sites/default/files/cer-216-telehealth-evidence-summary.pdf