

Baptist Health South Florida

Scholarly Commons @ Baptist Health South Florida

All Publications

10-25-2019

Telemedicine Is Medicine, Tele-ICU Is ICU, and Tele-Healthcare Is Healthcare

Donna Lee Armaignac

Baptist Health South Florida, DonnaAr@baptisthealth.net

Follow this and additional works at: <https://scholarlycommons.baptisthealth.net/se-all-publications>

Citation

Armaignac, Donna Lee, "Telemedicine Is Medicine, Tele-ICU Is ICU, and Tele-Healthcare Is Healthcare" (2019). *All Publications*. 3295.

<https://scholarlycommons.baptisthealth.net/se-all-publications/3295>

This Conference Poster -- Open Access is brought to you for free and open access by Scholarly Commons @ Baptist Health South Florida. It has been accepted for inclusion in All Publications by an authorized administrator of Scholarly Commons @ Baptist Health South Florida. For more information, please contact Carrief@baptisthealth.net.

Telemedicine is Medicine, Tele-ICU is ICU, and Tele-Healthcare is Healthcare

Donna Lee Armaignac¹, Heather Meissen², Craig Lilly³, Timothy G. Buchman⁴, Jeremy Kahn⁵, Michael Reis⁶

¹Baptist Health South Florida, ²Emory University Hospital, ³University of Massachusetts Memorial Medical Center, ⁴Emory University, ⁵University of Pittsburgh, ⁶Advocate Health Care

Background

- Connected health technologies make healthcare more effective and efficient by electronically connecting clinicians and patients and providing clinical-support to clinicians
- Tele-healthcare:
 - affords advanced physiologic monitoring
 - strengthens integration of clinical services
 - increases access to care
 - decreases patient mortality, complications, readmissions, and length of stay (LOS)
- Objectives:
 - Outline persistent and emerging healthcare challenges
 - Provide examples of BHSF's tele-solutions to aforementioned challenges

Tele-Solutions

- Example solution to ED surge, patient experience and ICU patients in the ED:
 - Tele-Triage to provide real time solution for unexpected surges in the department and improve 'door-to-doc' time and 'door-to-dispo-decision'
 - Compared tele-triage group and regular triage group for door-to-doc:

Cases vs. Control	Tele-triage significantly reduced time by:
Overall	25 min
Chest pain patients	45 min
Abdominal pain patients	20 min
Other pain patients	30 min

- No significant differences for door-to-dispo decision, except for subgroup comprised of chest and epigastric pain.
 - In chest pain patients, tele-triage group had a decision made 40 min sooner than the regular triage group
- Example solution to disaster preparedness:
 - ICU without borders

CHALLENGE

IMPACT DEPARTMENTS

- EDs 50% - 100% over capacity per surge unit period
- ICUs all full
- Mobile carts constant use
- MIBDs - non-acute emergency admissions - hospital discharges

PLANNING

SOLUTION - Not one part in a system

LESSONS LEARNED

- No internet or cell service
- Remember Walter Tubbard II
- Improved food planning
- Showed sign
- Carriage
- Bedlines
- Create a tele-triage IC

Persistent & Emerging Challenges

- ICU and PCU acuity/bed utilization
- ED surge, patient experience and ICU patients in the ED
- LOS and cost
- Disaster preparedness
- See the forest through the trees

Discussion

- To fulfill the promises of health information technology, we need to maximize positive patient care expertise, and provide solutions to persistent and emerging healthcare challenges
 - BHSF's tele-critical care hub-and-spoke model of care delivery promotes optimized access to evidence-based, patient-centered care
 - BHSF's Center for Advanced Analytics applies predictive analytics to the data from tele-applications

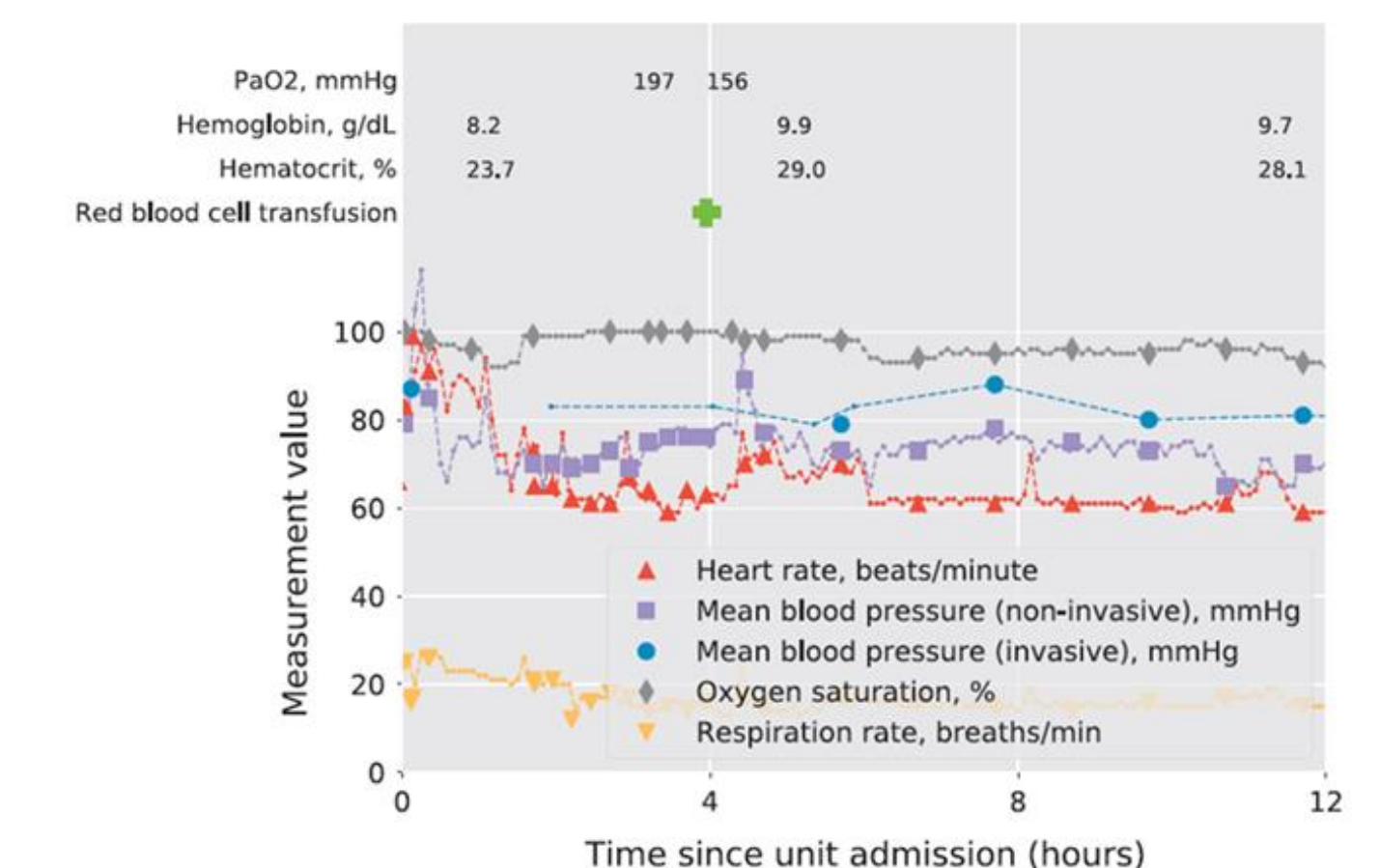


Figure 2. Visualization of a single patient's stay. Data shown are a subset of all data available, and include: high granularity vital signs (dashed lines, sourced from vitalPeriodic and vitalAperiodic), nurse validated vital signs (solid markers, sourced from nurseCharting), blood product administration (green cross, sourced from intakeOutput), and laboratory measurements (sourced from lab).

Source: www.nature.com/sdata

References

- Armaignac, Donna Lee. (2017). Teletriage: Application of a Tele-ICU Infrastructure to Enhance Patient Care Experience in the Emergency Department. *Telemedicine and eHealth* 23(4): A-45
- Armaignac, D., Valle, C., Gidel, L., Mei, X., Zaidi, I., Gross, L., Williams, L., & Veledar, E. (2015). The Effect of Tele-ICU Innovation on Progressive Care Unit Patient Population. *Critical Care Medicine* 43(12)
- Armaignac, Donna (2018). Fulfilling the Promises of Health Information Technology: Expect to Maximize Positive Patient Care Outcomes, Advance Analytics and Innovate Research with Tele-Healthcare Application. *Contributory Article Invite: A special on Connected Health from Healthcare Tech Outlook*