Clinician Attitudes Towards Remote Monitoring

Mission Statement

Physician-Patient Alliance for Health & Safety is an advocacy group dedicated to improving patient health and safety.

PPAHS seeks to advance key patient health and safety initiatives that significantly impact patient lives and to do so in a prescriptive and practical manner.
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Patient Families:

- **Brian & Cindy Abbiehl** (A Promise to Amanda Foundation)
- **Lenore Alexander** (Leah’s Legacy)
- **Patricia LaChance Knode** (Patient Safety Advocate)
Expert Commentary & Authors (Select Few)

- **Moises Auron**, MD (Department of Hospital Medicine and Center for Pediatric Hospital Medicine, Cleveland Clinic)
- **William M. Callaghan**, MD, M.P.H. (senior scientist for the maternal and infant health branch, Division of Reproductive Health, CDC’s National Center for Chronic Disease Prevention and Health Promotion)
- **Brendan Carvalho**, MD (Associate Professor, Department of Anesthesia, Stanford University)
- **Eric Coleman**, MD (professor of geriatric medicine and director of the care transitions program, University of Colorado at Denver)
- **David Crippen**, MD (Associate Professor of Critical Care Medicine, University of Pittsburgh Medical Center)
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- **John Keats**, MD (ex-officio member of ACOG’s Patient Safety and Quality Improvement Committee)
- **Elliot Krane**, MD (Director, Pediatric Pain Management, Lucile Packard Children’s Hospital at Stanford)
- **Gregory Maynard**, MD, MCS, SFHM (Health Sciences Professor of Medicine; Director, UC San Diego Center for Innovation and Improvement Science)
- **Ana Pujols McKee**, MD (Executive Vice President and Chief Medical Officer, The Joint Commission)
- **Julianna Morath**, RN, MS (California Hospital Association)
- **Bryanne Patail** (biomedical engineer, U.S. Department of Veterans Affairs, National Center for Patient Safety)
- **Marc Popovich**, MD (Medical Director, Surgical Intensive Care Unit, Cleveland Clinic)
- **Mark Reiter**, MD, CEO of Emergency Excellence, president American Academy of Emergency Medicine)
- **Tim Ritter** (Senior Patient Safety Analyst at the Pennsylvania Patient Safety Authority)
- **Paul M. Schyve**, M.D. (Senior Advisor, Healthcare Improvement at The Joint Commission)
- **Daniel Sessler**, MD (Professor and Chair, Department of Outcomes Research, Cleveland Clinic; Director, Outcomes Research Consortium)
- **Robert Stoelting**, MD (President, Anesthesia Patient Safety Foundation)
- **David Watson** (Vice President, ECRI)
Key Initiatives

- Opioid Safety (pain management)
- Venous Thromboembolism (blood clots)
- Alarm Management (noise fatigue)
Physician-Patient Alliance for Health & Safety (PPAHS) would like to thank Medtronic (Platinum Sponsor) and EarlySense (Bronze Sponsor) for their generous support.

Survey questions, interpretation and dissemination of findings are solely the responsibility of PPAHS.
Survey Participants

Survey of nurses and nursing executives of the American Hospital Association
(survey conducted October 6-14, 2015)
Survey Participants

Bedside 67%

Administrative 33%

Preliminary data analysis - to be finalized and therefore subject to be changed
Question Areas

• Respiratory Compromise: knowledge and awareness
• Use of Monitoring Equipment: preferences, likes/dislikes
Survey Results & Analysis

- Respiratory Compromise: knowledge and awareness
- **Use of Monitoring Equipment: preferences, likes/dislikes**
Patient Monitoring

Patients are typically tethered to multiple machines

Patient Monitoring

What Most People Think of as Wireless & Wearable

Press release about Stanford Hospital clinical trial using wireless, wearable patient monitor - [http://prn.to/1LnnXX3](http://prn.to/1LnnXX3)

Venture Beat article on how a small wearable device is improving care and saving money for hospitals: [http://bit.ly/1t2OxzB](http://bit.ly/1t2OxzB)

[https://www.fitbit.com](https://www.fitbit.com)
Wireless & Wearable

3 Aspects of Wireless & Wearable

- Mobility
- All-in-One Multiple Physiological Monitoring
- Interoperability


Image source: http://www.swissarmy.com/us/content/swissarmy/category/1

Source image: http://www.lanpark.eu/interoperability
Mobility

79% of respondents want mobility


Press release about Stanford Hospital clinical trial using wireless, wearable patient monitor - http://prn.to/1LnnXX3

Venture Beat article on how a small wearable device is improving care and saving money for hospitals: http://bit.ly/1t2OxzB

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All-in-One Multiple Physiological Monitoring

67% of respondents want all-in-one physiological monitoring

Image source: http://gbmnews.com/wp/archives/254

Preliminary data analysis - to be finalized and therefore subject to be changed
Survey Results & Analysis

45% of respondents want interoperable equipment

Image source: https://www.openice.info/docs/6_example-setsups.html

Preliminary data analysis - to be finalized and therefore subject to be changed
Why Not 100%?

Preliminary data analysis - to be finalized and therefore subject to be changed
Why Not 100%?

Why Aren’t Responses 100%?

Cost

False Alarms
Why Not 100%?

Why Aren’t Responses 100%?

Cost

False Alarms

Fear of Replacement by Technology
(not a question on the survey - personal opinion)

Preliminary data analysis - to be finalized and therefore subject to be changed
1. A majority see the benefits of remote patient monitoring.

2. There is resistance to remote monitoring, including:
   - High costs of the system
   - Workflow disruptions (e.g. nuisance alarms)
   - Fear of replacement by technology

3. Use of remote patient monitoring is likely to be more accepted in higher risk areas:
   - Medical and/or surgical floors (86%)
   - ICU/PACU (74%)
   - Emergency room (71%)

4. Technology May Not Replace All Human Intervention
   - 81% want a risk assessment tool

Preliminary data analysis - to be finalized and therefore subject to be changed
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