

Physiological monitoring workers: Maximizing worker efficiency and maintaining patient safety

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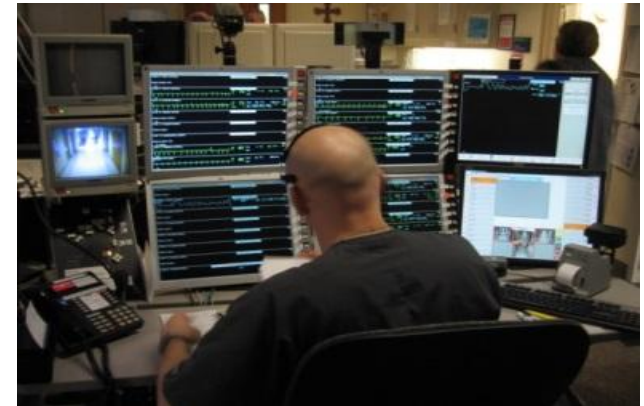
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- 24-hour real-time physiological monitoring
- Multiple noncritical care patients
- Remote display station
 - Cardiac rhythms, pulse oximetry, blood pressure, and other physiological data
 - 15-40 in-hospital patients at a single station



- Benefits:
 - Early recognition patient deterioration
 - On-site workload reduction per patient
- Future plans for operation expansion
- Must determine factors influencing effective monitoring system
 - Major factor: Monitoring operator's workload

- One-week data collection period on site
 - Three different work shifts: 6 AM, 2 PM, and 10 PM



ds used:

Example Questions:

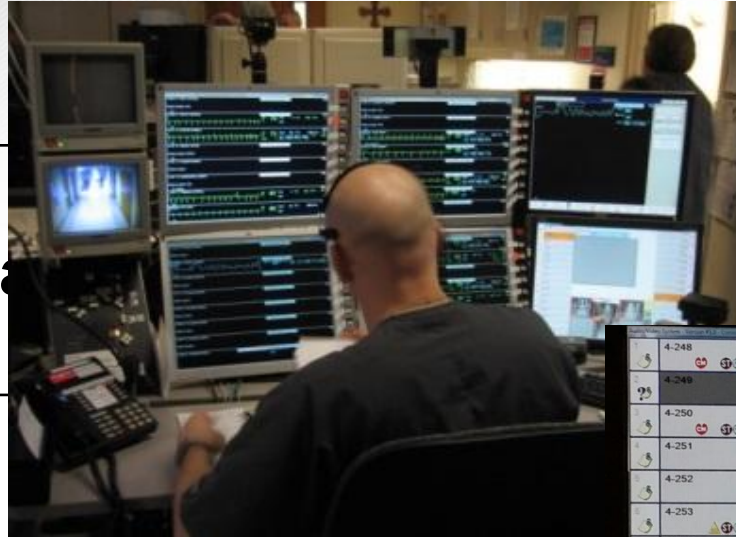
a little about your experience

– Critical incident
In January!!!

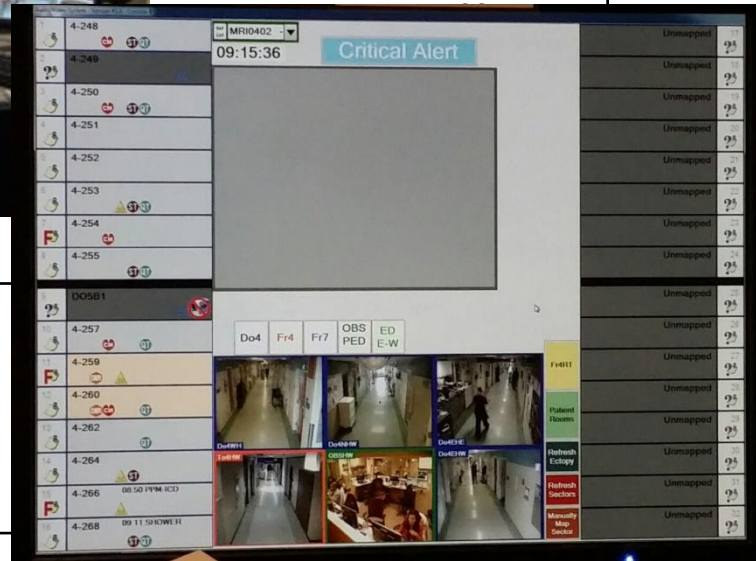
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- 37 Mayo Clinic employees:
 - remote monitoring operators, nurses, and other clinical personnel
- All information digitally recorded and/or written in field notes

- There are three distinct Remote Monitoring Paradigms (RMPs):
 - make-up of the healthcare team, i.e., console operator, runner, and nurse staff
 - performed tasks
 - physical location
 - quality of communication

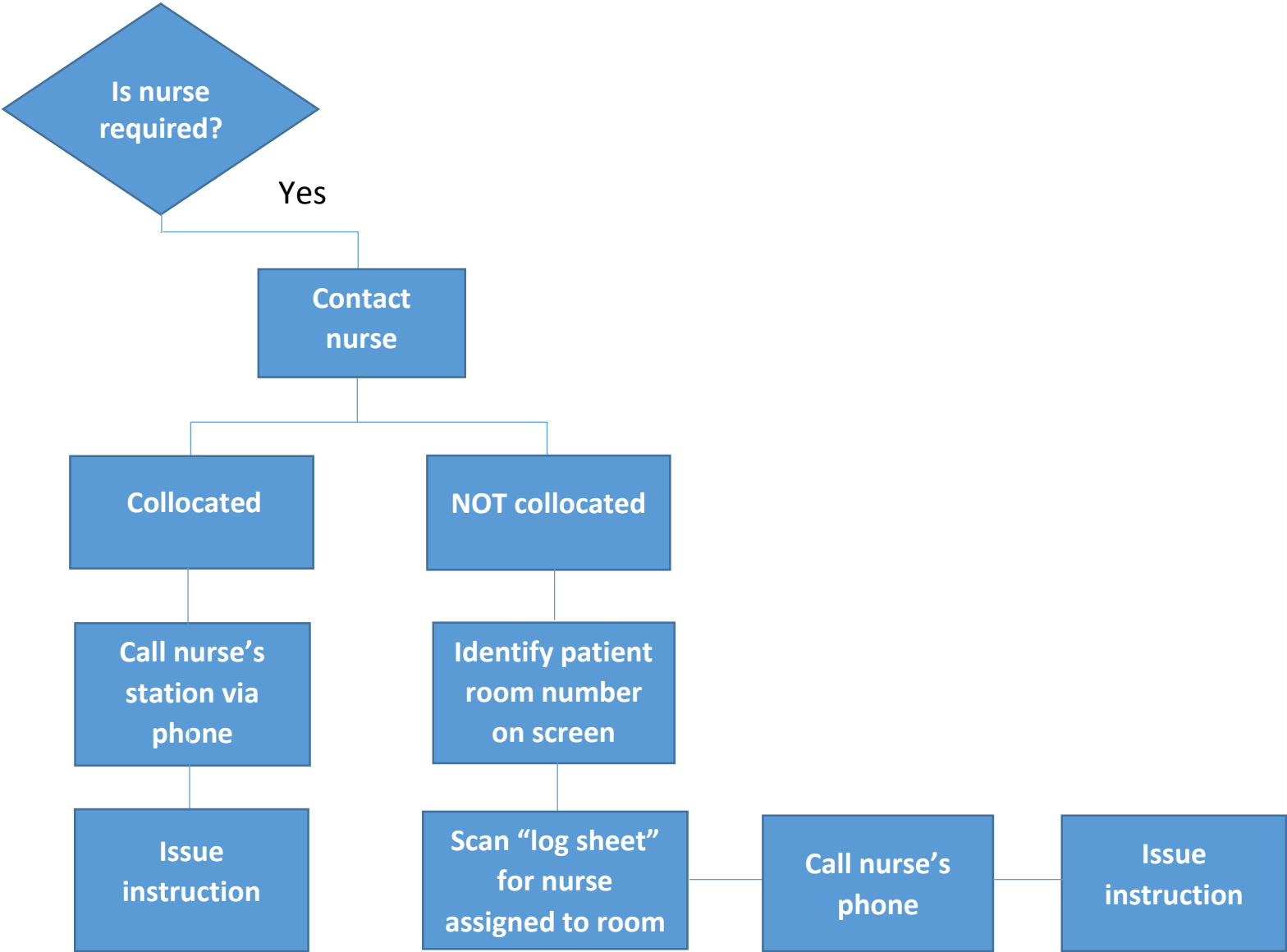


Healthcare team		RMP 2	RMP 3
		Console operator, runner,	Console operator, nurse staff
Collocated			No
Tech components of communication	A/V display, telephone		Telephone

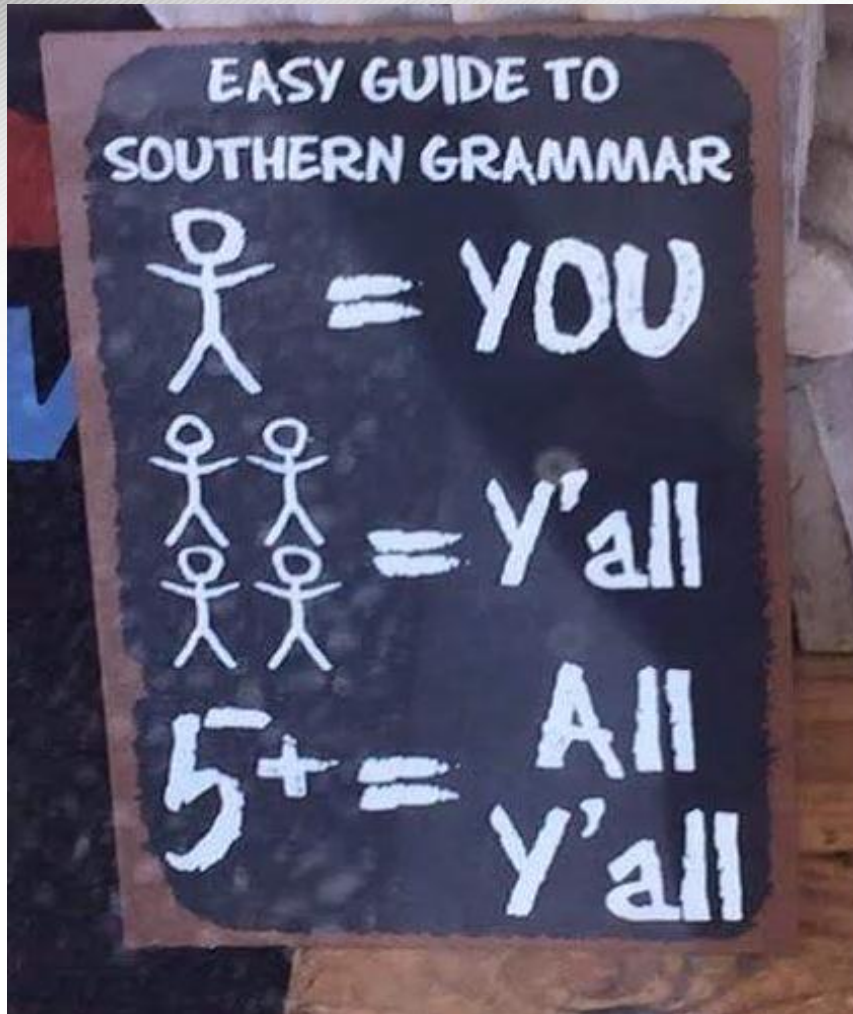


How do they compare?

- Perceived quality:
 - Paradigm 1 > Paradigm 2 > Paradigm 3
- Most influential characteristics:
 - Healthcare team spatial proximity
 - A/V technical capabilities available to console operators



- Initial steps in continued analysis of the remote monitoring system
- Currently in the works:
 - Validating task analysis
 - Narrowing in on key workload drivers
- Potential next step: simulation of monitoring workstation to manipulate workload drivers



Any Questions?

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