

## Speech Communication Interference (SCI):

A method to study miscommunication in the OR

### ABSTRACT

#### Background

Operating room (OR) communication is frequently disrupted, raising safety concerns. We used a Speech Interference Instrument to measure the frequency, impact, and causes of speech communication interference (SCI) events.

#### Methods

In this prospective study we observed 40 surgeries, primarily general surgery, to measure the frequency of SCI. We performed supplemental observations, focused on conducting post-surgery interviews with SCI event participants to identify contextual factors. We thematically analyzed notes and interviews.

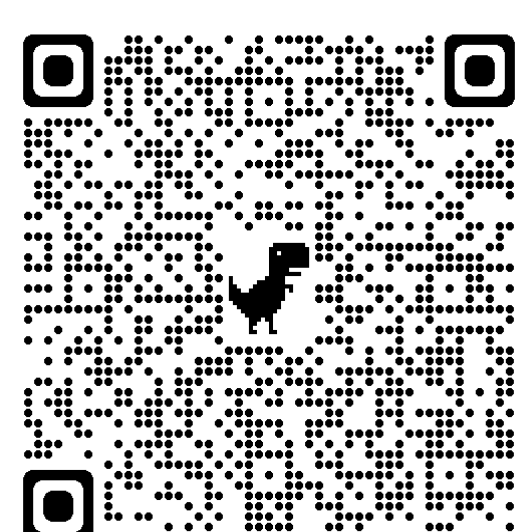
#### Results

The observed 103 SCI events in 40 surgeries (mean 2.58) mostly occurred during another patient related task. 17.5% occurred at a critical moment. 27.2% of SCI events were not acknowledged or repeated and the message was lost. Including the supplemental observations, 97.0% of SCI events caused a delay (mean 5 seconds). Post-surgery interviews confirmed miscommunication and distractions. Attention was most commonly diverted by loud noises (e.g. suction), conversations, or multitasking (e.g. using the EHR). Successful strategies included repetition or deferment of the request until competing tasks were complete.

#### Conclusions

Communication interference may have patient safety implications that arise from conflicts with other case-related tasks, machine noises, and other conversations. Reorganization of workflow, tasks and communication behaviors could reduce miscommunication and improve surgical safety and efficiency.

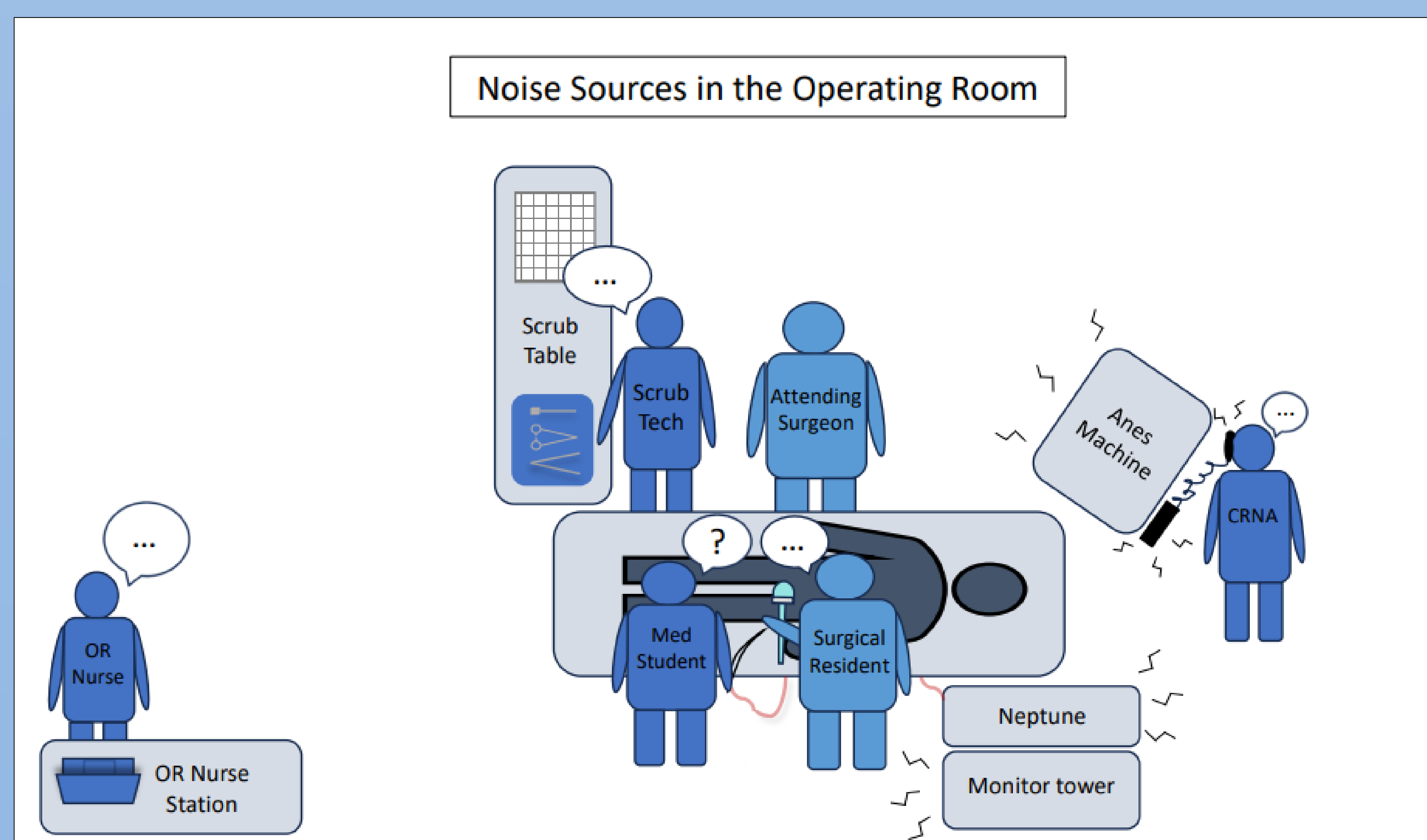
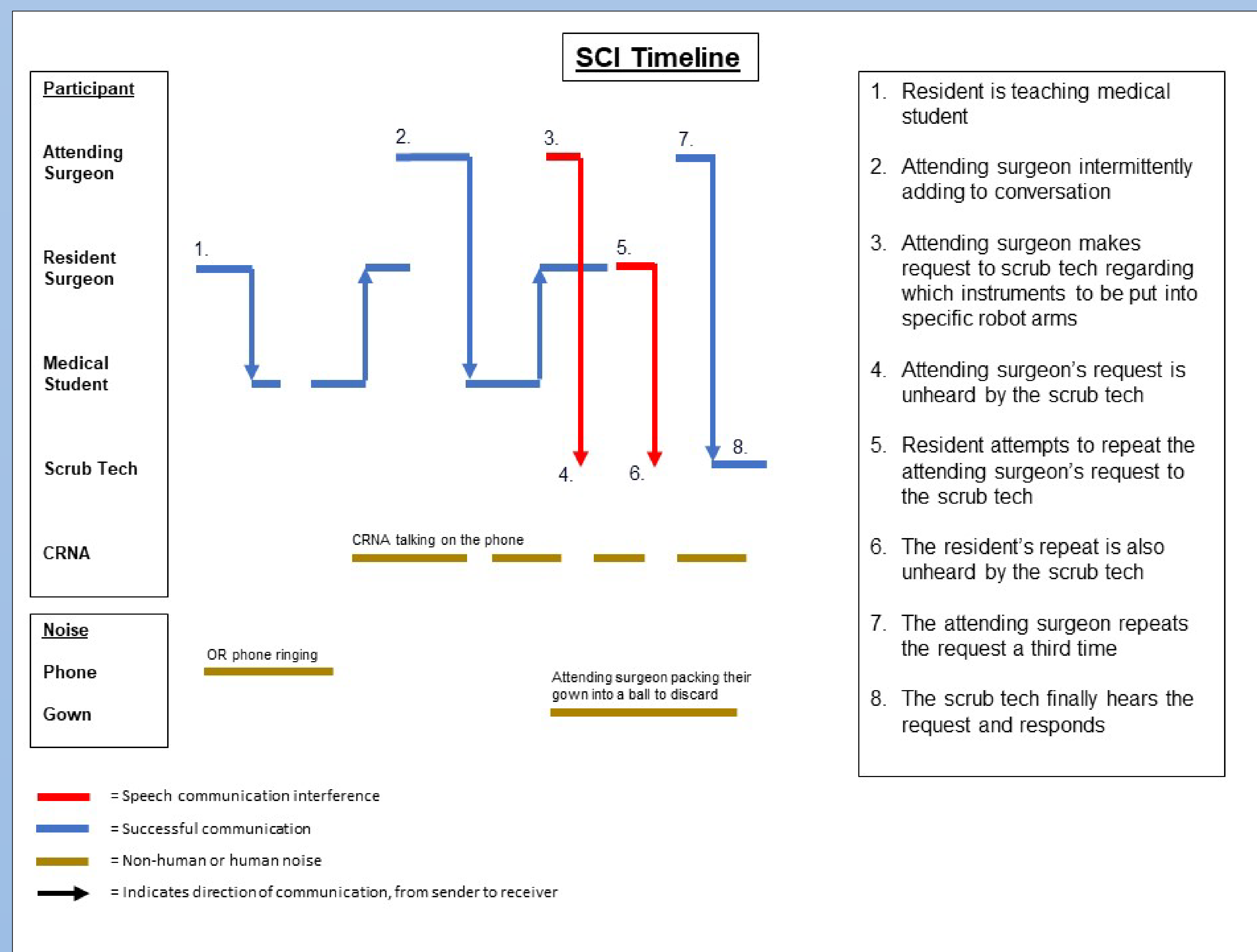
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# Speech Communication Interference in the Operating Room

## What is Speech Communication Interference?

1. "Group discourse disrupted according to the participants, the goals, or the physical and situational context of the exchange."
2. Communication flow obstructed by:
  - Loud machine and alarm noises
  - Overlapping conversations
  - Multitasking



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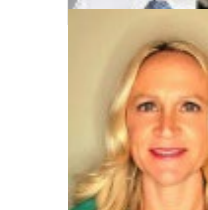
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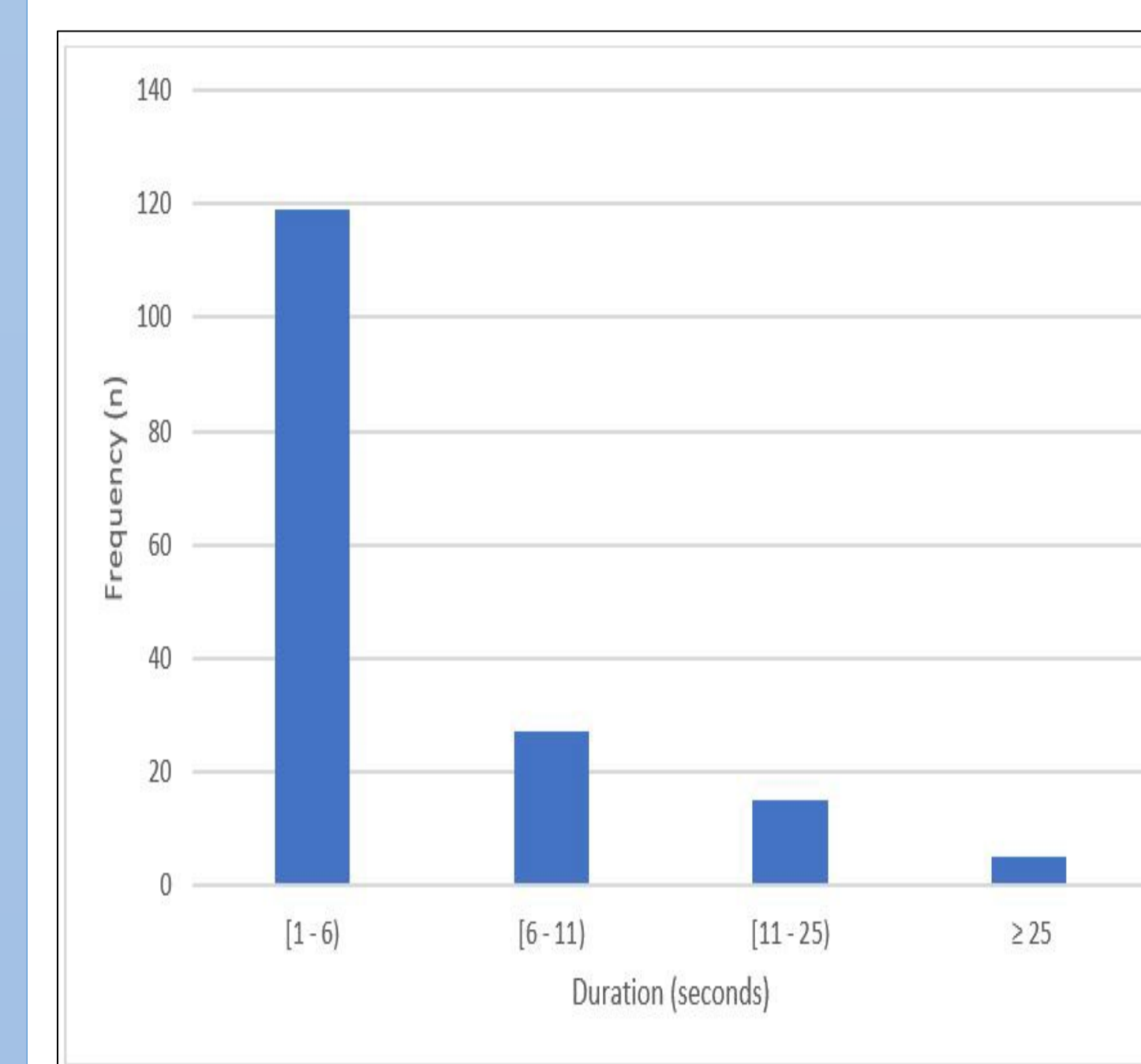
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### Duration of case delays associated with SCI events



### SCI Instrument

Time: \_\_\_\_\_

Portion of Surgery

Setup  Main Surgery  Loud Noise

Intubation  Critical Moment  Overlapping Conversation

Time Out  Extubation  Multitasking

Describe event: \_\_\_\_\_  Not paying attention

Participants: \_\_\_\_\_  Other

Evidence of Speech Interference (check all that apply)

Receiver did not respond  Effect of Speech Interference

Sender repeated themselves  None

Receiver asked for clarification  Case Delay

Other \_\_\_\_\_  Near Miss

Describe: \_\_\_\_\_  Surgical Error

Context: \_\_\_\_\_  Describe: \_\_\_\_\_

Hotbox interview: \_\_\_\_\_



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