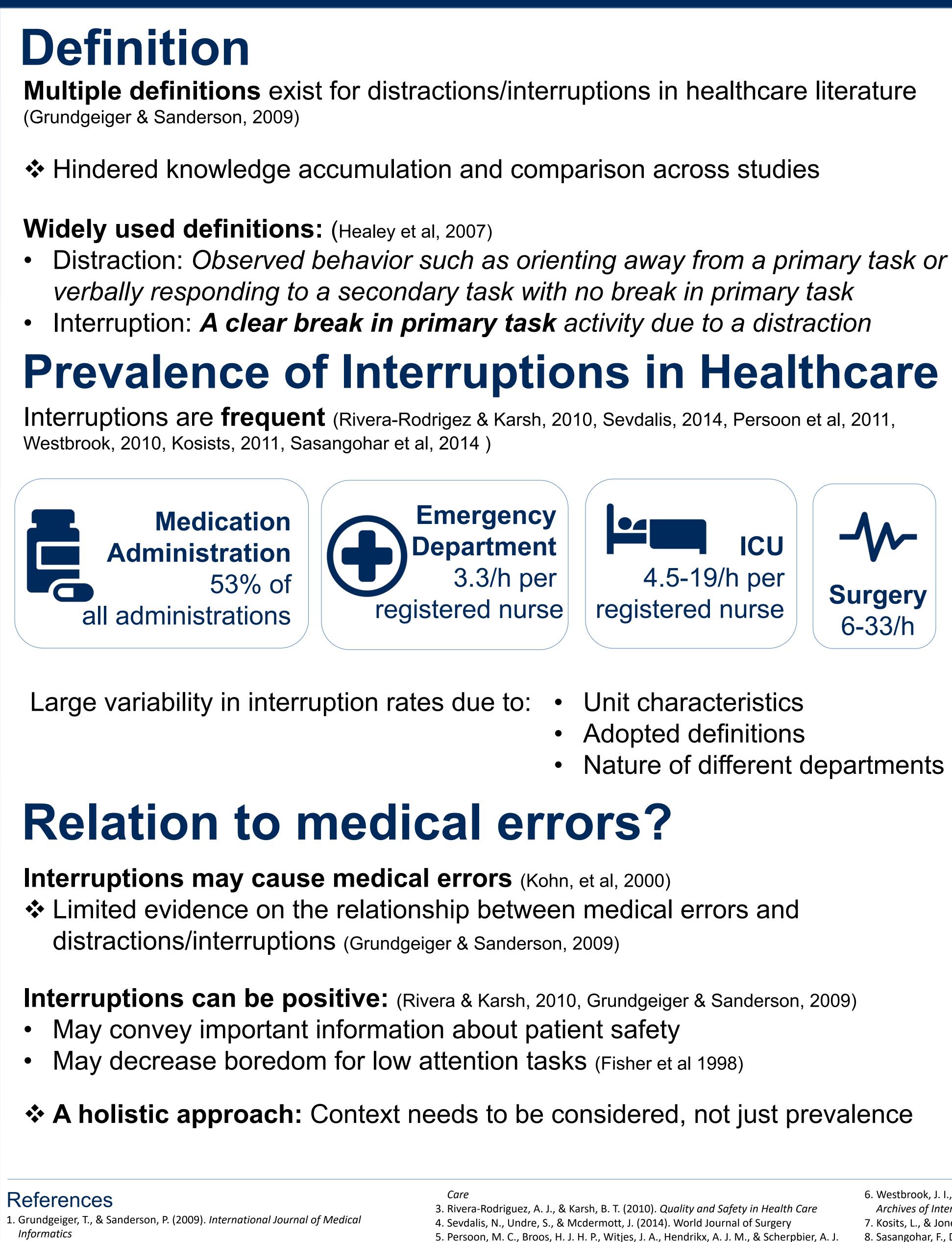


Mechanical & Industrial Engineering UNIVERSITY OF TORONTO



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Understanding and Mitigating the Distractions/ Interruptions Experienced in the OR

Suzan Ayas, Birsen Donmez





- Unit characteristics
- Adopted definitions
- Nature of different departments

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Research Gap:

Investigating Interruptions in Surgery

- Naturalistic data is being collected in operating rooms at St. Michael's hospital (Operating Room Black Box Data)
- Statistical analyses on the naturalistic data could help:

Operating Room Black Box

- Multiview, high-resolution images of Audio/video of OR Endoscopic camera/wearable technology Patient physiology, Environmental factors Recording devices

more insights

- 6. Westbrook, J. I., Woods, A., Rob, M. I., Dunsmuir, W. T. M., & Day, R. O. (2010).
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- 7. Kosits, L., & Jones, K. (2011). Journal of Emergency Nursing 8. Sasangohar, F., Donmez, B., Easty, A., Storey, H., & Trbovich, P. (2014). Journal of Critical Care

Collaborators: Teodor Grantcharov, Katie Hogan

Mitigation

Physical and Procedural Changes:

- Blocking (Raban&Westbrook, 2014)
- No interruption zones
- Do not disturb vests
- Supporting resumptions
- Whiteboards (Westbrook et al, 2010)
- Bar-coding (Westbrook et al, 2010)

Training/Cultural Changes:

e.g. how comfortable a resident feels asking the team to switch off the radio

Automate error-prone tasks

 No standards in definitions of distraction and interruption • Limited evidence on the relationship between distractions/interruptions and errors Systems approach in interruption-error relationship • Mitigation techniques specific to different departments

• identify which distractions/interruptions may be related to surgical errors mitigate the most detrimental ones with a suitable mitigation technique

Raw, **unbiased** recordings – potential to capture

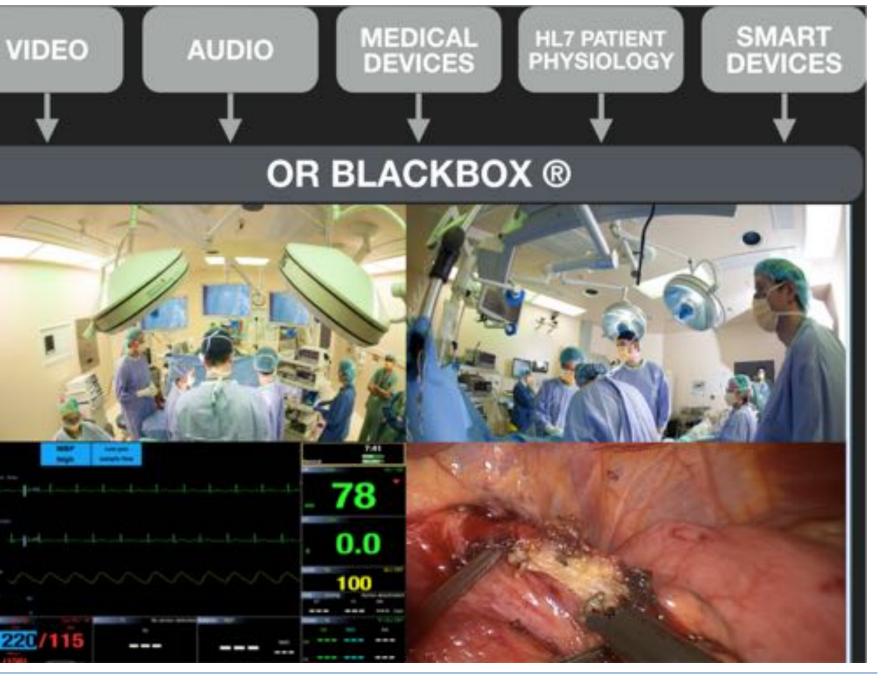
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• Well-coordinated teams (Sevdalis et al, 2014) Knowing one's self and active handling (Sevdalis et al, 2014) Sympathetic relationship (Persoon et al, 2011)

Mitigation technique should be matched to the problem





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