

The Science of Interruption

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En historie fra det virkelige liv



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Problem

- Interruptions!!
- *M Weigi, A Müller, A Vincent, P Angerer, N Sevdalis*
- *The association of workflow interruptions and hospital doctors' workload: a prospective observational study*
- *BMJ Qual Saf 2012;21:399-407*

Background

- Interruptions are common
- Link between interruptions and clinical error
- Impact on patient safety

Aim

- To examine the relationship between observed workflow interruptions and hospital doctors' perceived workload during day clinical shifts

Methods

- Prospective observational study - validated tools
 - Structured full-shift observations
 - Self-report measures (before lunch, before leaving)
- 300 bed general community hospital in Düsseldorf
- 4 departments
 - Surgery (general, trauma)
 - Internal medicine (cardiology, gastroenterology)
- 8 wards including A&E and ICU

Participants

- 2 observers
- 29 doctors
- 25 (86%) in postgraduate specialty training
- 14 women (48%)
- Age 34 (27-57)

Results – how many interruptions?

- Mean 3.66 interruptions/hour
- Internal medicine vs surgery
 - (3.92) (3.41) $p = 0.09$
- A&E/ICU vs ward
 - (3.95) (3.55) n.s.
- Morning vs afternoon n.s.
- Specialist vs junior level n.s.
- Gender n.s.

Results – interrupted - by whom? (%)

- *Colleague*
- Doctor 16.4
- Nursing staff 29.5
- Telephone/beeper 28.9
- *Others*
- Patients 4.9
- Patients relatives 3.2
- Any other person 2.1

Results – interrupted - by what? (%)

- Equipment/technical malfunctions 2.1
- Information impediments 5.4
- Waiting time 4.7

Results –workload rating (scale 0-100)

- Internal medicine vs surgery n.s.
- A&E/ICU vs ward
- (51.8) (44.4) p=0.08
- Morning vs afternoon p=0.059
- (42.3) (50.0)
- Specialist vs junior level p=0.05
- (53.5) (44.6)
- Gender n.s.

Results – correlations

- Hierarchical linear regression
- Dependent variable: perceived workload

- Time of day beta=0.23 p=0.09
- Position beta=-0.22 p=0.03
- Interruptions beta=0.22 p=0.05

Summary

- Hospital doctors
- Disrupted almost 4 times per hour
- Nursing staff and telephone/beeper (30% each)
- Workload for senior doctors > junior doctors
- Workflow interruptions related to perceived workload

Conclusion

- Frequent workflow interruptions may be linked with increased workload in doctors.
- Healthcare environments need to be better designed to reduce unnecessary interruptions and distractions so that hospital doctors can manage clinical work efficiently and safely

Hvordan ser det ud hos os?



Perspektivering DK

- *Sygeplejersken 3.2012*
- Viborg Sygehus, mave-tarm-kirurgisk afdeling
- Sengeafsnit med 37 senge, 70-80 medarbejdere
- Observation af 5 sygeplejersker + 2 assistenter
- 126 afbrydelser/8 timer (>15 gange/time)
- Hovedsagelig kolleger
- Intervention

Perspektivering DK

- Intervention
- Flere nøgler til medicinskabet
- Klokker erstattet med mobiltelefon
- Oprydning og orden
- Struktur i arbejdet – alle ved, hvad de skal
- Kulturen på kontoret
- 90 afbrydelser/8 timer (33% reduktion)