



FOURTH INTERNATIONAL CONFERENCE ON
INFORMATION TECHNOLOGY IN HEALTH CARE : **SOCIO-TECHNICAL APPROACHES**

Organizational considerations for the implementation of a CPOE

Sylvia Pelayo

& Marie-Catherine Beuscart-Zéphir





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Context of the study

- Impact of a CPOE on doctor-nurse communications largely demonstrated
 - leaves nurse out of the ordering loop
 - Impairs synchronization and feed-backs mechanisms
- But doctor-nurse communications are governed by the organization of their work

HYPOTHESIS

The organizational variables have a larger impact than the CPOE on the doctor-nurse's communications and cooperation's activities.

STUDY

- CPOE variable
- Communications' organization variable



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Methods

❖ SITES OF THE STUDY

1. CPOE / Paper-based

✓ Computerized



Denain Public Hospital
(cardiology / gastroenterology and infectious disease)

✓ Paper-based



University Hospital of Lille
(Cardiology, Nephrology and Neurosurgery)

❖ SITES OF THE STUDY

2. Different communications' organization

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2. Different communications' organization



THE COMMON ROUND

❖ SITES OF THE STUDY

2. Different communications' organization



THE COMMON ROUND



THE BRIEFING

❖ SITES OF THE STUDY

2. Different communications' organization



THE COMMON ROUND



THE BRIEFING



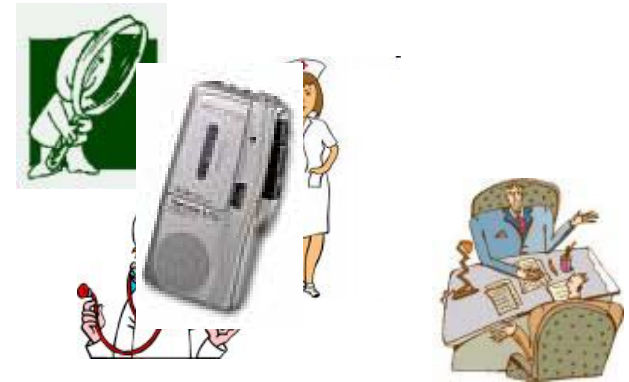
THE OPPORTUNISTIC EXCHANGES

❖ SITES OF THE STUDY

	Common Round	Briefing	Opportunistic Exchanges
CPOE	cardiology / gastroenterology	infectious disease	No access to this situation
Paper-based	Neurosurgery	Nephrology	Cardiology

❖ METHODS

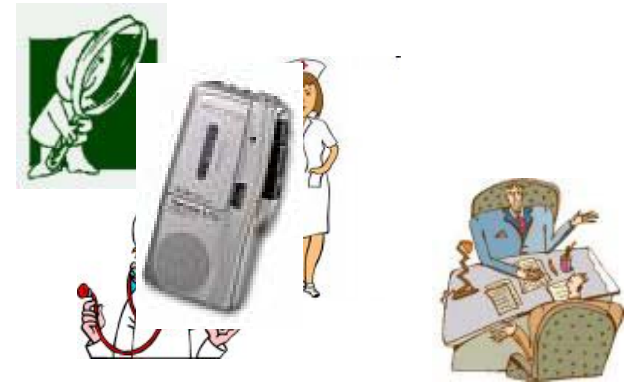
1. Activity analysis
 - Systematic observations (8/ward)
 - Semi-structured interviews



❖ METHODS

1. Activity analysis

- Systematic observations (8/ward)
- Semi-structured interviews



2. Communications' contents analysis

- Dialog Act Markup in Several Layers (Core & Allen, 1997)
- Contents:
 - The patient
 - The care-providing
 - The logistic

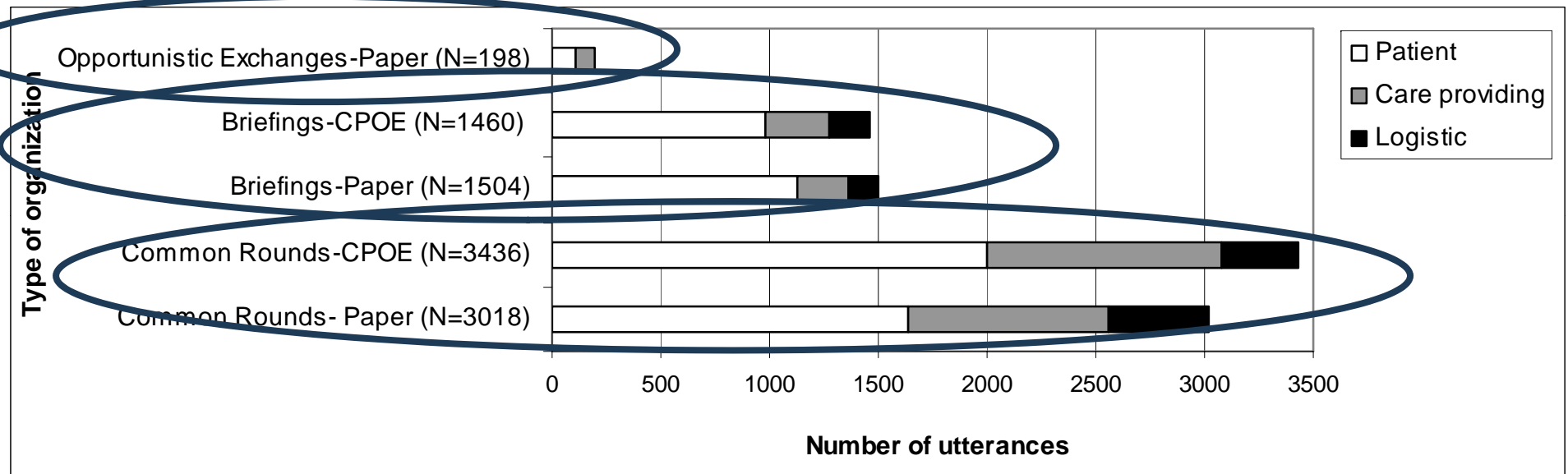


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Results

System	Communications' organization		
	Common Round	Briefing	Opportunistic exchanges
CPOE	126,25 (20,6)	17,25 (2,5)	
Paper-based	98,75 (12,2)	16,9 (3,3)	4,12 (4,2)

Mean durations of the doctors-nurses dialogs depending on the system and the communications' organization



Distribution of the number of utterances expressed by doctors and nurses depending on the system, the communications' organization and the contents



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Conclusion

- Relevance of the organizational variable?
 - organizational variable could be interpreted as a confounding factor
 - With these new insights, we can control the negative impact of CPOE on the cooperative activities if we pay attention to this organizational variable
- Generalization?
 - Cognitive descriptors rather than organizational



Thank you
Questions?