

# CHARACTERISTICS OF WORK INTERRUPTIONS DURING MEDICATION ADMINISTRATION

## PURPOSE

To document characteristics of nurses' work interruptions (WIs) during medication administration.

## MATERIAL AND METHODS

A descriptive observational study design was used along with a sample of 110 medication administration rounds.

Data were collected on 11 medical unit using a unit dose distribution system during February 2016.

Data collection on WIs relied on direct structured observation.

The following WI characteristics were recorded : source, secondary task, location, management strategies, and duration.

## RESULTS

**79 WIs** were observed over **25 hours 22 minutes** of medication administration and preparation time (**3.16 WI/hr**).

### PROCESS (Figure 1)

#### WIs occurred :

- **during the preparation phase (n= 45 ; 56%),**
- **during administration phase (n= 34 ; 43%).**

### SOURCE (Figure 2)

#### During the preparation phase,

Nurse colleagues (n= 22; 27 %), followed by phone (n= 18; 22.8%) were the most frequent source of WIs.

#### During the administration phase,

The most frequent sources of WIs were : self-initiation (n= 14 ; 17.7 %), patients (n= 20; 25.3 %).

### SECONDARY TASK (Figure 3)

Nurses were interrupted during the **preparation phase** mostly :

- **to solve system failures (missing medication or equipment) (n= 19 ; 24 %)**
- **for care coordination (n= 15; 19%).**

The most frequent secondary task undertaken during the **administration phase** was **direct patient care (n= 45; 56.9 %).**

### DURATION (Figure 4)

WIs lasted **2 min 52 s** on average, and were mostly handled immediately (n= 75; 94.9%).

### LOCATION (Figure 5)

The most frequent location was the **hallway (n=43; 55%), patient room (n=43; 44%)** and **medication room (n=1; 0,01%).**

FIGURE 1 : PROCESS

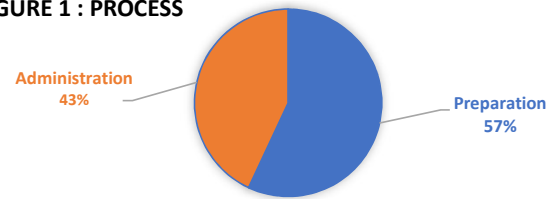


FIGURE 2 : SOURCES

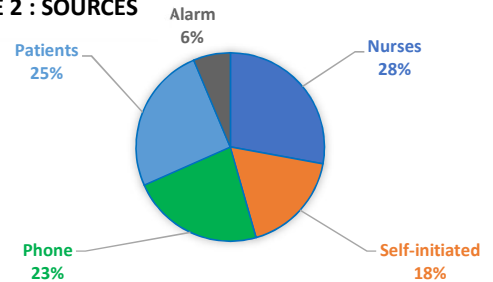


FIGURE 3 : SECONDARY TASK

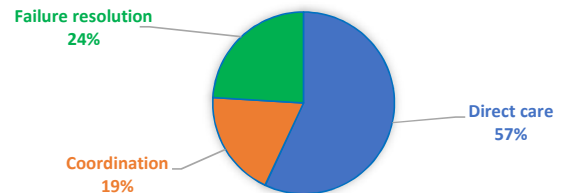


FIGURE 4 : DURATION

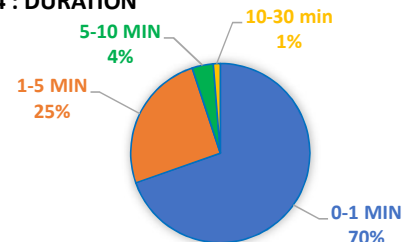
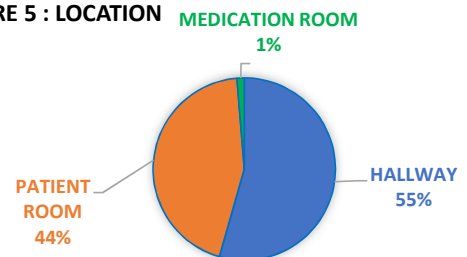


FIGURE 5 : LOCATION



## CONCLUSION

The process of medication administration is not protected against WIs, which poses significant risks.

Interventions to reduce WIs during the medication administration process should target **nurses and system failures** to maximize medication administration safety :

- **developping « the management of processes, activities support tools, signalization of interruption-free areas as safety zone, and continuous education of the staff to qualify both those being interrupted and those who are doing the interrupting,**
- **controlling interruptions, and considering the priorities and times with a greater risk of harming the work process and patient safety an area exclusively dedicated to prepare medications;**
- **promoving use by the nurse responsible for administering medications of a yellow vest with the following words on it "Please, do not interrupt, I am administering medications"; and the use of educational strategies.**

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