

# Prevalence & type of potentially teratogenic medications prescribed to hospitalized pregnant women in Belgium

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## Background and Objectives



Hospitalized pregnant women may use potentially teratogenic medications, although **epidemiologic data** on this topic in Belgium **are generally lacking**.



This study examined the **frequency and type of potentially teratogenic medications prescribed to pregnant women hospitalized** in our University Hospitals Leuven in Belgium.

## Methods



This **retrospective, descriptive** study analyzed electronic health records (EHRs) of pregnant women hospitalized in UZ Leuven between 1/1/2021 and 31/12/2023. Only EHR documented pregnancies were included.



A pragmatic list of potentially teratogenic medications was compiled using evidence-based teratology information ([www.lareb.nl](http://www.lareb.nl)), and categorized into two groups, as either **contraindicated** during (parts of) pregnancy (**category 1**) or as **carrying** potential fetal **risks** requiring case-by-case assessment (**category 2**).

## Conclusions



Nearly all hospitalized pregnant women received medication, of which **one in four** were **exposed to potentially teratogenic medications**, more often during non-pregnancy related admissions.



The findings support the **potential value of a pregnancy-related, pharmacist-led surveillance system**. However, **documentation of pregnancy status** in hospital records, particularly in non-obstetric wards, remains insufficient and **should be prioritized** to maximize the sensitivity and effectiveness of such a pharmacist-led surveillance system in the hospital setting.

## Results

**Cohort:** N=155 pregnancies  
Median maternal age: 31 years (IQR:8)  
Median hospital stay: 5 days (IQR:5)  
Delivery during hospitalization: 11.0%



**Prenatal medication use during hospitalization**  
1,058 medications used during hospitalization  
Mean of 6.8 medications per patient  
Two women (1.3%) received no medication

### Most used ATC level 1 categories

Alimentary tract and metabolism: 34.5%  
Nervous system: 15.2%  
Blood and blood-forming organs: 14.0%

### Most used ATC level 2 categories

Analgesics: 12.3%  
Drugs for acid-related disorders: 11.7%  
Drugs for functional gastrointestinal disorders: 10.0%  
Systemic antibiotics: 9.1%

### Most used medications ATC level 5

Paracetamol: 61.9%  
Metoclopramide: 57.4%  
Pantoprazole: 51.0%  
Atosiban: 38.1%  
Cefazolin: 34.2%

### Timing of hospital admissions

First trimester: 21.3%  
Second trimester: 47.1%  
Third trimester: 31.6%

### Main reasons for hospital admission

Hyperemesis gravidum: 17.4%  
Fetal open spina bifida repair: 11.6%  
Laser therapy for twin-to-twin transfusion syndrome: 11.0%  
Preterm premature rupture of membranes: 6.5%  
Prenatal surgery for congenital diaphragmatic hernia: 6.5%

**Admission unrelated to obstetric conditions:** 10.3%

	Prevalence (%)
<b>Potentially teratogenic medications</b>	7.3% (77/1058)
<b>Prevalence among all 155 pregnancies</b>	27.1%
Most used potentially teratogenic medications	
• Analgesics	44.2%
• Anti-inflammatory & antirheumatic products	39.0%
Indomethacin	18.7%
Tramadol	18.1%
Sufentanil	7.7%
Timing of exposure	
• Second trimester	85.7%
Teratogenic category	
• Category 1: NSAIDs	39.0%
• Category 2: Opioids & benzodiazepine	61.0%

➡ Potentially teratogenic medications were used twice as often during non-pregnancy vs. pregnancy-related admissions (12.7% vs. 6.8%)

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