4CPS-207

Comparative Study of Adherence Rates to Computerized Injectable Antibiotic Protocols

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Introduction

The establishment of protocols for the prescription of injectable antibiotics (IA) is a crucial component of medication safety. **Computerized antibiotic protocols** (CAP) are available in our institution as a prescribing support tool.

Objective

The objective of this study is to **evaluate the current** and **compare it** with previous data. **adherence rate to CAP.**

Methodology

Retrospective descriptive study in 2022 — *Comparative study in 2024*

27/07/2022 - 10/08/2022 → **02/11/2022 - 05/01/2023** → **12/2022 - 01/2023** → **01/07/2024 - 01/08/2024**

First evaluation

❑ **Scope :**
All prescriptions for injectable antibiotics made on **Cristal-Link®**

❑ **Selection of the reference framework :**
Local Computerized antibiotic protocols (CAP)

❑ **Data collection grid :**
8 criteria regarding the preparation and administration of IA

Actions for improvement in certain targeted departments with the following criteria

≥ 5 injectable antibiotics **prescribed over a 2-week** period
+
Non-compliance rate of the department's prescriptions **≥ 50%** (for at least one of the criteria in the data collection grid)
+
Cristal-Link® user department until January **2023** inclusive

❑ Intensive **training** on CAP
❑ **Questionnaire** for prescribers
❑ **Flyer display**

Simulation session for the preparation of antibiotics with nurses (Augmentin® and Tazocillin®) + Questionnaire for nurses

Second evaluation

❑ **Scope :**
All prescriptions for injectable antibiotics made on **Easily®**

❑ **= Selection of the reference framework**

❑ **= Data collection grid**

❑ **Identify the issues related to the use of these protocols**

Results

1 First evaluation (27/07/2022 - 10/08/2022)

Global description	Number
Number of injectable antibiotics prescribed	217
Number of departments	20
Number of prescriptions with CAP	108 (49.8 %)
Number of prescriptions without CAP	109 (50.2 %)

4 targeted departments
(Low prescription rate without CAP)
➔ 47 antibiotic prescriptions
• 11 prescriptions **with CAP (23.4%)**
• 36 prescriptions **without CAP (76,6%)**

Second evaluation (01/07/2024 - 01/08/2024)

Global description	Number
Number of injectable antibiotics prescribed	200
Number of departments	20
Number of prescriptions with CAP	126 (63 %)
Number of prescriptions without CAP	74 (37 %)

Significant improvement in the antibiotic prescription rate **with CAP**
(63 % vs 50,2 %; p = 0.0085)

2 Comparison of the two study periods on the same 4 targeted services (2022 and 2024)

2022		2024
4 services account for **33%** of prescriptions **without CAP**	Test de Student : 33% vs 19% ***p = 0.0298***	4 services account for **19%** of prescriptions **without CAP**
Adherence rate 24% (12/50)	Test de Student : 24% vs 68% ***p = 1.33E-5***	**Adherence rate 68%** (28/41)
Adherence rate 66% (23/35)		**Adherence rate 100%** (10/10)

The most prescribed antibiotic during both study periods is **ceftriaxone**

The antibiotic with the greatest increase is **amoxicillin/clavulanic acid**

3

In contrast, **2 services** prescribe **without CAP** in **73%** (11/15) **and 58%** (14/24) of cases in 2024, and these services were **not studied** in 2022.

Ability **to identify issues** with the use of these protocols
→ Single-path infusion not allowing prolonged administration via PI-ATB.

Creation of protocols tailored to the needs of the services.

Discussion

ADVANTAGES

✓ **ACC : A fast, effective, and reproducible method**
- → **Simple** extraction and analysis method
- → **Limited** number of criteria
- → **Independence** of operators

✓ **Absence of selection bias**
- → **Flexible and unpredictable** extraction period by the prescribers

LIMITS

✗ **Some services not exploitable - Low sample size**
- → Some services **prescribe outside** the software (e.g., intensive care, emergency)

✗ **Study conducted on different prescription software (Cristal® and Easily®)**
- → The services studied **are different**

Conclusion

EPP = An easy, fast and reproductive evaluation tool

CAP allows to :
- ❖**Improve the quality** of antibiotic prescriptions by prescribers
- ❖Ensure **better safety** in the **preparation and administration** of antibiotics by nurses

➔ The 2024 EPP also allowed for the identification and **creation of protocols** tailored to the specific needs of services.