# RETROSPECTIVE EVALUATION OF THE DOCUMENTATION OF ALLERGIC AND IDIOSYNCRATIC ADVERSE DRUG REACTIONS

IN THE CONTEXT OF THE REQUIREMENTS CONCERNING A CLINICAL DECISION SUPPORT SYSTEM

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## BACKGROUND AND IMPORTANCE

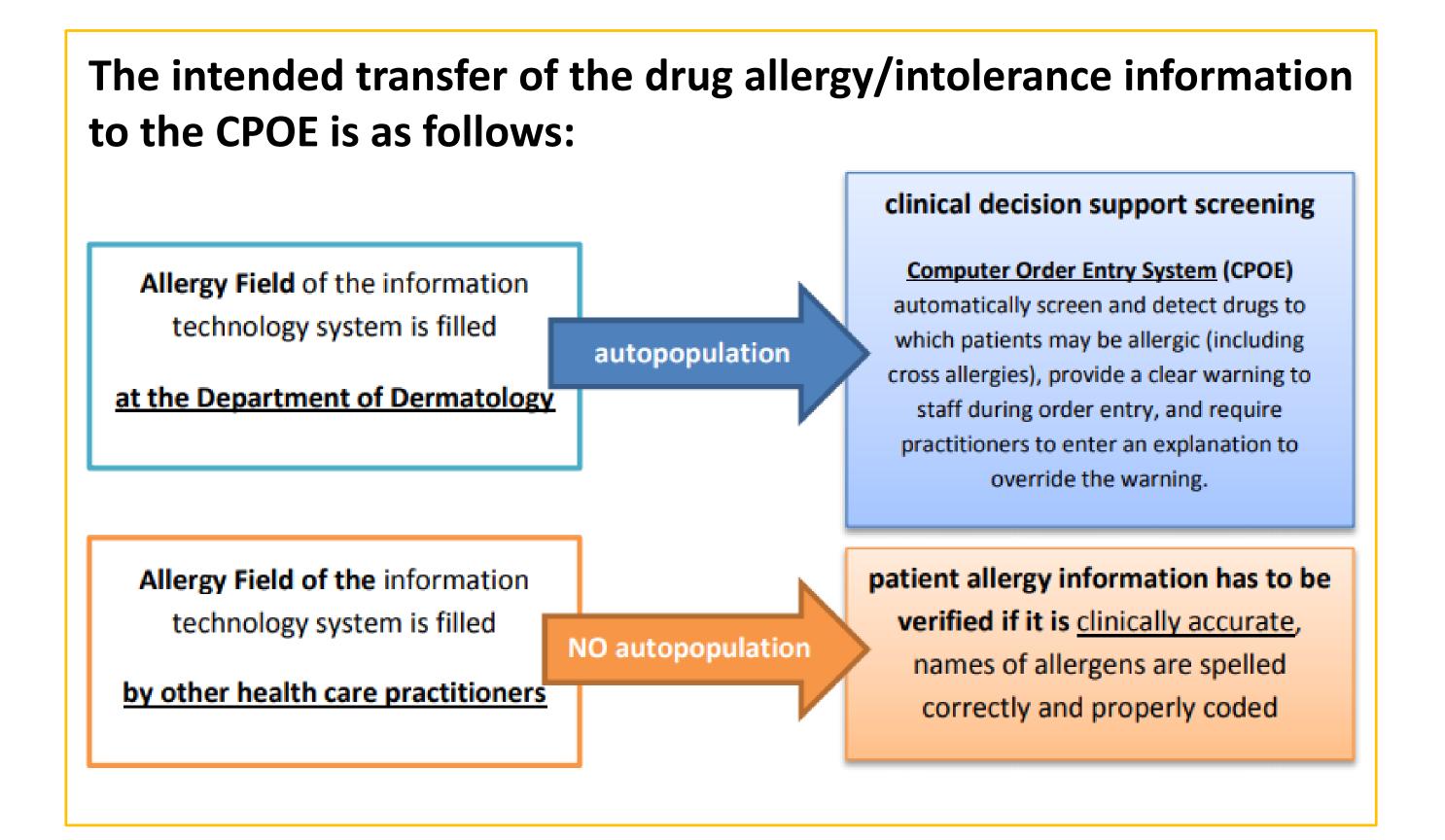
- Allergies should be visible on all patient-specific pages or screens of the Electronic Medical Record (EMR) in the Hospital Information System (HIS).
- The Computerized Physician Order Entry (CPOE) system must have a tiered severity rating for allergies based on the patient's reaction to the drug.
- Limiting alert fatigue from drug intolerances that are not true allergies and providing clear warnings to staff during medication order entry is crucial for a Clinical Decision Support System (CDSS).

## AIM AND OBJECTIVES

- This study analyzed the current practice of documentation of information associated with allergic or idiosyncratic Adverse Drug Reactions (ADRs) in patients admitted to the Department of Dermatology in order to improve documentation of allergy information and establish a Clinical Decision Support System (CDSS).
- The secondary objective was to examine the adherence of follow-up appointments for verification of potential ADRs in order to improve organizational procedures.

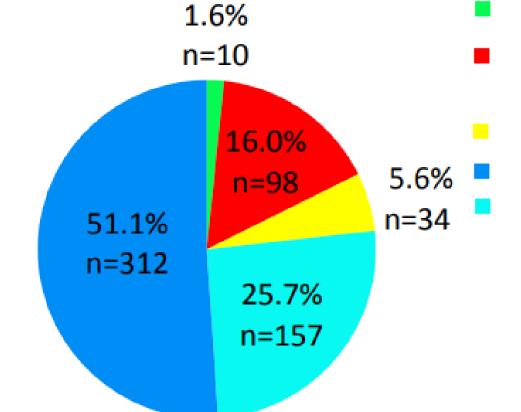
#### MATERIAL AND METHODS

- Medical reports and entries from patients admitted to the Department of Dermatology over four years due to an ADR were retrospectively reviewed. A total of 611 were considered eligible.
- A subpopulation of 190 ADR-related cases was reviewed to examine adherence to follow-up appointments.



## RESULTS

• In 23.2% (n=142) the documentation was incomplete: in 1,6% (n=10) the tested alternative drug was not entered, in 5,6% (n=34) the verified allergy/intolerance was not documented and in16% (n=98) both were missing (Figure 1):

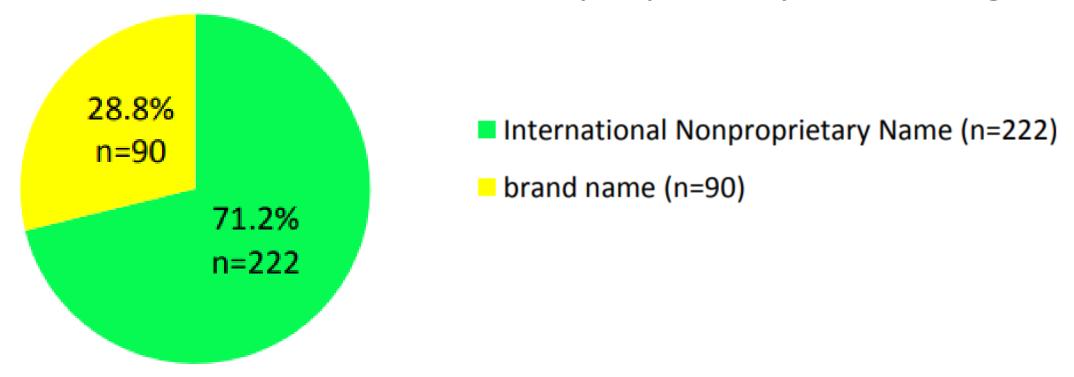


verified allergy/intolerance and tested alternative drug was not entered (n=98) allergy/intolerance was not entered (n=34) allergy/intolerance information was entered (n=312) allergy/intolerance information could not or did not need to be entered (n=157): follow-up appointment was not kept, allergy has not been confirmed or has not been verified yet or was not verified (because of age, Alzheimer's disease, multimorbidity, external

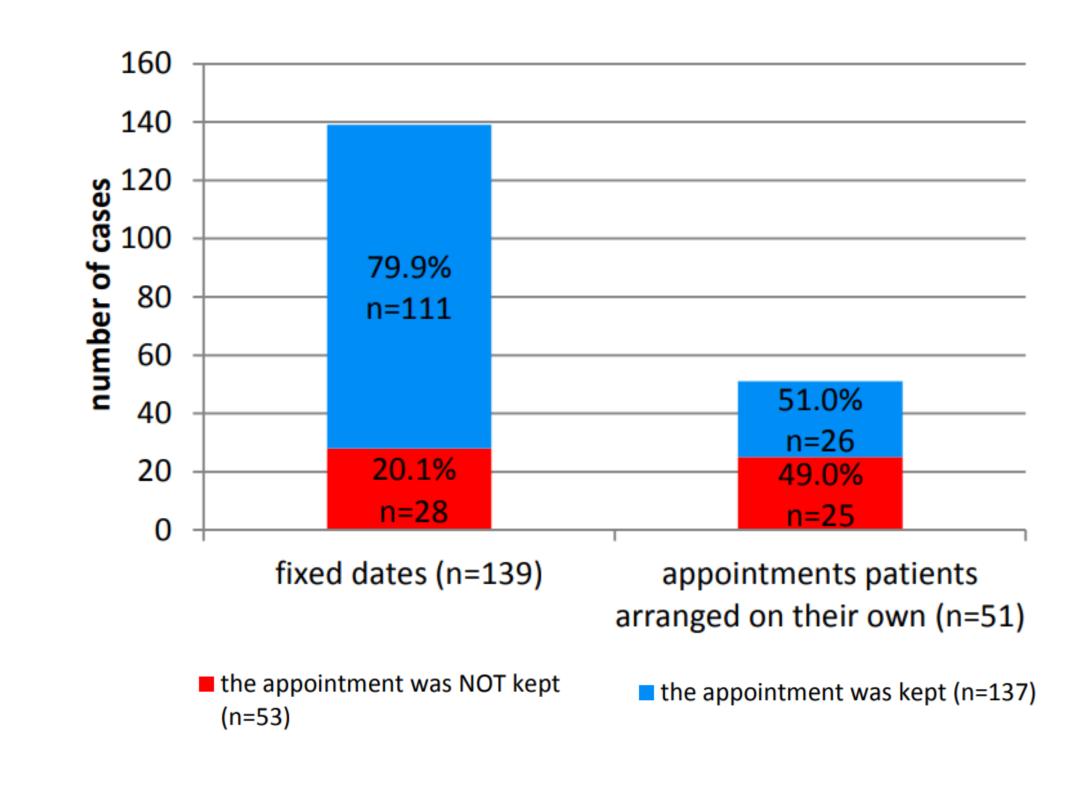
tested alternative drug was not entered (n=10)

 In 28.8% (n=90), when patients got a permanent allergy pass corresponding entry was made with the brand name and not with the International Nonproprietary Name (Figure 2):

clarification).

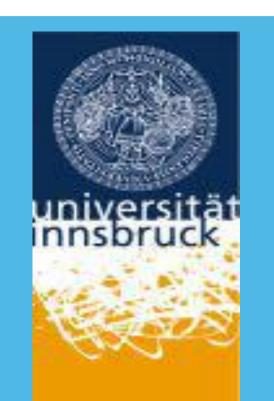


• In 53 (27.9%) of 190 cases, patients with follow-up appointment recommendations did not keep their appointment at the Department of Dermatology's outpatient clinic to verify the concern. If the patients had to arrange the appointment on their own (n=51), 49.0% (n=25) did not keep their appointment. Only patients with follow-up in the Allergy Unit of the Department were documented completely in the drug allergy/intolerance field (Figure 3):



#### **CONCLUSION AND RELEVANCE**

- Any patient allergy information entered into the information technology system must be accurate to allow for CDSS- Screening.
   Both potential and verified ADR should be documented, but they must be clearly distinguishable.
  - > Fixed appointments improve the adherence of follow-up appointments for verification of potential ADRs.



#### Contact:

#### References:

- 1. 2011 ISMP Medication Safety Self Assessment for Hospitals, Institut for Safe Medication Practices (ismp.org)
- 2. Legat L et al. Clinical Decision Support Systems for Drug Allergy Checking: Systematic Review, J Med Internet Res 2018; Sep 7;20(9)