

THE UTILITY OF EARLY PHARMACEUTICAL VALIDATION OF SELECTED HIGH-RISK DRUGS IN A HOSPITAL EMERGENCY DEPARTMENT

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INTRODUCTION

High-risk medication and the associated errors represent a potential source of adverse effects and readmissions for patients.

AIM AND OBJECTIVES

To analyze the utility of early pharmaceutical validation of direct oral anticoagulants (**DOACs**) and long-acting insulins (**LAIs**) in a Hospital Emergency Department.

MATERIALS AND METHODS

This **retrospective study** was conducted between May 15, 2023, and September 28, 2023. Two groups of high-risk medications were selected: **DOACs** (apixaban/dabigatran/edoxaban/rivaroxaban) and **LAIs** (degludec/detemir/toujeo (glargine)) due to their high-risk nature, requiring validation by a pharmacist for the early in the morning dispensation. All locations, appropriateness, and, in cases of inappropriateness, both the underlying reasons and their acceptance were recorded. Medication reviewed on previous days were excluded to prevent duplication. The **primary variable was the degree of total non-appropriateness, both overall and by therapeutic group**. Secondary variables included the reasons for non-appropriateness, the degree of acceptance of pharmaceutical recommendations, and, in cases of non-acceptance, the occurrence of adverse drug events (ADEs) for each therapeutic group.

May 15, 2023 - Sept 28, 2023

DOAC

- Apixaban
- Rivaroxaban
- Edoxaban
- Dabigatran

LAI

- Insuline degludec
- Insuline detemir
- Insuline glargine Toujeo

Degree of total non-appropriateness: Overall and by therapeutic group

RESULTS

338 POTENCIAL HIGH RISK DRUGS

- 193 DOAC (57.1%) & 145 LAI (42.9%)
- 13% Non-appropriate DOAC (25/193)
- 21.4% Non-appropriate LAI (31/145)

DOAC 13%

- 13/25 Temporary contraindication (52%)
- 9/25 Inappropriate dosage (36%)
- 3/25 Medication reconciliation (12%)

LAI 21.4%

- 18/31 Inappropriate dosage (58.1%)
- 10/31 Contraindication (32.3%)
- 3/31 Inappropriate presentation (9.7%)

INTERVENTION ACCEPTANCE

- Overall acceptance: 86% (49/57)
- DOAC acceptance: 100% (13/13)
- LAI acceptance: 88% (22/25)
- Total non-appropriateness: 16.6% (56/338)
- No adverse events (0%)

CONCLUSIONS

Early and proactive validation by the pharmacist in the Emergency Department of selected high-risk drugs appears to **optimize pharmacotherapy and reduce the occurrence of adverse events** associated with these medications.

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