

## Enhancing Prescription Practices for Syringe Drivers Among Junior Doctors in Oncology: A Quality Improvement Initiative

Prabhancha Prabhakumar Nair\*, Gautham Vinayak Gopikuttan Nair, Dalia Albaik, Laura Dunnachie, Altaf Ali

Hull University Teaching Hospitals NHS Trust, United Kingdom

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\*Corresponding author: Prabhancha Prabhakumar Nair, Hull University Teaching Hospitals NHS Trust, United Kingdom

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### ABSTRACT

#### AIM

The primary aim of this quality improvement initiative is to evaluate and enhance prescription practices for syringe drivers among junior doctors in the oncology department.

**Keywords:** Syringe drivers; Oncology; Pharmacist

### Introduction

Accurate prescription practices for syringe drivers are essential in oncology care, where errors pose significant risks to patient safety<sup>1</sup>. An initial assessment identified recurring prescription errors among junior doctors in the oncology department, particularly regarding syringe drivers for patient discharge. These errors not only increase the workload for clinical pharmacists but also introduce potential safety risks. To address these challenges, this quality improvement project was designed to evaluate and improve prescription practices for syringe drivers<sup>2</sup>.

### Methods

A questionnaire assessing knowledge, prescription practices and areas of difficulty related to syringe drivers was administered to 25 doctors, with 23 completing the survey. Following the initial assessment, all resident doctors received comprehensive

training that included live demonstration sessions, one-on-one guidance and resources to foster confident and accurate prescribing practices.

### Initial Results

**Understanding of Syringe Driver Purpose:** 100%

Formal Training Received: 13.64%

**ePMA System Uncertainty:** 20%

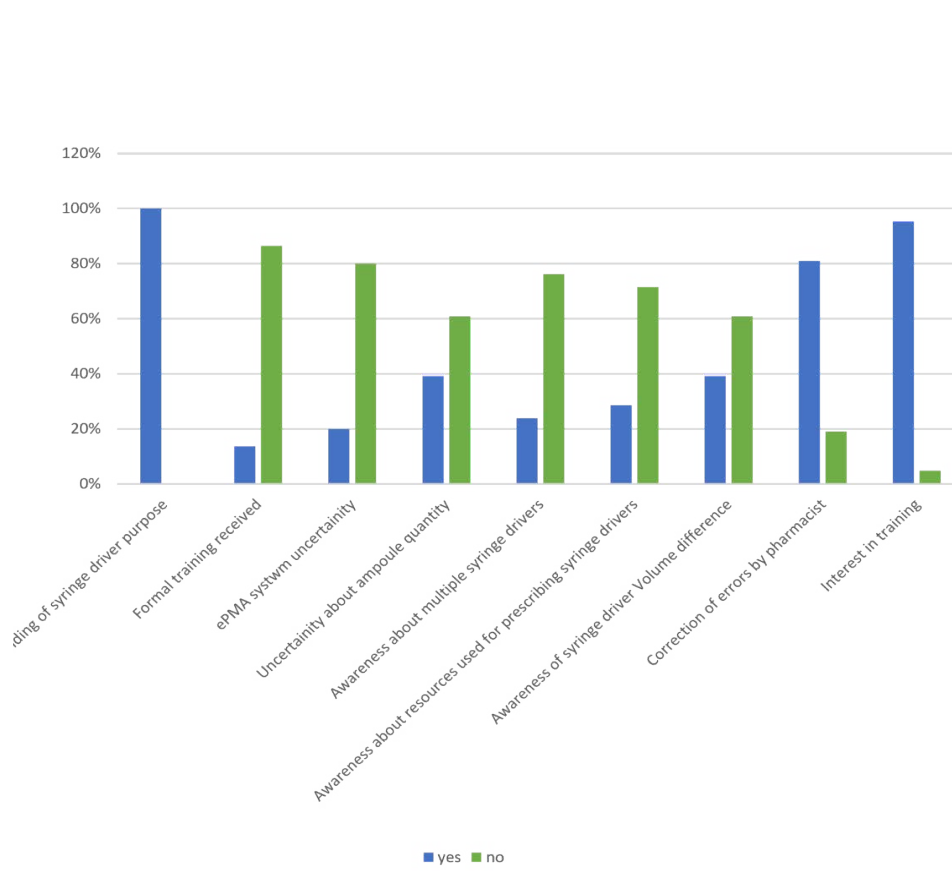
Awareness of Syringe Size Differences: 60.87%

**Uncertainty About Ampoule Quantities:** 34.76%

Belief About Single Syringe Driver: 23.81%

**Correction by Pharmacists:** 80.95%

**Interest in Training:** 95.24%



**Interventions and Recommendations**

**Comprehensive Training Program:** A structured training curriculum was developed covering key concepts in syringe driver prescriptions, dosage calculations, ePMA usage, and best practices.

**Live Demonstration Classes:** Pharmacist-led, hands-on sessions were introduced to provide doctors with practical experience.

**Guideline Posters:** Syringe driver discharge guidelines posters were created and displayed in every ward.

**Re-Audit Results**

After implementing these interventions, a re-audit demonstrated remarkable improvements:

- Understanding of Syringe Driver Purpose:** 100%
- Formal Training Received:** 100%
- Understanding of Syringe Driver Prescription in ePMA:** 100%
- Understanding of Ampoule Quantities:** 100%
- Awareness of Multiple Syringe Drivers:** 100%
- Awareness of Resources for Prescribing Syringe Drivers:** 100%

**Awareness of Syringe Driver Volume Differences:** 100%

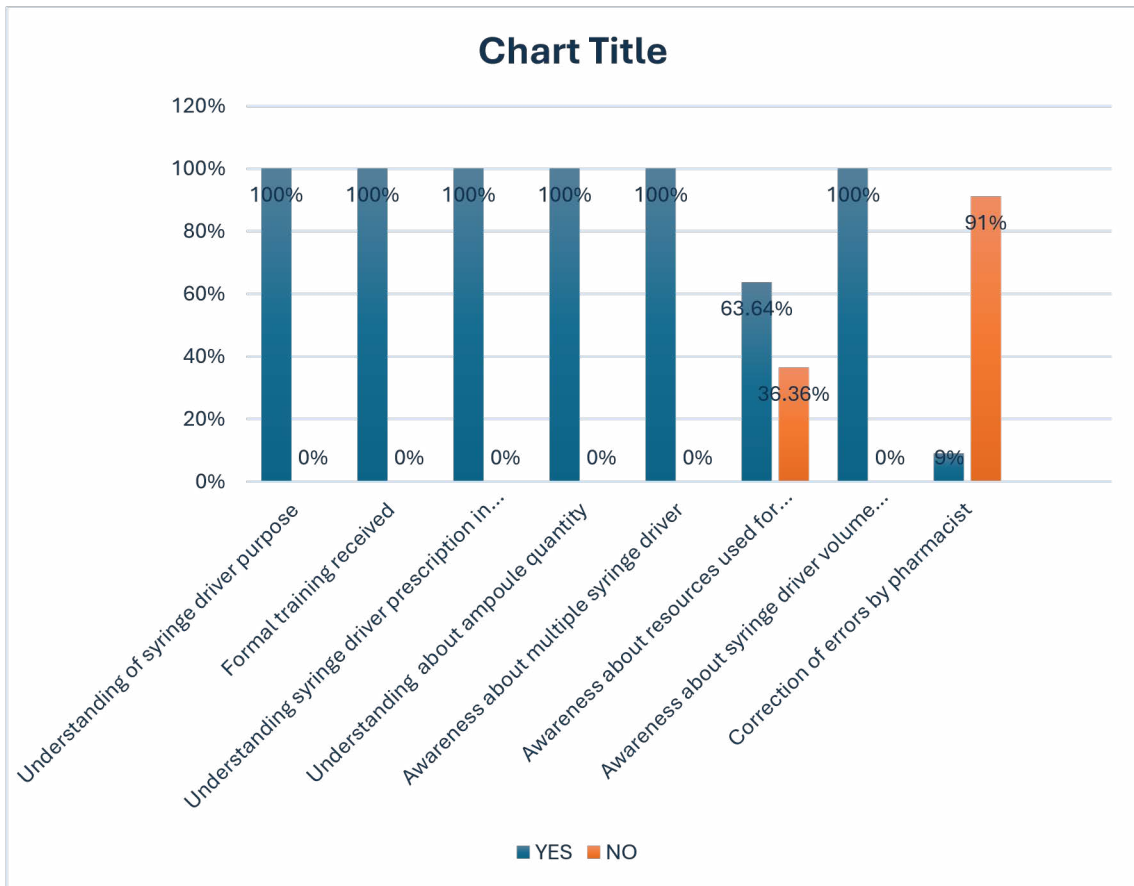
**Correction of Errors by Pharmacists:** Reduced to 9%

**Discussion**

The re-audit results show a significant improvement in knowledge and prescription practices among junior doctors, indicating that the targeted interventions effectively addressed prior deficiencies. The reduction in pharmacist corrections further highlights the impact of the initiative on improving prescription accuracy and enhancing patient safety.

**Conclusion**

This project underscores critical areas for improvement in syringe driver prescription practices among junior doctors. By implementing targeted training, live demonstration sessions and visual aids, we have effectively minimized errors and raised awareness of best practices. A positive departmental change resulting from this project is the new policy of providing syringe driver demonstration classes to all incoming doctors during their induction phase, a sustainable measure that promises to maintain high standards in prescription practices and ensure ongoing patient safety.



**References**

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