

# NURSES PERCEIVED PROBLEMS WITH "HIGH-ALERT DRUGS": RESULTS FROM THE EUROPEAN INSTITUTE OF ONCOLOGY

Poster n. GRP051

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## Objectives

The increasing attention paid by patients to maintaining their own health and quality of life can certainly be linked to a significant increase in a knowledge of their rights. AIFA (Agenzia Italiana del Farmaco) has published a series of documents that aim to provide recommendations to support the management of drug therapy, in order to reduce the risk of accidental errors.

At the European Institute of Oncology (IEO) we decided to participate, in a concrete way, in the appreciation of the processes of prescribing, preparation and administration of high-alert drugs, starting with an assessment regarded as central: the perception of the operator, who is at the forefront of having to deal with drugs in hospital department, with the aim of better understanding the specific problems within our own environment.

## Methods

We defined a test (Panel 1) of 5 questions, which were designed to investigate nurses' knowledge and training regarding the handling of high-alert drugs. Questions evaluated what nurses consider to be high-risk medication, investigating drug preparation sites, and what might represent hypothetical solutions to the definition of a common management procedure.

The first question asked the meaning of "drug high risk", focusing on dangers linked to the effects on humans and the possibility to confuse drugs with similar names (sound-alike) or similar packaging (look-alike), known like LASA.

Questions 2 and 3 asked nurses to specify the place where they prepare high-alert drug therapy and, more specifically, if there were dedicated places where they could do it. Question 4 enters into the merit of the types of drugs considered high-risk between adrenergic agonists (adrenaline, noradrenaline and isoprenaline), concentrated electrolytes (potassium chloride and sodium chloride), insulin, lidocaine and heparin.

Finally, with question number 5, we asked nurses to suggest possible management measures to reduce the errors.

**IEO Istituto Europeo di Oncologia**

**Questions about high-risk drugs**

Hospital department: \_\_\_\_\_

1) What do you mean for High-Risk drug?

A Drugs with similar packaging (look-alike)

B Drugs with similar name or sound

C Dangerous collateral effects for man

D Other \_\_\_\_\_

2) Where do you prepare a High-Risk drug?

A On cart of therapies

B In infirmary

C Other \_\_\_\_\_

3) Alone or with all the therapy?

A Alone

B With all the therapy

4) Do you think that we can defined particular management procedures to reduce errors?

A No

B Yes  
If yes, what? \_\_\_\_\_

5) According to your perception, order, (by assigning a number from 1 to 6), these drugs ordered, giving a degree of danger from more to less hazardous.

<input type="checkbox"/> Adrenaline, noradrenaline, isoprenaline	<input type="checkbox"/> Lidocaine
<input type="checkbox"/> KCl, NaCl	<input type="checkbox"/> Heparin
<input type="checkbox"/> Insulin	<input type="checkbox"/> Other _____

Panel 1

## Discussion

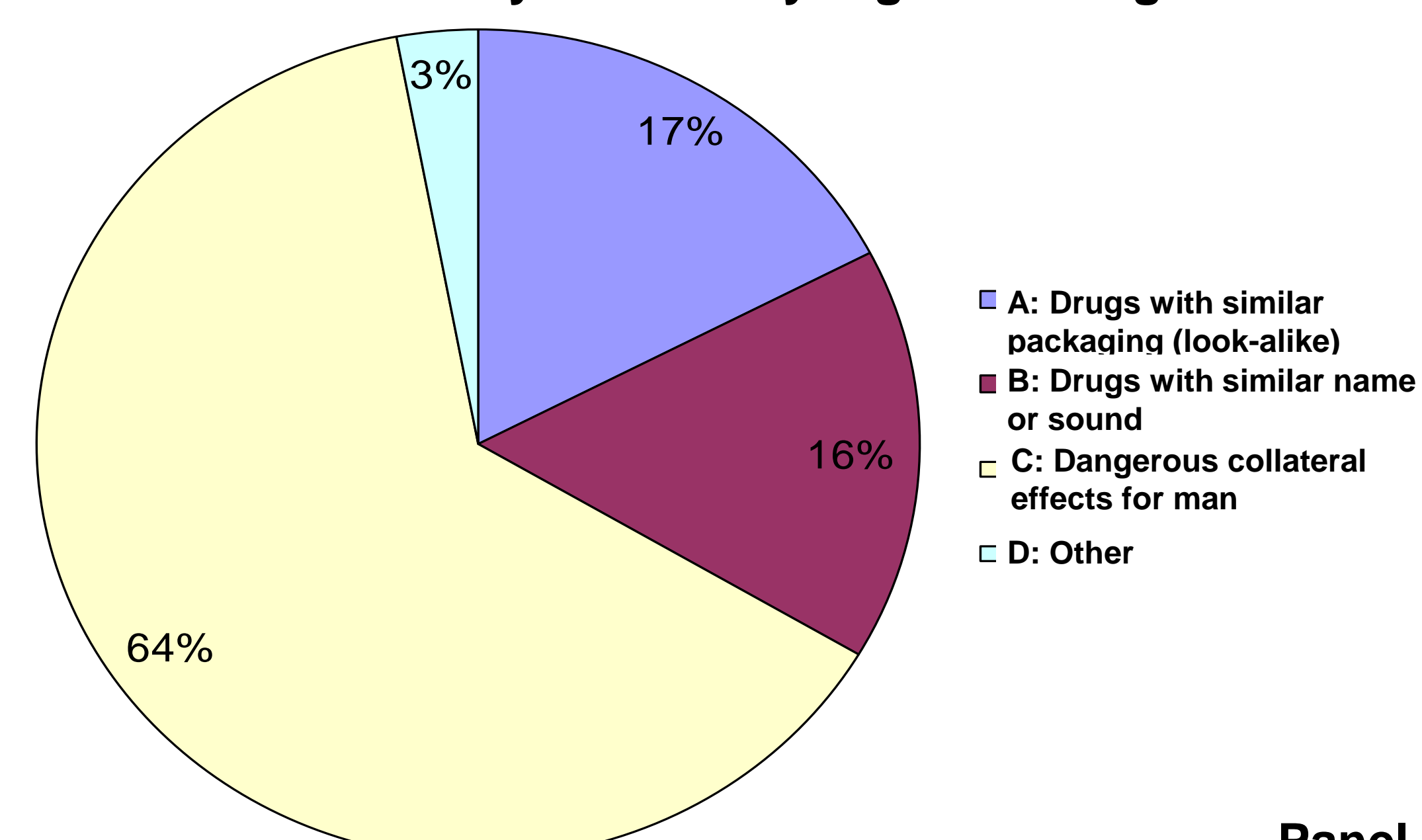
The results led to the Pharmacy Division in cooperation with the Division of Anaesthesia and Intensive Care, the Quality Service, the Medical Oncology Department and the Risk Manager, to establish a procedure for the management of high-risk medications, at first defining a list of drugs considered in IEO as high-risk.

The list includes adrenergic agents (adrenaline, isoprenaline, noradrenaline), concentrated electrolytes (concentrated sodium chloride, concentrated and concentrated potassium chloride), insulin, heparin, paralyzing agents, narcotics and antitumor agents.

For each of these sets we produced a card displaying the main information (category, active drug, dosage, dilution, compatibility, stability after opening, risks and precautions) in order to train operators and instruct them in proper management.

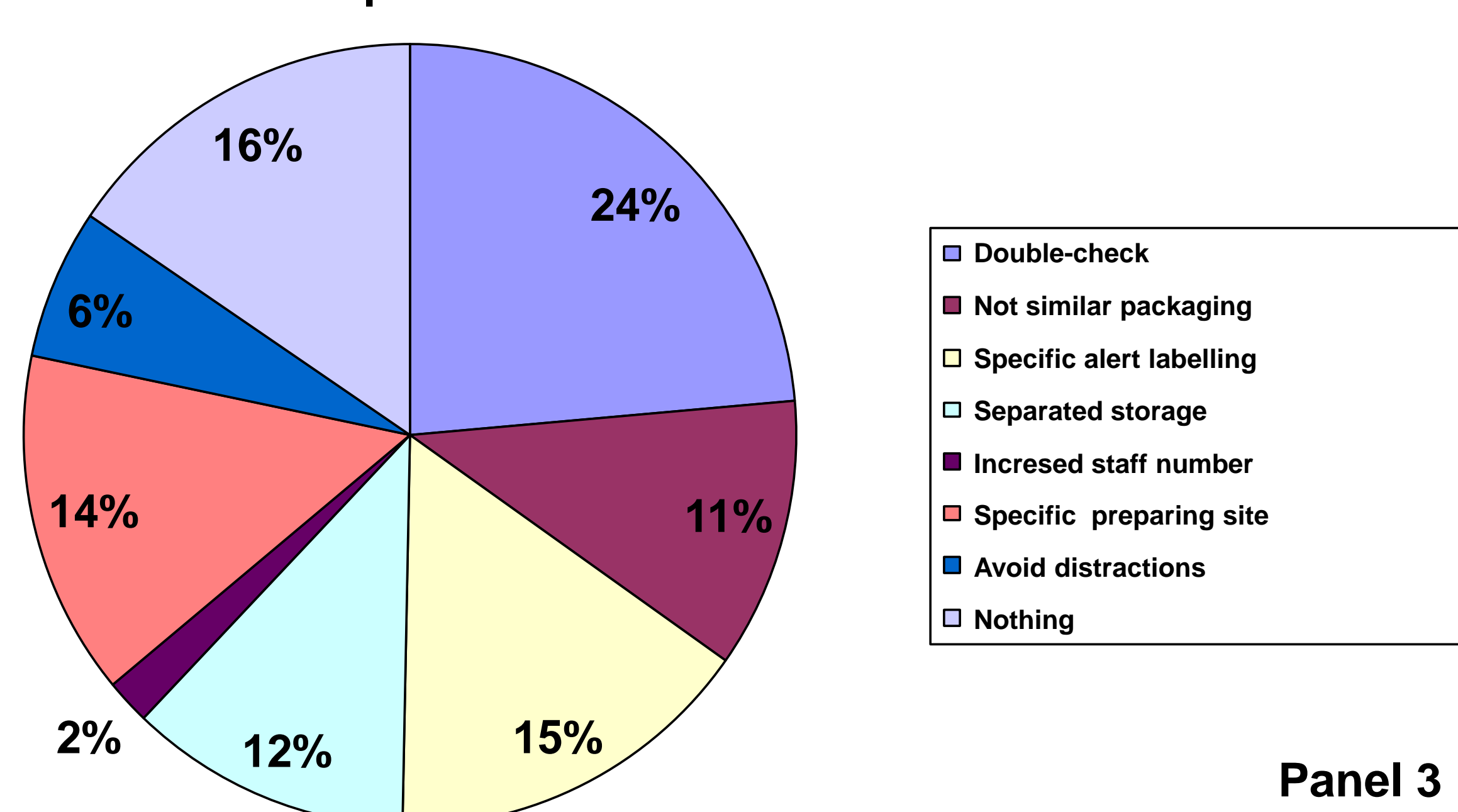
We also created a list of LASA drugs present in the Institute proposing alternative solutions, such as the purchase from different manufacturers and/or storage in separate locations.

## What do you mean by High-risk drug?



Panel 2

## Do you think that we can define particular management procedures to reduce errors?



Panel 3

## Results

216 questionnaires were sent to nurses of all hospital units (medical oncology, intensive care, surgery, etc.). Analyzing the results we deduced that the main issues, to which attention should be paid, are (see Panels 2 and 3):

- proper storage in separate places (12%);
- clear recognizability via alert signs (15%);
- procurement of materials with no similar packaging and of various pharmaceutical companies (11%);
- physician prescription clear and readable;
- the establishment of sites dedicated to preparation of therapies (14%), without distractions (6%);
- revision of workers shifts and of workloads (26%) in order to allow the implementation of double-checking of preparation and administration of drugs.

## Conclusions

With these assessments we defined a specific procedure which governs the management of IEO high-alert drugs in order to reduce the occurrence of medication errors, with an impact on the quality of offered service and patient quality of life.

