

MEDICATION ERRORS RELATING TO SIMILAR OR MISLEADING MANUFACTURER SPECIFIC DRUG PACKAGING AND LABELLING

M. JESKE¹, C. GEHMACHER², P. SALCHNER¹, M. ZEILER¹.

¹INNSBRUCK UNIVERSITY HOSPITAL, PHARMACY DEPARTMENT, INNSBRUCK, AUSTRIA.

²INSTITUTE OF PHARMACY UNIVERSITY OF INNSBRUCK, PHARMACOLOGY AND TOXICOLOGY, INNSBRUCK, AUSTRIA.

BACKGROUND AND IMPORTANCE

- Pharmaceutical packaging is often associated with medication errors. Especially the so-called "look-alikes" and "sound-alikes" are challenging. While some countries have already tackled this problem and introduced appropriate legislation, no initiatives have yet been taken in Austria.

AIM AND OBJECTIVES

- This study aimed to analyze the pharmaceutical packaging of the University Hospital pharmacy's product portfolio for similar or misleading manufacturer-specific drug packaging and labeling to determine whether there are security gaps in this regard.

MATERIAL AND METHODS

- The recommendations of the "Sound-alike - Look alike" (SaLa) working group founded by Swiss hospital pharmacists were used as criteria.
- Besides, the cases of near-misses reported in the Austrian Critical Incident Reporting System CIRSmedical.at were evaluated.

RESULTS

- A total of 1,139 secondary packaging and 1102 primary packaging for solid oral preparations, and 474 secondary packaging and 653 primary packagings for parenteral preparations were assessed.
- The evaluation of the manufacturer's implementation shows an inconsistent fulfillment of the recommendations of the working group SaLa. Especially the labeling and appearance of the primary packaging of parenteral products are one of the biggest existing problems.

parenteral products - use of colour for



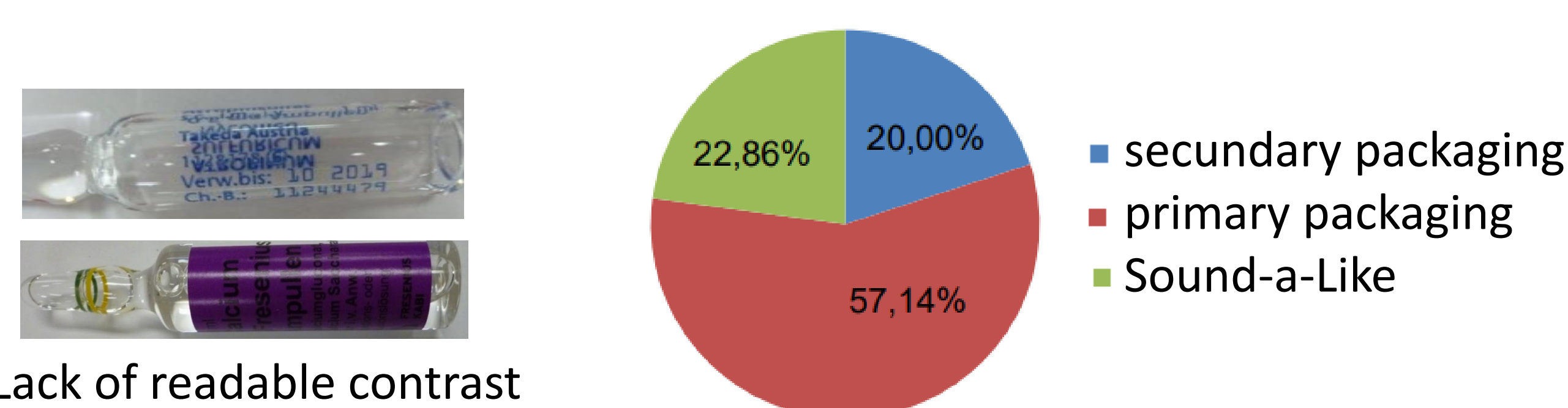
- Biggest problem areas of the primary packaging of parenterals:

primary packaging problem areas	%	comment - risk
No use of color to increase safety	76,4	Increasing the likelihood of confusion
Rotation necessary for reading	57,6	Label design not well thought out - Overlooking relevant information is likely
Lack of indication of the total amount of active substance	32,6	Calculation necessary - risk of error increases
Lack of indication of concentration per volume	30,3	Making dose calculation more difficult - risk of error increases
Lack of readable contrast	21	Wrong use of color, transparent labels - Overlooking relevant information is likely
Multiple concentration data	16,5	Incorrect dose calculation possible - risk of error increases
Lack of indication of the routes of administration	10	Lack of control option - incorrect application possible

RESULTS

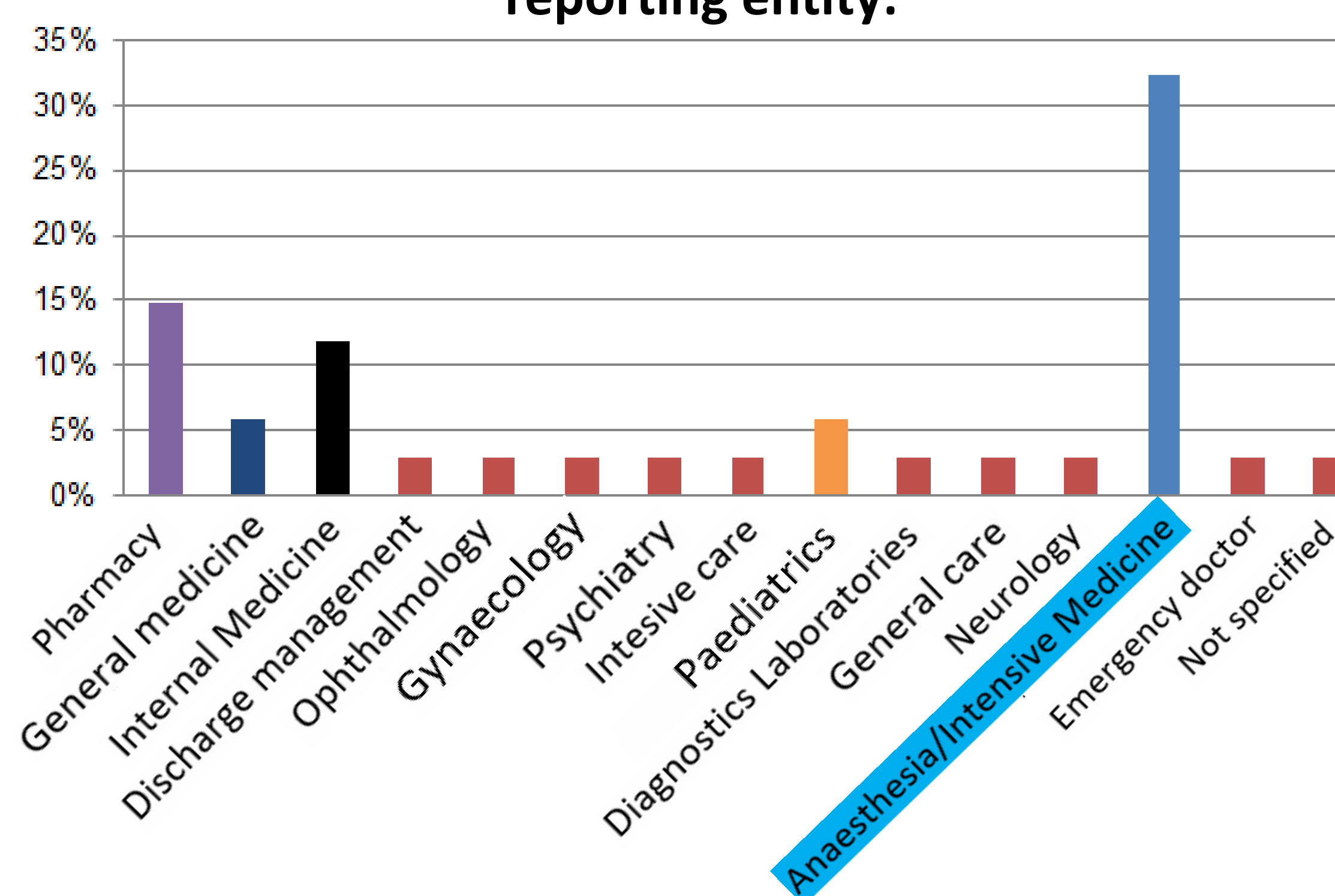
- Out of a total of 522 reports on CIRSmedical, 35 were relevant for the evaluation. CIRSmedical's data confirms the main problem with parenteral products' primary packaging and indicates an increased risk of medication errors caused by LASA's in the anesthesia and intensive care sector.

CIRSmedical.at - reported problems with drug packaging:



Lack of readable contrast

reporting entity:



- In any case, the university hospital's pharmacy's product portfolio must be regarded as a limitation of this work, as it only has a selected range of pharmaceuticals throughout Austria. A further limiting factor is CIRSmedical itself, as there is a general focus on errors, and there is no specialization for identifying medication errors.

CONCLUSION AND RELEVANCE

- Some companies' pharmaceutical packaging is very well thought out, while labeling on ampoules is hardly legible in others.
- The results show the existing security gaps in the design of drug packaging, though generalization that all pharmaceutical companies have insufficiently labeled and designed pharmaceutical packaging is not possible.
- Still, many pharmaceutical companies tend to prioritize marketing considerations when selecting the design of labels and packaging and ignore human factors.
- Professionals, legislation, and the pharmaceutical industry must be involved to reduce medication errors caused by misleading manufacturer-specific drug packaging and labeling.

Contact:

Mag. Pharm. Martina Jeske, MSc
Apotheke des A.ö. Landeskrankenhauses – Univ.-Kliniken Innsbruck
Tirol Kliniken GmbH – www.tirol-kliniken.at
martina.jeske@tirol-kliniken.at

References:

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- Look Alike Sound Alike - gemeinsame Arbeitsgruppe der Stiftung Patientensicherheit Schweiz (patientensicherheit.ch)