Cytotoxic Agents: Breaking to Manage Better!

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INTRODUCTION

- Increased **risk of accidental exposure to cytotoxic drugs** due to increased activity
- **Fast** and **efficient support** is essential

SIMULATION

= Teaching method that enables trainees to practice managing risky situations in a safe environment

OBJECTIVE

Design and implement a **simulation-based educational program** for **managing accidental spills of cytotoxic substances**

MATERIALS AND METHODS

1. **Preliminary analysis**: review of current practices, existing procedure, and available equipment
2. Design of a **simulation-based teaching model**, in accordance with good practices in healthcare simulation (French National Authority for Health, March 2024)
3. Planning **simulation sessions** for all exposed personnel
4. **Evaluation of training effectiveness**, based on **Kirkpatrick's model**
   Level 1 – Satisfaction: gather feedback from trained staff using a 7-point Likert scale questionnaire
   Level 2 – Skills acquisition: pre/post self-assessment questionnaire with 15 questions

RESULTS

1

- **Procedure** update
- **Standardization** of the **3 decontamination** kits in the pharmacy

2

Creation of 4 different scenarios:
- Breakage of a powder vial
- Breakage of a liquid vial
- Leakage from a bag
- Direct contact with the product

+ Observation grid with **27** criteria

3

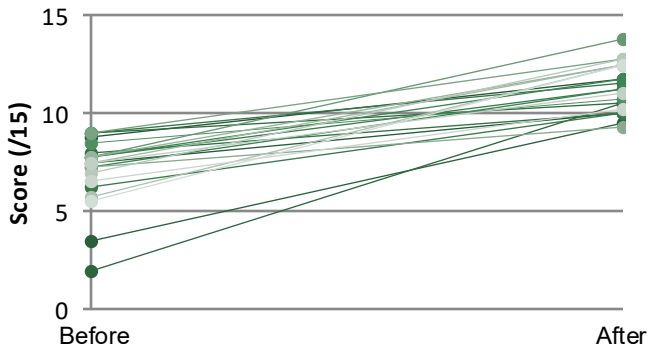
Typical session schedule (1 hour):
- Self-assessment questionnaire: 10 min
- Briefing: 10 min
- Role-play: 10 min
- Debriefing using the RAS method (Reaction, Analysis, Synthesis): 30 min

- **11 sessions** organized from August 28 to September 20, 2024
- **22 participants** (n=22): 15 pharmacy technicians, 3 storekeepers, 3 pharmacists, and 1 pharmacy resident

4

Satisfaction	**100%**
Confidence in the application of the procedure in the event of an incident	**86%**

All participants made progress after the training!



CONCLUSION / DISCUSSION

- **Improved management** of accidental spills of cytotoxic substances
- Simulation = **effective training method**

- Possibility of **extending the method to other risk situations** such as computer failures
- **BUT** requiring **additional resources**

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