

From centralized cytotoxic reconstitution unit (CCRU) to day-care unit (DCU), all involved with chemical contamination: spread simulation

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Background

2022 Failure mode, effects and criticality analysis → risks associated with chemical contamination, +++ lack of information among exposed staff

Materials and methods

1) Survey: perceptions of chemical contamination:

3 questions on exposure, 3 on information, 4 on protection, 1 picture-game : "where is the contamination ?", 1 open field "ideas"

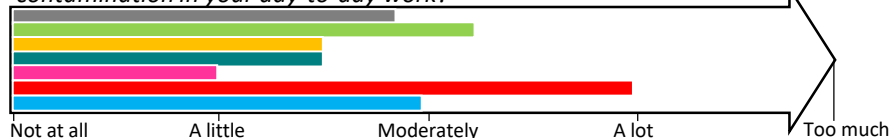
Excerpt from the survey:

Total n = 19:
Mean value (total)

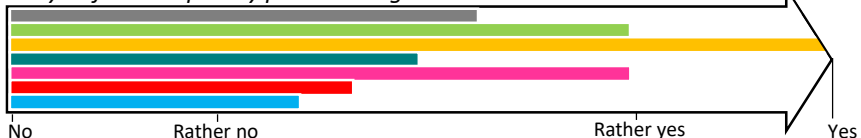
4 Pharmacy technicians
3 Pharmacy suppliers
2 Pharmacists

2 Coordinations nurses
3 Nurses
5 Nursing assistants

How intensely do you think you are exposed to the risk of chemical contamination in your day-to-day work?



Do you feel adequately protected against this risk?



Would you like more information/training on this subject?



Objectives

1. Evaluation of staff perceptions of chemical contamination, from the CCRU to the DCU
2. Simulation game on the diffusion of external chemical contamination of vials and preparations

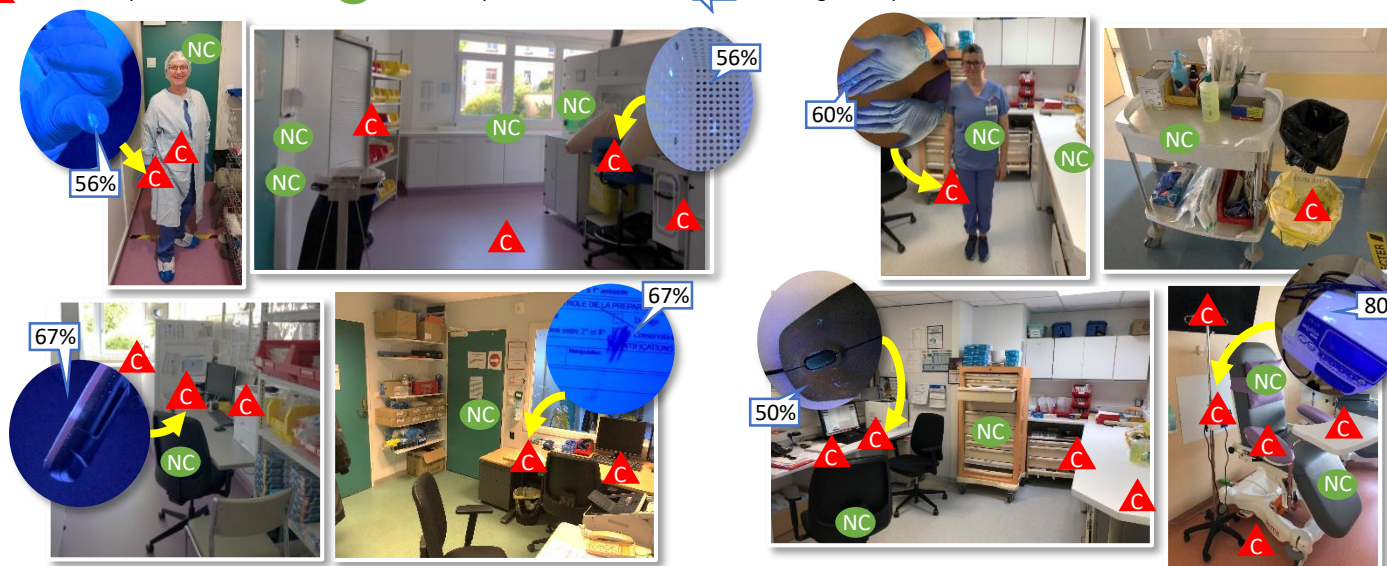
2) Simulation game of diffusion of external contamination by quinine (125 mg/ml) on 6 vials, 3 bags, 3 syringes, 6 packages.

At the CCRU: simulation of vials reception/storage, manufacturing sheet printing, preparation of materials, output from isolator, packaging, releasing, transport.

At the DCU: simulation of preparations receipt/storage, preparation of materials and premedications, administration, elimination.

At the end of the simulation, fluorescence detection with staff (fluorescence hunt) with a 325nm UV lamp.

△ Presence of quinine contamination NC Absence of quinine contamination xx% Percentage of respondents who considered this location to be "contaminated"



Discussion – conclusion

Playful staff awareness-raising (picture-game + fluorescence hunt)

Implementation of preventive measures adapted to each stage of the process
(phone in speaker mode at the CCRU, systematic use of gloves whenever pump flow rates are adjusted and when preparing materials and premedications at the DCU,...)

Quick and easy visualization of the spread of chemical contamination from the CRU to the HDJ