Les déchets issus des médicaments (DIMED)

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Dr Cindy BOURNE_ CH de CREST- Club Pharma C2DS

Dr Evariste DELANDE et Dr Sophie HYVERT _ HCL

Dr Karine VAYRON_OMEDIT ARA

omedit AUVERGNE-RHÔNE-ALPES

Les différents types de déchets à l'hôpital

Types de déchets	Dans l'étude « Médicaments à l'hôpital : pourquoi et combien on jette ? »
Déchets infectieux	X
Déchets anatomiques	X
Déchets piquants/tranchants/coupants	X
Déchets chimiques	X
Déchets radioactifs	X
Déchets pharmaceutiques et cytotoxiques	✓

Source : https://www.who.int/fr/news-room/fact-sheets/detail/health-care-waste

Les DIMED

- Déchets issus de médicaments

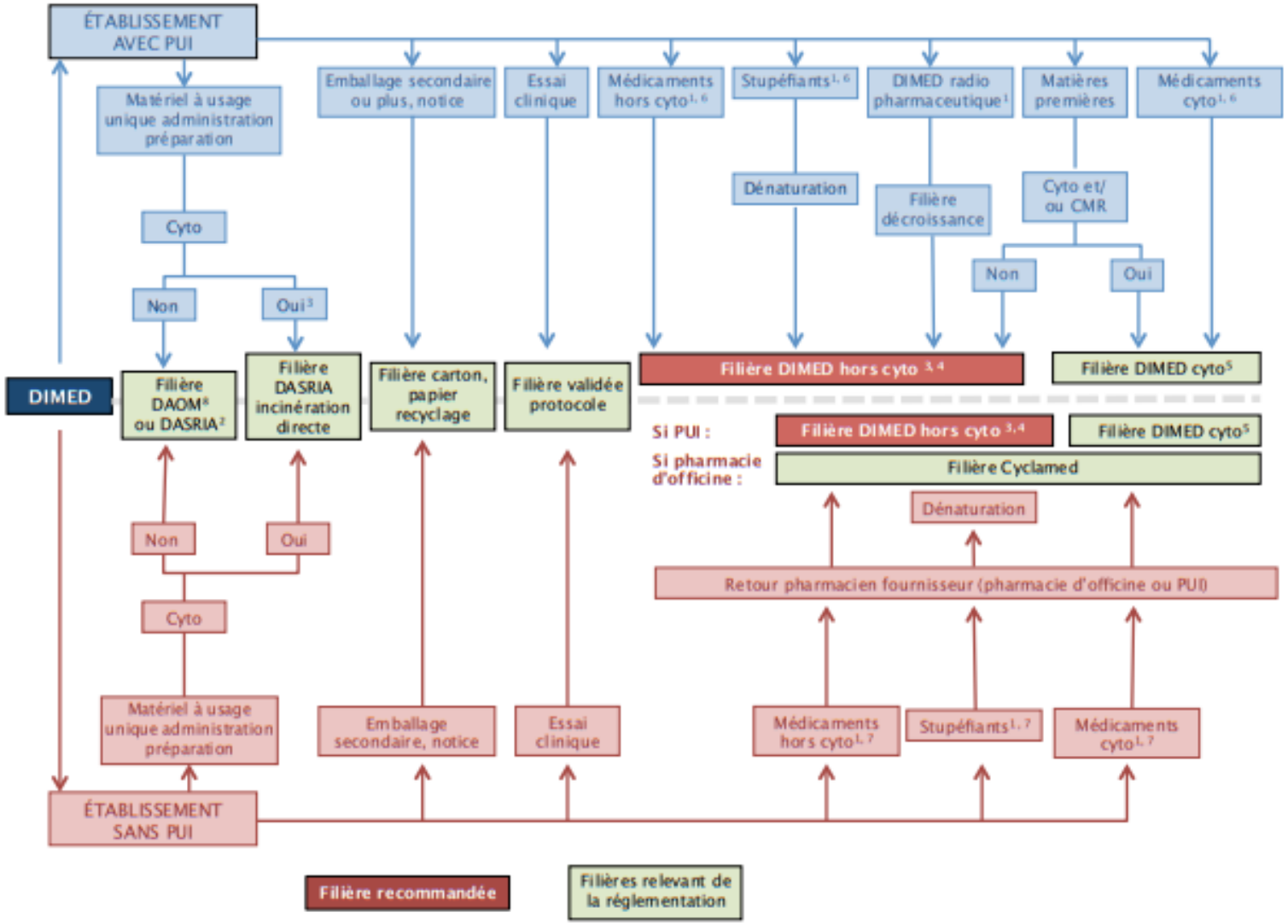

Figure 2 • Logigramme de tri des différents DIMED dans les établissements avec ou sans PUI

- *Guide pratique « pour une bonne gestion des déchets produits par les établissement de santé et médico-sociaux – DGS - 2016*

Les enjeux actuels autour des DIMED

- Environnemental
  - ➢ Ne pas polluer les sols : DIMED doivent être incinérés et non enfouis

Une filière CYCLAMED TRIER, APPORTER, PRÉSERVER à l'hôpital ??

- Sociétal
  - ➢ Réduire le gaspillage : médicaments jetés non utilisés

- Environnemental et économique
  - ➢ Réduire les volumes de déchets médicamenteux : réduire la consommation des médicaments

C2DS et actions sur les déchets (médicaments et DM)

- Réflexion CLUB PHARMA sur les DIMED - 2022
- C2DS & Action convergence Infirmières - 2024
  - « balance ton gaspi »

Gaspillage : 123 millions d'euros par mois
soit 1,476 milliards par an
sur la base de 35 000 cabinets infirmiers
(moy 3 IDE /37 patients par jour)

Partage d’expérience HCL

- Présentation étude Réalisée sur René Sabran
- Présentation des résultats préliminaires de l’étude Gaspimed

Partage d'expérience HCL

Identifying and quantifying drug-related waste in a Healthcare Establishment

Plan A.*(1), Mandy B.(1), Aimar D.(2), Delande E.(1)
(1)Pharmacy, Renée Sabran Hospital, Hospices Civils de Lyon, Giens
(2) Logistics, Renée Sabran Hospital, Hospices Civils de Lyon, Giens

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Background

In France, 8% of CO_2 emissions (eCO_2) come from the healthcare system. Healthcare establishment represent 38% of those and 50% are attributable to the medicines and medical devices used in hospital (1). Several sustainable development initiatives are beginning to be implemented in hospitals, including the management of waste associated with medicines (2).

Objective

The aim of the study is to identify and quantify the sources of medicinal waste to implement virtuous sustainable development actions.

Materials and Methods

First, we targeted the pharmacy and two clinical departments in test phase : Follow-up and Rehabilitation care (FRC) for spinal cord injuries (Department A) and FRC for geriatrics (Department B). We chose these wards for the patient typology, average length of stay (ALOS), number of beds, dispensing method and type of storage (table 1). We created a specific blue trash in which all products in contact with medicine was throwed (pills, primary packaging, vial, syringe, plastic container...) (picture 1). Secondary packaging was not included in the study, because it was not in contact with the medicine.

Next, we extended to other clinical departments : FRC for pneumology and mucoviscidosis (Department C) and orthopedic surgery (Department D) (Table 1)

Medicines-related waste was quantified over 2023 by recording the number of bins, the fill rate and the weight. Waste qualification was based on observation of a sample of thirteen bins in the test phase for which the type of waste they contained was recorded.

Picture 1 : Medicine waste circuit

Characteristic	Department A	Department B	Department C	Department D
Ward	FRC neurology	FRC geriatry	FRC pneumology	Orthopedic surgery
Number of bed	26	45	29	44
ALOS	78	30	24	3
Dispensing method	Nominative and manual / twice-weekly	Globale	Globale	Globale
Number of référence in ward	144	192	162	103

Table 1 : Wards charactéristic

Results

Average bins fill is 73% (61 to 79%) and it depend on the type of waste which are throw in barrels. Nurses have to carry containers which are sometimes heavy, so they have not completed them all.

Average weight of medicine waste per bed in wards is 9,35Kg a Year (19,9 to 2,1 Kg) and it depend on the type of medicines they have to use for their patients.

The weight of waste medicines per bed is 1,4Kg in the pharmacy.

In ward, System of administration (tubular bag) had the higher impact on weight and represent an average of 5,8Kg per bed a year. Glass bottle usually associate with them for medicine preparation represent an average of 2,2Kg per bed a year.

All wards produced primary packaging's pills, plastic bottle and syringe but only some specific ward use a lot of drinkable sachet. Those waste are lighter than the other but take a lot of place in barrels.

RESULTS TABLE	Department A	Department B	Department C	Department D	Pharmacy
% Fill	68%	83%	61%	79%	77%
Annual Weight (Kg)	224	96	576	301	197
Annual weight per bed (Kg)	8,6	2,1	19,9	6,8	1,4
Weight répartition (%)	Department A	Department B	Department C	Department D	Pharmacy
Glass bottle	25%	14%	34%	0%	45%
Tubular bag	23%	42%	56%	93%	0%
Drinkable sachet	20%	0%	0%	0%	0%
Primary packaging pills	13%	31,50%	4%	5%	31,30%
Plastic bottle and seryngе	19%	12,50%	6%	2%	23,70%

Conclusion and Relevance

This study show us that every wards have their specific kind of medicine waste : In neurology a lot of drinkable sachet are taken by patient who have sympathetic and parasympathetic digestive's syndrome. In pneumology and especially mucoviscidosis a lot of intravenous antibiotics are used and in surgery a lot of infusions because they're administrated in operative room and reanimation, and disconnected in orthopedic ward.

We can observe some inconsistent data that lead us to interrogate nurses : In geriatric only empty waste was throw in the container, full one was put with infectious risk trash. This observation permit us to change some bad practice.

Type of medicine have an impact on the waste we produce : For example intravenous administration has a strong impact on eCO_2 and we must try to reduce it in the future (3). Also, the containers were not completely full, and this has a major financial impact as we pay by the container and not by weight.

In pharmacy we have a significant amount of out-of-date medication, whereas in clinical ward, waste come from the activity, except when the nurse forgets to return the medication to the patient on discharge.

The pharmacy is the backbone of the hospital's medication circuit, so it must take steps to dispose of medicinal waste in an ecologically responsible way. To do this, it is essential to know the quantity of waste and the specific characteristics of each department.

In the future we need to reduce wastage, reuse medicine when it's possible, recycle the packaging and rethink the way we use medicines to treat patient. The first main areas for improvement is reducing wastage and a secondary study is launched about the evaluation of wastage medicine in clinical wards and pharmacy in our hospital.

PHASE PILOTE : ESTIMATION SUR 1 AN A RENÉE SABRAN POUR 200 LITS

35 000

Unités médicamenteuses non utilisés détruits / an

18 000

MNU liés aux péremptions (pharmacie et unités de soins)

15 000

MNU liés aux traitements patients non rendus (unités de soins)

25 000€

Coût estimé des MNU / an (uniquement données périmés)

4 À 12 TONNES

de C02 produits pour ces MNU (en fonction du FE estimé) / an

HCL
HOSPICES CIVILS DE LYON

Etude « Médicaments à l'hôpital : pourquoi et combien on jette ? » en ARA

➡ Cible **tous les établissements sanitaires et médico-sociaux**

🎯 Objectifs

✓ Evaluer **quantitativement et qualitativement les déchets issus des médicaments** (DIMED) et identifier les **causes d'élimination**

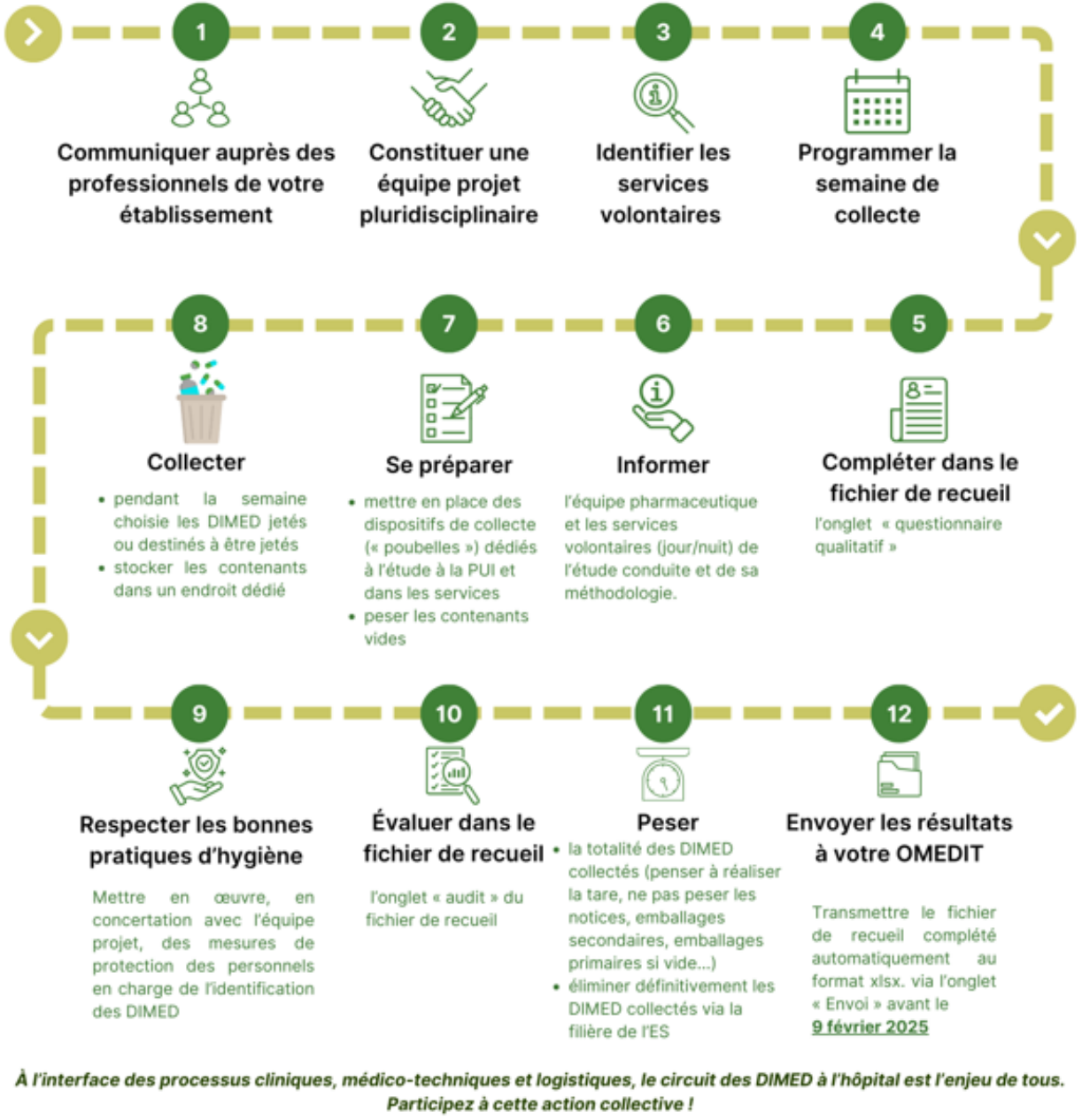
✓ Évaluer l'impact économique et **calculer l'empreinte carbone liée à ces DIMED**

➡ **Identifier des actions de réductions des déchets au regard des profils construits** par l'OMEDIT

Etude « Médicaments à l'hôpital : pourquoi et combien on jette ? » en ARA

✓ DIMED ciblés	X DIMED Hors champ de l'étude
✓ toutes les formes galéniques (PO, injectable par exemple stylo à insuline, dispositifs transdermiques, crèmes, voie inhalée : inhalateurs, flacon d'anesthésiques inhalés…)	X Stupéfiants
✓ conditionnement entier ou partiel (blister entamé, flacon multidoses…)	X UPC : cytotoxiques/cytostatiques injectables
✓ injectable préparé à l'avance mais non utilisé (sans aiguille)	X bouteilles gaz médicinaux
✓ médicaments identifiables en totalité, partiellement, ou non identifiables	X médicaments en quarantaine suite à retrait de lot ou autre
✓ médicaments de la PDA (préparation des doses à administrer)	X notices de médicaments, emballages secondaires, emballages primaires vides
✓ médicaments dérivés du sang	X matériels et dispositifs médicaux à usage unique ayant servi à la préparation avant administration et/ou à l'administration de médicaments ou intégrant des substances actives
✓ anticancéreux PO dans leur emballage primaire ou re/sur conditionnés	X essais cliniques
✓ quel que soit le lieu de stockage (température ambiante, entre +2°C et + 8°C…)	X matières premières à usage pharmaceutique
✓ médicaments au livret/hors livret/traitement personnel/échantillons laboratoires lors des appels d'offres	X médicaments radiopharmaceutiques

Méthodologie de l'étude

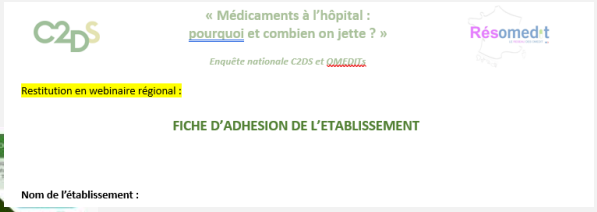


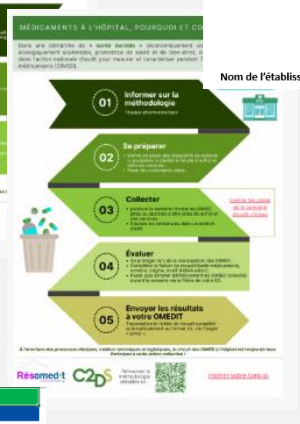
À l'interface des processus cliniques, médico-techniques et logistiques, le circuit des DIMED à l'hôpital est l'enjeu de tous. Participez à cette action collective !

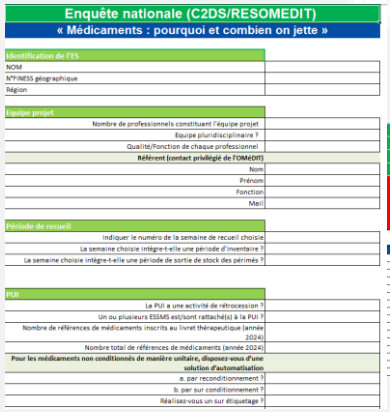
Outils fournis pour l'étude

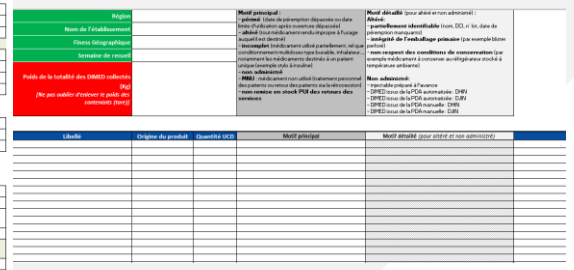
Les établissements participants recenseront leurs DIMED :

- ✓ Pendant 1 semaine
- ✓ Entre le 27 novembre et le 09 février









Discussions

Avez-vous des questions ?