future, a survey among sanitary professionals will be carried out to analyse the impact of these actions.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of Interest No conflict of interest.

2SPD-013 A COMPARATIVE LIFE CYCLE ASSESSMENT OF DIFFERENT PACKAGING OPTIONS FOR ALBUMIN DISTRIBUTION

[1]A Bala Gala*, [2]R Antúnez Retamal, [2]L Clemente Martí. *[1]Esci-Upf, Unesco Chair in Life Cycle and Climate Change, Barcelona, Spain; [2]Grup Carles, Engineering and Sustainability, Igualada, Spain*

10.1136/ejhpharm-2024-eahp.50

Background and Importance Traditionally, albumin has been presented in glass vial packaging, but is it the optimal choice for its distribution?

In recent times, many pharmaceutical companies have shifted from glass vials to plastic bags to deliver their hospital products. Plastic bags have demonstrated clear advantages for both nurses (as glass carries a higher risk of breakage) and patients (since the bag does not require air inlet, so there is less risk of contamination). However, plastic bags are often perceived as harmful to ecosystems.

Life Cycle Assessment (LCA) provides the scientific evidence on the actual impact of the entire process. Therefore, when comparing glass and plastic packaging for the same product under LCA methodology, the scientific proof regarding environmental impacts is stablished.

Aim and Objectives The goal of this study is to compare the environmental performance of glass and plastic packaging options for delivering albumin 100 ml doses in the European market, considering all their life cycle stages.

Material and Methods A cradle-to-grave LCA has been performed, considering the distribution of 10.000 units of albumin (20%) served in 100 ml doses to hospitals as a reference or functional unit.

The Product Environmental Footprint method (E.F. 3.0) has been used for the environmental assessment of the alternatives. However, only the more 9 relevant impact categories after normalising the results plus water scarcity indicator have been analysed in further detail.

The study has been conducted following ISO 14.044 standard, using LCA for Experts software Gabi (until very recently known as GaBi) and their relative databases (2023_1 update).

Results Plastic bags perform better than glass vials in all the impact categories analysed. Regarding climate change total (CC) the improvement is 23%. Also noteworthy is the 55% reduction in water scarcity impact.

Conclusion and Relevance Although plastics are popularly considered harmful to ecosystems, plastic bags have less environmental impact than glass vials. So, for 10.000 units of albumin (20%) served in 100ml dose with plastic bag instead glass vial, the emission of 655 kg of CO2eq and the consume of 355 m^3 of water are avoided. This is equivalent to travelling about 3.930 km in an average car and to take 3.500 five-minute showers, respectively.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of Interest No conflict of interest.

2SPD-014 ECO-CONSCIOUS HEALTHCARE PRODUCTS SUPPLY: INVESTIGATING THE EFFECTS OF FEWER ORDERS

C Fenat*, E Leroy, S Prot-Labarthe, V Le Bigot, D Feldman, A Goubil. *Nantes Université-Chu Nantes- Pharmacie- F-44000- France, Pharmacy, F-44000, France*

10.1136/ejhpharm-2024-eahp.51

Background and Importance Healthcare sector contributes 8% of the country's carbon footprint, with 50% attributed to healthcare product supply. Plasma-Derived Medicinal Products (PDMP) represent a significant portion of this product supply. An improvement project was initiated in early 2023 in our University Hospital (UH) to reduce the frequency of weekly orders to monthly orders.

Aim and Objectives Evaluate the Environmental Impact (EI) of a 6-month reduction in PDMP orders.

Material and Methods A query of the number of all PDMP orders was carried out using *Pharma*® software (*Computer-engineering*, V5.9). The results from February to July in 2022 and 2023 were compared. Suppliers' ability to communicate the EI of orders is compared to an estimate on literature data and the *Empreinte*® database of the Environment and Energy Management Agency (ADEME). Results are in CO_2 equivalents (eq. CO_2).

Results Among the 189 listed PDMPs from 17 suppliers, reductions were applied to three major suppliers (32% of 2022 orders). Their orders dropped from 99 (2022) to 73 (2023), representing a 26% decrease. The number remained stable for others and PDMP consumption were comparable between two periods. Suppliers could not estimate the orders' EI. Using the *Empreinte*® database, transporting products in fully loaded vehicles is ecologically favourable. According to the Shift Project, a 20–30% truck load increase saves 14% to 21% fuel. The average 400km distance to suppliers and a 20m^3 truck using 10L/100km of diesel B7 would save 5.6L of fuel per round trip. One litre emits 3.10kg.eq.CO_2, saving 451.kg.eq.CO_2 over 6-months. However, the number of PDMPs receipts has not decreased as much as the number of orders. The calculated CO_2 savings are estimates, if the ratio orders/receipts tend towards 1.

Conclusion and Relevance Reducing orders can optimise vehicle filling and lower delivery-related fuel consumption. Coordinating routes with other centres could further reduce EI. Route sharing could be considered by cohabitating flows with other centres. Larger orders require additional storage space, but it is not a concern in our establishment. Fewer orders also ease the workload for logistics staff. However, tensions in healthcare supply can lead to sporadic receptions independent of our reduction policy, making an exact order-receipt match challenging.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of Interest No conflict of interest.

2SPD-015 INTEGRATED HEALTHCARE LOGISTICS: KANBAN SOLUTION FOR MANAGEMENT OF DIALYSIS WAREHOUSES PILOT CASE

[1]R Cavi*, [2]P Giovanni, [2]S Alice, [1]P Laura, [1]M Francesca, [3]G Patrizia, [4]B Laura. *[1]Asst Sette Laghi, Pharmacy, Varese, Italy; [2]Asst Sette Laghi, Operations Management and Next Generation Eu, Varese, Italy; [3]Asst Sette Laghi, Experience Management, Varese, Italy; [4]Asst Sette Laghi, Dialysis unit, Varese, Italy*

10.1136/ejhpharm-2024-eahp.52

Background and Importance The outsourcing of the integrated healthcare logistics service and the centralisation of the public healthcare company warehouses represent a response to technical and logistical-management critical issues typical of a decentralised system (Hub & Spoke warehouses) characterised by obsolete technologies and IT systems for warehouse stock management. The project (a 9-year contract that started in June 2022) involves the centralisation of all peripheral warehouses in a single warehouse HUB and the installation of a Warehouse Management System (WMS) required for the management of Drugs, Medical Devices (stock, transits) and various material useful for daily hospital activity.
Aim and Objectives This abstract focuses on micrologistics and, in particular, on the reorganisation of a dialysis warehouse based on a Lean Management perspective with the aim of optimising logistics and procurement processes.
Material and Methods The preparatory phase of the project involves the visual reorganisation of the department warehouse, identifying a unique, dedicated and marked location for each product and defining the department stocks (3 days of autonomy) and the mechanism and frequency of resupply (daily).

The key tool is the Kanban method: after taking each product from the department warehouse, the department operator places an 'X' on a dedicated Kanban board. Every day, a warehouse dedicated operator ('spider') collects the board and takes the consumed quantities from the central hospital warehouse to resupply dialysis warehouse stocks. The restored quantities are placed in the previously established spaces in the department locker.
Results The department is able to monitor stocks available on site, allowing a more accurate planning and reduction in waste due to expired goods. Department spaces defined for dialysis material storage are optimised (from 50 m^2 to 15 m^2). The methodology adopted allows us to guarantee a standardised and non-operator-dependent stock resupply method. The time spent by the Unit Coordinator on non-value activities for the reorganisation of the material is reduced (about 7 hours/week).
Conclusion and Relevance
Results are relevant This pilot case, whose main objective is to guarantee operational efficiency for dialysis material resupply through standardised management, provides a solid model that can be applied in the future to other business units in order to improve department efficiency and logistics service quality.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of Interest No conflict of interest.

2SPD-016 DATA-DRIVEN SELECTION OF A MEDICATION MANAGEMENT MODEL IN HOSPITALISATION WARDS

[1]A Pérez, [2]V Correa, [3]MI Martínez, [1]R Borràs, [4]R López, [1]L Estrada*, [1]E Terricabras, [1]S Aulet, [5]S Fernàndez, [3]C Miret, [1]C Quiñones. *[1]Hospital Universitari Germans Trias I Pujol, Pharmacy Department, Badalona, Spain; [2]Apex Consultoria, Apex Consultoria, Sant Quirze del Vallès, Spain; [3]Hospital Universitari Germans Trias I Pujol, Projects and Innovation Unit, Badalona, Spain; [4]Hospital Universitari Germans Trias I Pujol, Information Systems Unit, Badalona, Spain; [5]Hospital Universitari Germans Trias I Pujol, Nurse Direction, Badalona, Spain*

10.1136/ejhpharm-2024-eahp.53

Background and Importance Optimal dispensing and distribution management model of drugs reduces inefficiencies and increase drug safety.
Aim and Objectives To select best medication management model (centralised in pharmacy vs decentralised in hospitalisation wards (HW)) based on medication consumption pattern of different HW, in context of the redesign of medication management system in a high-complexity hospital.
Material and Methods Applying Pareto principles, an ABC-XYZ matrix was designed using medication consumption data from HW in January 2022. This data, obtained from the hospital's management system, included medications not listed in a pharmacotherapeutic guide (PTG). Information analysed included medication, guide inclusion situation, dispensed quantities, and HW. Within each HW, medications were categorised according to quantity (ABC) and variability (XYZ), with 'A' denoting highest consumption and 'Z' signifying maximum variability in consumption.

ABC:

- A. $x \leq 80{,}0\%$ (x medications ordered from maximum to lowest consumption)
- B. $80{,}0\% < x \leq 95{,}0\%$
- C. $95{,}0\% < x \leq 100{,}0\%$

XYZ:

- X. $CV < 0{,}3$
- Y. $0{,}3 \leq CV \leq 0{,}75$
- Z. $CV > 0{,}75$

Coefficient of variability (CV) was obtained by dividing standard deviation by the mean. Outliers were removed. ABC-XYZ combination defined consumption pattern of each medication for each HW, associated with a management system.

- GROUP 1: AX, AY, BX, CX – High consumption, low variability. Decentralisation and replenishment based on standard minimums.
- GROUP 2: BY, AZ – Moderate volume and variability. Decentralised with replenishment based on criticality or consumption peaks.
- GROUP 3: BZ, CY, CZ – High variability, regardless of consumption. Centralised in pharmacy or decentralised with systematic monitoring of expiration dates.
- GROUP 4: zero consumption.

Results 13 units and 826 references were analysed, 37 not included in PTG. Consumption pattern was similar across HW. In HW, 'A' account for 56–75 medications, 'B' for 63–99 and C for 105–151. A 39–96 [18%-32%] of the references belonged to Group 1, 54–62 [19%-24%] to Group 2, and 116–182 [48%-58%] to Group 3. Each HW only consumed 25%-36% of total references used in the hospital.
Conclusion and Relevance Optimal medication management model was determined by consumption pattern of each reference in each HW, rather than one-size-fits-all approach for entire hospital. However, data supports decentralising medications with monitoring of specific references.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Conflict of Interest No conflict of interest.