

risk, sterile single-use double packaging, towards reusable 'resterilisable'. The approach was applied to skin preparation sets, electric and cold scalpel handles.

Material and Methods A working group was created, made up of pharmacists, pharmacy technicians, OR managers, OR nurses, sterilisation and hygiene service. The number of references, quantities ordered, and the annual budget spent in 2022 were evaluated. For the skin preparation sets, an audit among OR nurses was carried out to assess usage practices and to find out if switching to re-sterilisable MDs for the skin preparation stage was possible. The organisational, economic and environmental impact was assessed.

Results In 2022, 15,690 skin preparation sets (€70,547), 15,455 single-use electric scalpel handles (€24,092) and 12,310 single-use cold scalpel handles (€2,050) were used. For the skin preparation sets, two of the three available references include a detersion set. The working group decided to remove them, to reference a double-packaged sponge stick and to integrate re-sterilisable cups into the instrumentation boxes (75% were in favour). An update of the procedures concerning skin preparation for the operation has been carried out. To integrate: one cup, one electric scalpel handle and two cold resterilisable scalpel handles, 684 instrumentation boxes were identified. The cost of purchasing MDs represents an investment of €27,600. That of sterilisation remains zero since these boxes are already in circulation. Finally, the estimated gain for the BO at the end of the first year is €43,000, i.e. a reduction in CO₂ emissions of 13,545 kg.

Conclusion and Relevance This approach has been validated and has been in place since June 2023 with evaluation planned for the end of 2023. Other actions related to the reduction of waste at the OR are in progress, with a reflection on the double packaging of certain MDs.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

2SPD-020

DESIGN AND EVALUATION OF AN INNOVATIVE AIRBORNE TRANSPORT SYSTEM FOR BLOOD-DERIVED DRUGS UNDER EMERGENCY CONDITIONS

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Background and Importance Blood-derived medicines are administered especially in response to traumatic events. Since their use is linked to the occurrence of accidents, their need is unpredictable. Consequently, it is difficult to apply traditional management logic of warehouses.

Aim and Objectives The present research aims to compare different strategies of transporting blood-derived drugs under emergency conditions. Specifically, current land transportation is compared to innovative Electric manned Take-Off and Landing aircrafts (EVTOL) and drones. Different aspects are analysed including safety, as well as cost-effectiveness. Furthermore, the analysis includes the identification of the best location of a possible drug distribution hub within the Piedmont region.

Material and Methods Firstly, an assessment of the safety of air overflight is conducted by constructing a risk map. Each cell contains the probability that a catastrophic failure for the

vehicle will lead to a fatal impact with a person. The spatial distribution of population density is obtained from a dataset of 'Meta', while the presence of buildings is estimated using 'OpenStreetMap'. Secondly, Dijkstra's algorithm is used to determine the minimum-risk aerial trajectory; instead, for cars, 'NetworkX' is used.

Results An index of merit is constructed to compare transportation means. The EVTOL is the best means of transportation for making delivery between hospitals in densely populated areas, while the drone does not sufficiently meet the safety requirements. The latter is valid for joining non-densely populated areas. Finally, within the same city and for small distances land transportation is the most suitable. As for the delivery hub, it is strategic to place it in the vicinity of hospital centres where the demand for blood-derived drugs is greatest. Also, it would reduce the major risks correlated to proper medicine storage. For land delivery, it is more suitable outside Turin.

Conclusion and Relevance The study demonstrates that manned EVTOLs are the optimal way of transportation for drug delivery under emergency conditions. At the same time, the drone represents a viable solution if the areas to be flown over are not densely populated, also, they would bring reduction in costs compared to land transportation. The hub location study would represent a significant step forward in connecting hospitals and improving the logistics of drugs administered-as-needed.

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TOPICAL COMPOUNDED CLINDAMYCIN SOLUTION MADE FROM ORAL DOSAGE FORMS, CONTROL AND STABILITY STUDY

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Background and Importance Difficulties in drug supply makes pharmacists find alternative ways to provide functional therapy. API from available pharmaceutical forms can be used as a substance for compounding medicine. Drug effectiveness needs be considered as well as compatibility with excipients and primary packing material. Variable temperature, humidity, light can stimulate changes in all pharmaceutical forms, especially in solutions. Primary packing material should provide protection of dosage forms and compatibility with the medicine.

Aim and Objectives Aim of this study was to examine compounding clindamycin topical solution made from available clindamycin hydrochloride oral dosage forms. Effect of excipients and filtration process was evaluated. Drug stability determine not only effectiveness of drug, but also its safety. Patients may store solution in places that may be inadequate. The study compared glass and plastic bottles for storing the solution.

Material and Methods Method for assay determination was HPLC reversed phase with UV detector. Assay and peaks of related substances and impurities were evaluated. Solution was divided in glass and plastic bottles and stored at light exposure, elevated, decreased and room temperature. Sampling was according to free judgment.