3PC-035

Minimising Waste In Oncology

Maria Nazaré Rosado[1], Ana Patrícia Gomes[2], Ana Rita Lemos[2], Andreia Colaço[2], Humberto Melo[2], Miguel Pimenta[2], Miriam Capoulas[1], Cláudia Santos[1]

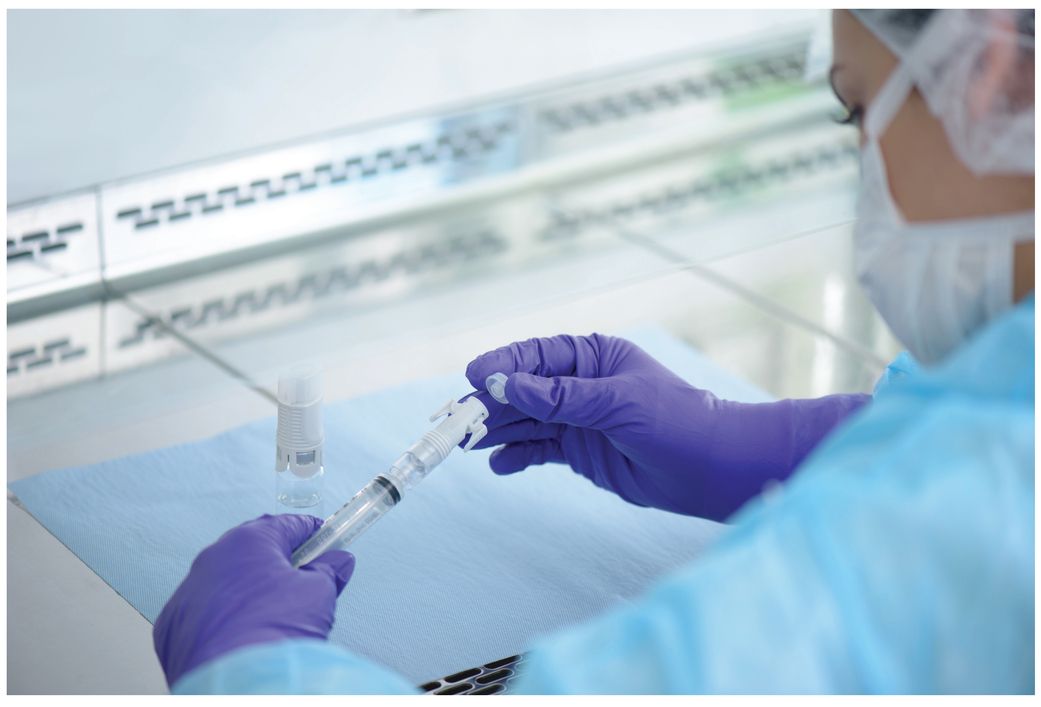
[1] Lead of Pharmacy Department, Serviços farmacêuticos, Hospital da Luz, Lisboa
[2] Hospital Pharmacists, Serviços farmacêuticos, Hospital da Luz, Lisboa

Background

The rise of promising new cancer therapies and their costs represents a colossal challenge for health systems. In addition, pharmacy departments face daily restrictions for the supply of cytotoxic drugs, while the number of patients is increasing. The Cytotoxic Centralized Units (CCU) allow the optimized use of cytotoxic drugs and monoclonal antibodies vials between treatments. There is, however, a significant waste of drugs, due to the impossibility to reuse the vials if they lose the sterility conditions provided by the biosafety chamber, at the end of the working day. Closed system transfer devices (CSTDs) were initially developed to minimize occupational exposure during cytotoxic preparation. They are commonly used as an important additional preventive measure, providing safety for the pharmacist, and facilitating work operations in the chamber. Recent data demonstrated that CSTDs can support the extent of the sterility and physiochemical stability of drugs when used with CSTDs in an aseptic environment, thus allowing the residual amounts of each vial to be stored and reused, therefore promote waste minimisation and cost reduction for the pharmacy. Our aim was to assess the profitability of the use of CSTDs in the CCU of our department.

Methods

Several models of CSTDs were analyzed by our department, concerning their safety performance and ergonomic design. The Tevadaptor® (Simplivia Healthcare LTD, Israel) was chosen as best appropriate for our purposes. The study was conducted for a time period of 12 months (January 1 - December 31, 2020). Study sample consisted of 8420 manipulated cytotoxic drugs. We have manually recorded the volumes (per ml) of each re-used drug, and counted the ampoules which did not need to be opened. Then, a comparison was made of the value price (Euros) of the medication ampoules which did not need to be opened versus the value price which was paid for the purchase of the Tevadaptor® device, in 2020.



Results

The additional costs for CSTD purchase reached the amount of 14,934€. However, when analysing the value price of the number of vials which were used with Tevadaptor® CSTD, it was found that the cost reduction of the reuse of the waste of each day resulted in a total annual savings of 205,665.05€. The balance is clearly positive for the institution, as the use of Tevadaptor® CSTD with cytotoxic drugs resulted with an economic outcome of 190,731€.

Conclusions

The Innovation Cost in Oncology, mixed with a context of frequent shortages, throws constant challenges to hospital budget and makes it imperative to reduce daily waste with drugs. The use of Tevadaptor® CSTD can be used as an efficient strategy that entails additional costs but allows to maximize the use of the vial, always respecting the physiochemical and microbiological stability of each drug, in addition to its advantages in offering additional security in the working area and decreasing the risk of occupational exposure.