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STERILE AND NON-STERILE COMPOUNDING: RISK ANALYSIS AND IMPROVEMENT MEASURES

Mensa-Vendrell, M | Roura-Turet, J | Martinez-Gonzalvo, G | Baño-Busto, L | Fuentes-Narbona, E
Pharmacy Department, Hospital de Terrassa, Barcelona - mmensa@cst.cat

Consorci Sanitari de Terrassa
Hospital Universitari
Fundació Joan Costa Roma

3PC-042

Background

Drug compounding errors can result in patient harm. Hence, the importance of reviewing formulations to ensure their quality and safety.

Aim

To analyse the risk derived from our current process of sterile and non-sterile compounding, through error records registered for one year, and to list and prioritize measures to solve them.

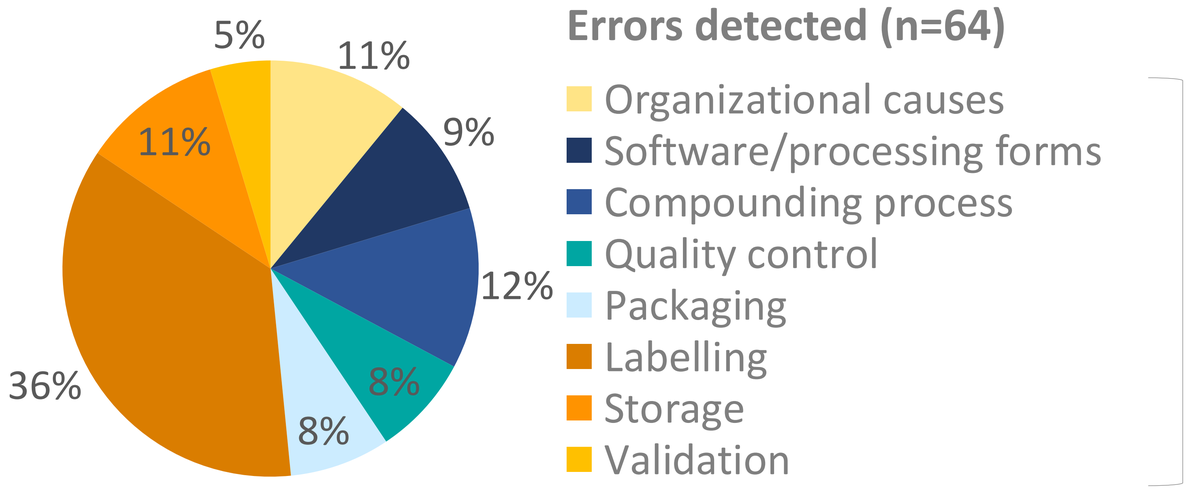
Material and methods

1. Descriptive study. Included errors related to sterile and non-sterile compounding (non-parenteral nutrition, non-chemotherapy) registered from Oct '22 to Sept '23. Error's severity was determined by the pharmaceutical team.
2. Brainstorming session with technicians and the pharmacist leading safety to discuss the critical points of the process. Improvement measures were listed and prioritized by feasibility and effectiveness.

Current process:

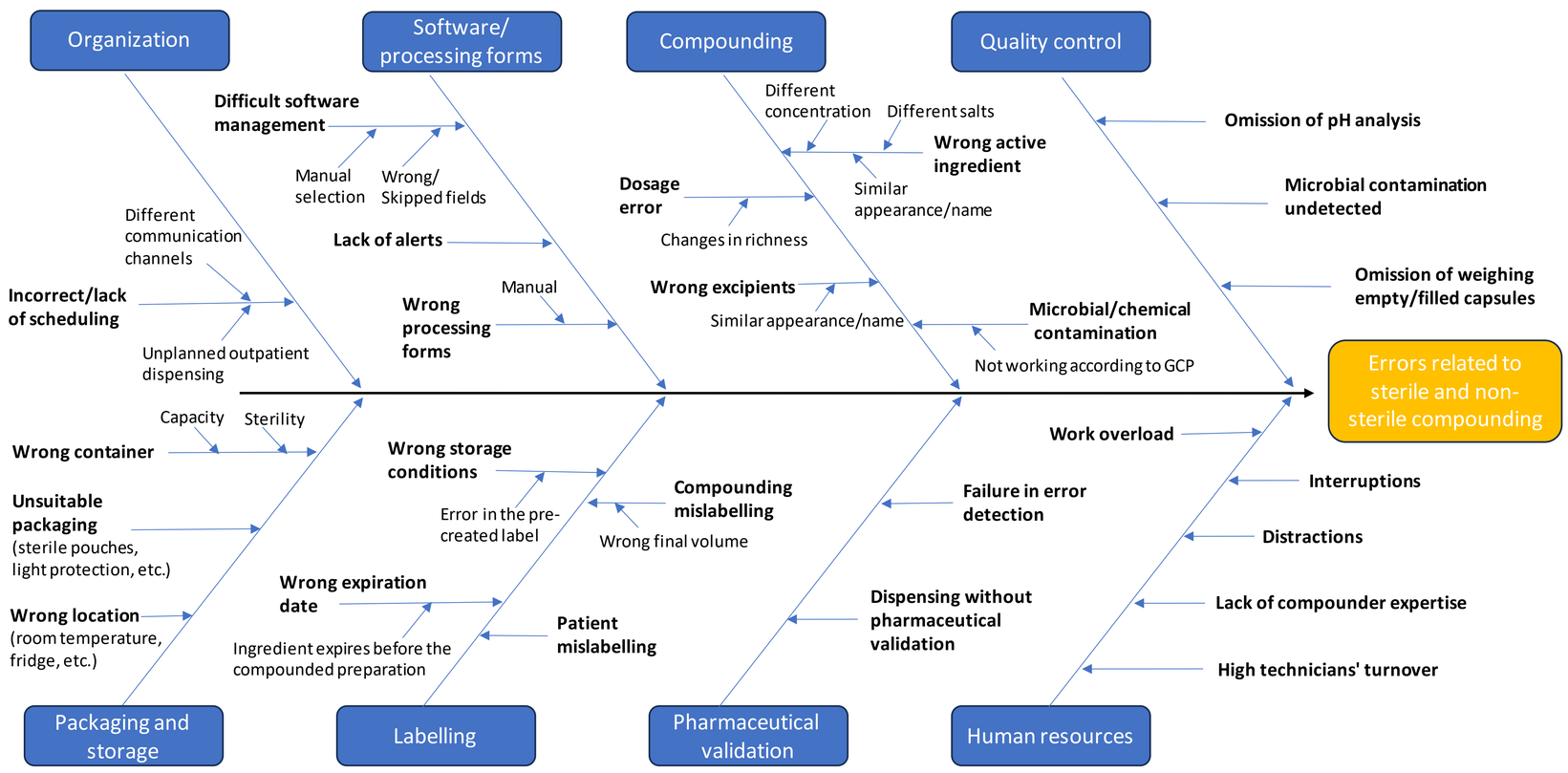
- Organization: Outlook schedule, email requests, electronic and paper prescriptions
- Sterile compounding managed through processing forms and non-sterile through Magisfor® software

Results



- 39% errors were considered severe
- 84% errors were detected by pharmacists during the validation process, the others by technicians/nurses

In total, 25 main critical points were detected through Ishikawa diagram:



Some of the improvement measures that could be implemented are: Outpatient scheduling, training in our actual software and the compounding process, evaluate other software that include sterile compounding, strategic placement or marking active ingredients/excipients susceptible to cause confusion, periodic revalidation of technicians and reduce technician turnover and less multitasking.

Conclusions

Several critical points were detected in our process of sterile and non-sterile compounding.
We found some measures that could help us to reduce risk of errors, but we think that we should prioritize those related to technicians training and revalidation.