Exploring the Human Factors of medication errors in community pharmacy: a mixed methods study.

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BACKGROUND & AIM

- Medication errors and near misses in pharmacy dispensing can adversely impact patient safety.
- WHO has identified the importance of Human Factors (HF) in the Patient Safety Curriculum guide (1).

AIM

- To investigate the factors contributing to medication dispensing errors & near misses in community pharmacy,
- To gather pharmacists' views on dispensing errors/near misses.

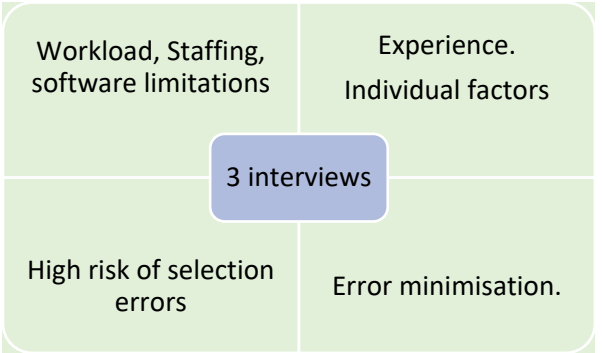
METHOD

- 10 recent near misses/errors collected from 3 community pharmacies.
- Errors mapped to a Hierarchical Task Analysis (**HTA**) tree and Systematic Human Error Reduction and Prediction Approach (**SHERPA**) step.
- Rating of seriousness of error conducted – Safety Assessment Code (**SAC**)
- Semi-structured interviews 3 community pharmacists

Site	Pharmacists on duty	Items dispensed
1	1	30-100/day
2	1	150-250/day
3	1	250-400/day

RESULTS

3 tailored Pharmacy error/near miss Reports produced.



Error category	Prevalence	SHERPA category examples	HTA steps involved	Severity (SAC)	Medication examples	Example	Recommendations
Selection	23/30 (76.7%)	A6: Right operation on wrong object. C1:Check omitted.	Selection & final checking	1-3 (minor to life threatening)	Irbesartan Diclofenac	Diclofenac tablets dispensed instead of suppositories	Mental break, double check process. Shelf alert.
Patient mix-up	5/30 (16.6%)	A6, C1, C2: Check incomplete. S2: Wrong selection made.	Selection & final check	2-3 (serious to life-threatening)	Amoxicillin Tramadol Desogestrel.	Dispensed medication handed to wrong patient.	Check patient address when handing out. Staff training. Induction period.
Storage	1/30 (3.4%)	A3: Operation in wrong direction. C1	Final Check	2 (serious)	Dakacort^{r} cream	Dispensed & stored at room temp. not fridge	Fridge item bag label. Clutter-free storage.
Knowledge	1/30 (3.4%)	A6, A10: wrong operation on wrong object. R1: information not obtained.	Clinical check	2 (serious)	Ovestin^{R} vaginal cream	Estrogel pump pack ordered & dispensed as thought it was the same	Access to up-to-date resources. Double check with colleague.

CONCLUSIONS

- Selection errors the most common. Lack of systematic final check process. Some errors involved multiple HTA steps.
- Cognitive burden and lack of standardised medication checking processes highlighted in interviews.
- Application of HF techniques enhanced understanding of errors/near misses & identification of preventative strategies.

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