

# Medication double-checking procedures in clinical practice: a cross-sectional survey of oncology nurses' experiences

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## Abstract

**Background:** Double-checking is widely recommended as an essential method to prevent medication errors. However, prior research has shown that the concept of double-checking is not clearly defined, and that little is known about actual practice in oncology, for example, what kind of checking procedures are applied.

**Objective:** To study the practice of different doublechecking procedures in chemotherapy administration and to explore nurses' experiences, for example, how often they actually find errors using a certain procedure. General evaluations regarding doublechecking, for example, frequency of interruptions during and caused by a check, or what is regarded as its essential feature was assessed.

**Methods:** In a cross-sectional survey, qualified nurses working in oncology departments of 3 hospitals were asked to rate 5 different scenarios of double-checking procedures regarding dimensions such as frequency of use in practice and appropriateness to prevent medication errors; they were also asked general questions about double-checking.

**Results:** Overall, 274 nurses (70% response rate) participated in the survey. The procedure of jointly double-checking (read-read back) was most commonly used (69% of respondents) and rated as very appropriate to prevent medication errors. Jointly checking medication was seen as the essential characteristic of double-checking—more frequently than 'carrying out checks independently' (54% vs 24%). Most nurses (78%) found the frequency of double-checking in their department appropriate. Being interrupted in one's own current activity for supporting a double-check was reported to occur frequently. Regression analysis revealed a strong preference towards checks that are currently implemented at the responders' workplace.

**Conclusions:** Double-checking is well regarded by oncology nurses as a procedure to help prevent errors, with jointly checking being used most frequently. Our results show that the notion of independent checking needs to be transferred more actively into clinical practice. The high frequency of reported interruptions during and caused by double-checks is of concern.

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