

## **Optimizing a Drug Dispensary in a Swiss University Hospital: Effect of a ward-individualized formulary (WIF)**

Marion Jordan, Kirstian Schneider, Bathasar Hug, Herbert Plagge, Christian Surber  
University Hospital Basel, Switzerland

**Background:** In hospitals and other healthcare institutions, drugs are routinely stored in designated satellite areas on the wards. Often ad hoc decisions are made by clinicians and nurses regarding drug type and quantity to be stored. As a result the number of different drugs and drug packages stored tends to rise and may therefore lead to inefficient drug handling, becoming a potential risk factor in the medication process.

Based on an extended analysis of a drug inventory on a ward, it was hypothesized that a ward-individualized formulary (WIF) could halve the number of different drugs and drug packages in a satellite dispensary and hence reduces bound capital, money lost through expired drugs and facilitates drug handling.

The interdisciplinary intervention described here took place on a 42-bed ward, in a 700-bed university hospital, housing patients in general internal medicine, haematology, nephrology and oncology.

**Methods:** A WIF was defined. All drugs from the complete hospital formulary ordered at least three times in the previous six months were included in the WIF. A pharmacist, a nurse and a clinician reviewed the listed drugs.

Clinicians were strongly encouraged to primarily prescribe drugs from the WIF. Drugs not included in the WIF were removed from the ward dispensary.

The number of different drug packages stored was reduced according to their order history. Drug inventory on the ward was monitored from October 16<sup>th</sup> 2004 to January 10<sup>th</sup> 2005.

**Results:** The original drug dispensary stock consisted of 2031 packages with 943 different drugs valued at Euro 83'931. The WIF-based drug dispensary stock consisted of 808 packages (-60.2%) with 415 different drugs (-56%) valued at Euro 28'012 (-6.6%).

After three months the drug inventory consisted of 922 packages (-54.6%, with 422 different drugs (-55.3%) valued at Euro 29'948 (-64.3%).

**Conclusions:** With the optimized WIF the number of different drugs and drug packages stored on the wards (and therefore the capital investment in ward drugs) could be more than halved. Losses from expired drugs and the number of out-of-WIF orders were reduced. The significant benefit was sustained through out the observation period by an interdisciplinary co-operation of a lead pharmacist, nurse and clinician.