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# **Observational study on patient problems regarding medication knowledge and supply after hospital discharge**

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11 January 2016 – 3 June 2016

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## Abstract

**Background:** The hospital-to-home transition is a vulnerable stage in a patient's care where patients can encounter several problems regarding medication supply and knowledge. Problems in medication supply can lead to interruptions in a patient's therapy plan. Adherence may be negatively affected by inadequate discharge instructions. To date there is not much known about supply and knowledge problems encountered by Swiss patients after discharge. Patient satisfaction with the information given from the hospital is also unknown.

**Objectives:** The objectives of this study were to investigate patient experiences with medication supply, and to determine patient medication knowledge after hospitalisation. Further objectives were to identify the current discharge process from the cantonal hospital Baden, Switzerland (KSB), and to compare patient and physician views.

**Methods:** A telephone interview was conducted with 100 discharged patients from the surgical and internal medical wards from KSB. Patients were called between the 2<sup>nd</sup> and 6<sup>th</sup> day after discharge. Inclusion criteria were: patients  $\geq 50$  years old, discharged to their home and a received prescription on discharge. Results were discussed in an interview with four residents and one senior physician from KSB. Data were analysed qualitatively as well as quantitatively using the relative risk (RR), the Fischer's exact test and the Mann-Whitney U-test.

**Results:** Seventy-seven out of 100 patients had their prescription filled when they were called. It took up to the 6<sup>th</sup> day after discharge until all 77 patients received their prescribed medication. Despite supply problems in 14 patients (18%), there were only four patients with therapy interruptions. Patients discharged from internal medical wards had a higher risk for supply problems (RR = 5.56,  $p = 0.007$ ). Patients experiencing supply problems had statistically significant more medicines on a daily basis ( $8.0 \pm 4.32$  vs.  $4.9 \pm 3.04$ ,  $p = 0.010$ ). The results found that knowledge about medication indications and changes like newly added drugs were high among all patients, 95% and 96%, respectively. Instructions about medication were received and preferred mainly as a combination of oral and written form (55% and 69%). According to the physicians, all patients should have received oral and written instructions. Improved communication between the hospital and the community pharmacy prior to discharge was not desired by 71% of patients. Physicians were also undecided about the advantages. Most patients (88%) were satisfied with the general discharge process from KSB.

**Discussion and conclusions:** The time needed to fill prescriptions is long and depending on medication such time spans are unfavourable since this could influence a patient's course of disease. The increased risk for supply problems with a higher drug intake on a daily basis and internal medicine may be due to polymorbid patients. The study showed good medication knowledge after discharge; however there was no control on the correctness of a patient's response. Discrepancies in received and desired instructions showed that patients are best informed about medication when receiving a combination of oral and written instructions. Instructions given to patients need to be optimised. Further, the findings about improved information transfer should be researched, since there are studies showing a benefit. Based on our findings, further studies should be limited to internal medicine patients.