

# Use of health information technologies to obtain the best possible medication history - an experience in a psychiatry ward

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**Background** Obtaining the Best Possible Medication History (BPMH) is the crucial step of the Medication Reconciliation process. The WHO defends the use of a systematic process to obtain the BPMH, considering the patient/caregiver as the main source of information. Other sources have emerged, in an attempt to obtain additional data and enhance the accuracy of medication history, such as electronic health records (EHR). The Plataforma de Dados da Saúde (PDS) is a Portuguese patient-centered platform that enables health professionals to have access to all the patients' clinical information, becoming one of the main complementary sources used.

**Purpose** PDS contains a large amount of information, which makes necessary to define a time cut-off that allows an efficient consultation, feasible in clinical practice. Our aim was to define the best time period to retrospectively appraise an EHR platform in order to obtain a reliable BPMH in a time-efficient manner.

**Method** An observational study was conducted in an acute unit of the Center for Integrated Responsibility of Psychiatry and Mental Health, University Hospital Center of Coimbra (CHUC). Adult patients taking at least one medicine were included. PDS was used to obtain the patient's medication history from the preceding year. Information was collected for 4 time-periods: the preceding 3 months (t1-3), 6 months (t1-6), 9 months (t1-9) and 12 months (t1-12). The proportion of omitted data between time-periods was analysed. The study was approved by the Ethics Committees of CHUC (CHUC-008-15)/Faculty of Medicine, University of Coimbra (CE 109/2014).

**Findings** 148 patients were admitted, with a mean age of 54.6 years ( $SD=16.3$ ), being 50,7% female. The total number of drugs gathered considering the different time frames were 778 (3-month), 1397 (6-month), 1748 (9-month), and 1933 (12-month). 45% of the drugs in the 6-month would be lost considering only the 3-month data, while 20% would be lost from 6-month to 9-month and 10% from 9-month to 12-month. Being still 20% a large number, we analysed the omissions individually, considering each patient pharmacotherapeutic profile, and categorized the omission by its probable cause. Of the 351 drugs missed if we consider only data of the previous six months, only 55 (15.7%) were real omissions, being only 15 (4.27%) considered as potential serious omissions (anticoagulant, antiplatelet and antihypertensive drugs).

**Conclusion** The information gathered in 6-months retrospective analysis of the patient's prescription records is the reliable and sufficient most credible and should constitute the basis to initiate the construction of the BPMH.