Pharmaceutical medication history: feasibility and impact on medication reconciliation documents at discharge

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BACKGROUND / OBJECTIVES

☆ An add-on software for physicians to document medication history (MH) was developed and added to the computerized physician order entry (CPOE) system of our setting.
☆ For each drug of the MH, the prescriber can choose to continue, hold, or stop (C-H-S) treatment during hospitalization.
☆ By comparing MH and discharge prescription, the software automatically generates a medication reconciliation document (MRD) at discharge.
☆ The new drugs, the drugs that were stopped and those changed during hospitalization are highlighted.
☆ A previous study evaluating the impact of this add-on software showed discrepancies in MH and MRD.
☆ Objectives:
  • Evaluate the feasibility of a pharmacist’s contribution to obtain the best possible medication history (BPMH)
  • Analyze if the BPMH, communicated to the physician, can increase the quality of the MRD at discharge (low rate of discrepancies).

SETTING AND METHOD

☆ Prospective observational study, patients >70 yrs, taking >3 drugs, and hospitalized in internal medicine from February to May 2013.
☆ To complete the BPMH, the pharmacist collected treatment-related information at 3 sources: the patient’s physician, the patient's pharmacist and via an interview with the patient.
☆ The BPMH was given to the prescriber within 72 hours after patient's hospitalization.
☆ Main outcome measure:
  The generated MRD was analyzed for discrepancies = therapy modifications between the BPMH and the discharge prescription that were not mentioned in the MRD.

RESULTS

☆ It took an average of 16 minutes to the pharmacist to generate one BPMH.
☆ Of the 11 patients included, only 2 MRD were accurate.
☆ 29 discrepancies were found in the 9 other MRD.
☆ About 60% of discrepancies were drugs that were present in the MH, and stopped during hospitalization but were not identified as such in the MRD.
☆ Another 30% were drugs that where identified in the BPMH but did not appear anywhere in the MRD because no decision to continue – hold – or stop them was taken.

CONCLUSIONS

☆ A BPMH taken by a pharmacist, combined with a software automating the medication reconciliation process resulted in only 2/11 accurate MRD.
☆ 55% of the discrepancies concerned drugs that should no more be taken by the patient. In terms of safety, these drugs are the most important to be identified.
☆ The sources of the discrepancies were found already in the initial step of taking the MH and during the following stages of the module use: at the time of deciding if the treatment must be continued-hold-stopped during hospitalization and when choosing the drugs for the discharge prescription.
☆ Some computing problems have also been identified and must be adjusted (eg. the software should force a decision C-H-S for each drug of the BPMH).
☆ As the software does not automate the whole process of prescription, it is important to maintain clinical reasoning in order to use this add-on module as a tool for continuity of care.

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Figure 1: Distribution by type of 29 discrepancies identified in the MRD

Other : drug has disappeared 9 (31%)
Drug is missing in the section = new medication = 1 (3%)
Drug is missing in the section = changed medication = 1 (4%)
Drug is missing in the section = stopped medication = 16 (55%)