Full Implementation and Proper Use of CPOE Yields Improved Overview of Drug Information

Margit Bæk BRAMMING*a, Sven KOLDBYb,1 Signe Stougaard PEDERSENc,

*a IT Department, Herlev Hospital, The Capital Region of Denmark
b Unit of Implementation, Corporate ICT, The Capital Region of Denmark
c MEDIQ - Medical Informatics and Quality Management, Copenhagen, Denmark

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Introduction: During 2006-2007 the effects of a pilot implementation of a Computerized Physician Order Entry system (CPOE) at five departments in the Capital Region of Denmark were evaluated by Corporate ICT and hospitals involved. On the poster results of the evaluation are presented. The focus is on how overview of drug information was improved with CPOE.

Methods: The data was primarily collected through a questionnaire to approximately 400 physicians and nurses sent out before implementation of a CPOE and a repeat corresponding questionnaire sent 6 month post implementation. The mean respond rate was 68% before implementation and 60% post. The participating departments fulfilled the criteria of consisting of several diversed clinical areas.

Results: The physicians’ overview of drug information was improved with CPOE and almost unchanged for the nurses. But the general results varied between departments and between physicians and nurses within same department. It turned out that at those departments where the physicians’ overview was improved with CPOE, the physicians had experienced a change from documenting in several media (patient’s record, medication forms and specific databases) to only documenting in one media: CPOE. On the other hand, the overview was not as good as before after implementation of the CPOE if the department had not managed to integrate all drug documentation in the CPOE. Some departments kept supplemental registration media such as special documentation of medication with high complexity.

The drivers behind the nurses’ development of overview were similar. The overview was improved if the nurses could obtain all necessary information in the CPOE, and it worsened if they had to use both CPOE and other media. The nurses who had difficulties in getting an overview were asked to state the type of information, which often caused trouble. 40% of the responding nurses listed difficulties in getting an overview of secondary ordination data. Those data are mandatory when prescribing drugs in CPOE. Apparently, those nurses did not know how to retrieve the necessary information and some physicians sometimes accepted default data instead of choosing the right information from the menu.

Conclusion: The results of this study indicate that if all drug information is documented in CPOE and other media can be abandoned, and if the users are familiar with the necessary functionality, then the overview of drug information tends to improve.

1Corresponding Author: Unit of Implementation, Corporate ICT, The Capital Region of Denmark. Borgervaenget 7, DK-2100 Copenhagen, Denmark. e-mail: sven.koldby@regionh.dk