

POSTER ABSTRACTS

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Paperless Data Collection for Chart Abstraction Studies via a Microsoft Access Database Application

Kristin Delaney, MPH, Group Health Cooperative of Puget Sound, Center for Health Studies

Background: Research studies that involve patient chart review can be conducted more efficiently with a Paperless Data Collection (PDC) method. Traditionally, a "paper and pencil" method (study data are entered first on paper and are then transferred to computer by electronic data entry) of data collection is used. Two major drawbacks with the paper and pencil method are: 1) delay of the data analysis phase and 2) storage of the paper data collection forms. The PDC method addresses and resolves both of these issues.

Methods: The PDC takes advantage of the built-in features of a Microsoft Access database application – security, user interface, and reporting capability. Visual Basic for Applications (VBA) programming language is used to make the data entry application user-friendly and customized to the research topic. Data are entered directly into an electronic database application, eliminating the need to use and store paper data collection forms. Data can be checked at the time of entry for out of range values, omissions, and discrepancies resulting in increased data quality. Once a record is entered it is ready for analysis, having already been through the data entry and cleaning steps. Customized reports, available at the click of a button, can be created to track study progress.

Results: The PDC method has been successfully implemented in several GHC (Group Health Cooperative) studies. It has been readily accepted by chart review personnel, even when computer experience is limited. The PDC method is programming time-intensive at the beginning of the study to meet the scheduled data collection timeline.

Conclusions: Implementation of PDC has many advantages; increased data quality; a more timely start to the analysis phase; elimination of paper storage. Time appropriately budgeted for planning and implementing the PDC method will pay off throughout the study.