

Removing the Paper Trail: Establishing a Research-to-Practice Pathway through Informational Technology Improvements

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Introduction

Kansas City Healthy Start Initiative (KCHSI)

is a program of Mother & Child Health Coalition in Greater Kansas City. KCHSI is a hybrid approach to home visiting that seeks to improve perinatal health and eliminate health disparities among pregnant and postpartum women and their children through care coordination, referral, and goal planning.



Objectives

KCHSI aimed to utilize information technology improvements to ensure a secure data collection process and provide long term storage of sensitive home visiting data.

Challenges

Evaluating a medical home visitation model is steeped in challenges:

- engaging multiple systems and organizations,
- coordinating management of public health and medical data that must remain confidential and HIPAA compliant,
- engaging personnel in multiple manual steps to enter paper and electronic forms of data into statistical software,
- and converging on a new solution.

References

Information technology. (n.d.). Retrieved May 12, 2016 from [http://www.merriam-webster.com/dictionary/information technology](http://www.merriam-webster.com/dictionary/information%20technology)

¹Paul A. Harris, Robert Taylor, Robert Thielke, Jonathon Payne, Nathaniel Gonzalez, Jose G. Conde, Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009 Apr, 42(2):377-81. Link to article: <http://www.sciencedirect.com/science/article/pii/S1532046408001226>

Methods & Results

Data Management

Data for the KCHSI program evaluation are collected by 8 Community Health Workers who provided comprehensive case management services to over 300 families in 2015. Data are stored and analyzed by a separate team of evaluators at UMKC-Institute for Human Development.



TRIED HARD COPIES & FILLABLE PDF'S
-TOO MUCH DATA ENTRY
-PAPERWORK PILE-UP
-TIME CONSUMING & COSTLY
-SHARED DRIVE SECURITY RISK



CONSIDERED EMAIL
-SECURITY RISK
-DOUBLE ENTRY OF DATA
-TIME CONSUMING



TRIED EXTERNAL FLASHDRIVES
-DIFFICULT TO GET THE DATA FROM LOCATION TO LOCATION
-SHARED DRIVE SECURITY RISK
-TIME CONSUMING



CONSIDERED USING EXISTING SYSTEMS FROM SITES
-COSTLY
-DIFFICULT TO MODIFY
-NOT ACCESSIBLE
-UNABLE TO EXPORT THE DATA WE NEEDED



IMPLEMENTED REDCAP (Research Electronic Data Capture)
-ONLINE SECURE SYSTEM
-REAL TIME DATA ENTRY
-NO DOUBLE ENTRY
-CAPTURES MORE DATA
-LESS TIME CONSUMING & NO EXTRA COSTS

Conclusion

REDCap software...

- enables a program to create a data management system that meets the needs of program stakeholders.
- supports the tracking of fidelity data in home visiting programs.
- ensures a consistent, secure method of data collection for the locations involved.
- uses a streamlined electronic data collection system with analytic efficiency, security, and cost-effectiveness.

Lessons Learned

Data collection systems...

- should replace a paper trail with an integrated electronic approach to tracking activities and outcomes at the system, program, and individual level.
- should be thoroughly tested before implementation to ensure the tool functions properly, captures necessary data, and meets program needs.
- should meet the complex demands of home visitation research by gathering and transferring accurate, timely program and participant data.

Suggested future research...

- includes an implementation study of organizations converting to new technologies to learn efficient methods of avoiding complications and building support during the transition.

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