Meaningful Use, Safety Net Providers, & Barriers to Meeting the Goal

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Introduction

The United States healthcare delivery system is under a major transformation, led to a large degree by restructuring the fundamental means of communicating healthcare information. Federal requirements for the use of health information technology (HIT) established under the Health Information Technology for Economic Clinical Health Act, passed in 2009, are focused on adoption, implementation, and the meaningful use (MU) of electronic health records (EHR). Healthcare institutions throughout the nation have experienced challenges meeting these requirements, including the following safety net providers: small primary care clinics, rural health clinics, and critical access hospitals. This retrospective quality improvement study was conducted using public domain data from the Office of the National Coordinator for Health Information Technology (ONC) to identify characteristics and factors successful safety net providers possess and the barriers safety net providers incur when implementing EHRs. By identifying areas of success, failure, and the common characteristics organizations share on meeting MU Stage I requirements, an increased understanding can be gained on how to further support and promote the success rate for EHR adoption and use throughout the nation.

Meaningful Use

The use of certified EHR technology is to improve patient outcomes, care coordination, and maintain secure and private health information. The Medicare and Medicaid EHR incentive programs for eligible professionals and hospitals must successfully attest to demonstrating MU of certified EHRs. The three stages of MU include increasing levels of criteria, objectives, and measures implemented over five years. Stage 1 – captures data and shares information, 2011-2012. Stage 2 – advances clinical processes, 2014. Stage 3 – improves outcomes, 2016.

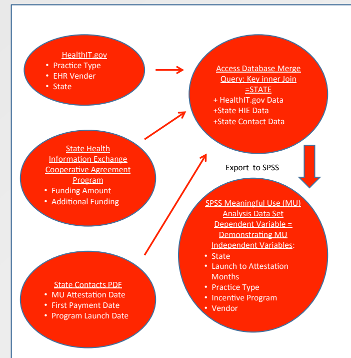
Triple Aim

HIT used in a meaningful way can improve care coordination for better health outcomes, and assist health care providers and organizations deliver the highest quality of patient care while reducing healthcare cost. (McGee, Reeder, Regan, Kleinke, & Arnold, 2009)

Method & Design

Data Sources: National public domain data obtained from HealthIT.gov. "De-identified list of providers working with the Regional Extension Centers (REC), including provider specialty, practice setting, EHR vendor, EHR implementation status, barriers/challenges encountered during EHR implementation" (Data set one).

Outline of merger and analyses for the public domain data sets



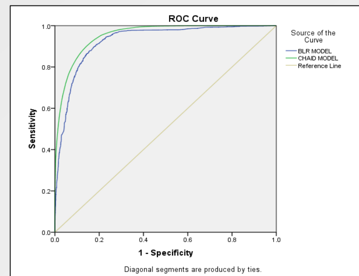
Additional information obtained from the ONC website included the State Health Information Exchange Cooperative Agreement Program (data set two) and the State Contact information (data set three) obtained from the Centers for Medicare and Medicaid Services (CMS) website. The three data sources were imported directly into separate Microsoft Excel spreadsheets, and imported into IBM SPSS Version 20 for a binary logistic regression analysis.

Limitations

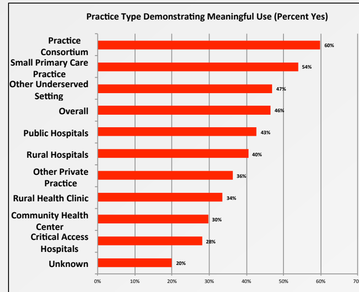
- Age of data (March 2010 - May 2013)
- The study was limited to providers and practices registered with RECs
- Goodness to fit calibration
- Restriction on available public data

Results

Receiver Operating Characteristics (ROC) Table



Practice Type Demonstrating Meaningful Use



Logistic Regression Table

Independent Predictor Variables	*B*	*S.E.*	*Wald*	*df*	*P*	*Exp(B)*
Medicare Incentive Program	6.006	0.034	32045.945	1	0.000	405.87
Medicaid Incentive Program	4.116	0.032	16876.405	1	0.000	61.33
Kansas	2.014	0.117	294.315	1	0.000	7.49
Iowa	1.669	0.124	182.024	1	0.000	5.31
Kentucky	1.529	0.077	390.65	1	0.000	4.61
California	1.391	0.037	1406.554	1	0.000	4.02
Louisiana	1.36	0.089	234.727	1	0.000	3.90
Successful Vendor	0.658	0.019	1208.301	1	0.000	1.93
Consortium Practice	0.092	0.03	9.132	1	0.003	1.10
Launch to Attestation Months	-0.026	0.003	63.851	1	0.000	0.97

Conclusion

- Providers who attested under the Medicare Incentive program had a higher percentage of success rates with implementation of EHRs than those who qualified under the Medicaid incentive program.
- Sixteen states met MU Stage I. The top five states were Kansas, Iowa, Kentucky, California, and Louisiana.
- Best practices-a combination of state, practice type, incentive program, successful vendor, and number of months to attestation could be determined by reviewing the logistic regression table and serve as exemplar, role models for expansion and migration.
- Successful vendor (defined as a vendor that had a MU percentage higher than the overall MU percentage of 46.3%) could be identified.
- The findings included vendor specific data (state, vendor, practice type, and incentive combinations) which determined successful or unsuccessful implementation of EHRs.
- There are approximately 2000 EHR vendors. However, they are not created equal. Vendor selection is critical for success in reaching MU.

References

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