Panel Two: Addressing Barriers to EHR-Generated Data Quality

Jackie Mulhall, SMC Partners for eHealthConnecticut with input from
Scott Cleary, SMC Partners and Executive Director eHealthConnecticut and
Lawrence Cross MPH, Chief Executive Officer Norwalk Community Health Center

Introduction: HRSA and other stakeholders are requesting and accepting clinical and financial data that is being used to assess the clinical and financial performance of health centers nationwide. Health center specific data is now published on a HRSA website for the public and stakeholders to view and assess. Therefore the accuracy, integrity, and quality of the data has never been more important. While reporting of Clinical Quality Measures (CQMs) is required for Stage 1 of Meaningful Use, providers are not being measured on their performance based on these measures. For Stage 2 of Meaningful Use, there is a transition to providers being measured by not just being able to produce quality measures but also by their quality as determined by the measures. So the issue of not just producing them but ensuring their accuracy becomes more critical.

Barriers exist to ensuring EHR-generated data quality that need to be addressed if the measures are to be used in the spirit in which they were developed.

1. **Lack of data expertise for EHR configuration: In order to produce accurate quality measures, the first step is appropriate configuration of the HER. Few health centers have staff trained in data management; such training might be in mathematics, statistics, epidemiology, or a similar field. As a result, many health centers lack knowledge about critical concepts like discrete variables, and fail to implement their EHR systems with a focus on meaningful input of discrete data elements; excessive use of scanning; excessive use of free text versus forms that populate discrete data; failure to examine work flows critically through the specific lens of the need for discrete data and meaningful output; all contribute to poor data, incomplete data, arduous chart review subject to variable interpretations, and other data problems. Lacking trained personnel it is likely that no ongoing testing of data output is occurring to check for missing, incomplete, or wholly inaccurate data. And while "canned" UDS reports theoretically ensure the extraction of data according to the data dictionary definitions, how the particular data elements were placed in the extraction fields is a potential source of error.**

2. **Limited Reporting Functions: Outside of canned UDS reports mentioned above, many EHRs offer limited report capabilities inherent in the tool. And while Crystal Reporting may be available, it is challenging to learn and to use and the training is expensive. Many health centers do not have a dedicated EHR staff, so it is difficult to know whom to train. Often, to really understand the output, such reports must be exported to**

Excel for further data manipulation and evaluation. The ability to perform these exports and properly use the powerful data features of Excel is also limited. Few health centers have a data analyst on staff capable of performing these functions. Also, while many EHRs are certified to produce CQMs, many require the users to purchase add-on capabilities to the base EHR which are cost-prohibitive. Additionally many EHRs produce some but not all CQMs.

3. **Data Aggregation: In order to maximize the effectiveness and quality of CQMs, there needs to be the ability to share the base data in a centralized reporting database with a shared reporting application. This enables health centers to look at their effectiveness relative to their peers and use this data to make process improvements. There are multiple barriers to this occurring. There are no organizations pushing for shared data in general. There are applications that will do this, both shareware (popHealth) and ones available to purchase, however there is also a cost to this. There is no incentive for data aggregation. If approached right, data aggregation is the most cost-effective way to produce CQMs and get the biggest benefit from them.**

4. **Data Extraction: In order to share quality data, the data needs to be extracted and sent to a centralized reporting database. While all approved EHRs can extract a CCD file, few – if any – can pull out a "group" or "batch" of CCD files. So for meta-analysis or comparisons across health centers, the tools are still very primitive. Until end users can run a single extract report that pulls out a group of CCDs with defined characteristics it will continue to be difficult to impossible to aggregate data meaningfully. Few centers are willing to pay thousands to develop this as a custom feature, and third parties charge a very great deal for such a service.**

5. **Data Transport: An additional level of challenge is developing a transport mechanism to transfer the data to a central service. Specifically data must be encrypted, communications secure, etc. And it has to be automatic...either system pushing or central service polling. This is on top of the issue of EHR systems producing a "batch" CCD file in the first place.**