The Pennsylvania Health Care Cost Containment Council

Summary of Public Comments Received Regarding the Continued Collection of Laboratory Data for the Purposes of Risk Adjusting Healthcare Outcomes

Introduction

At its March 4, 2010 meeting, the Pennsylvania Health Care Cost Containment Council voted to continue the collection of laboratory data from PA hospitals to be used as part of the Council's risk-adjustment methodology. The Council's decision to continue the lab data collection requirement was based on recommendations from its Technical Advisory Group, which advised the Council to continue to collect and use the lab data for risk adjustment after reviewing detailed statistical analyses that demonstrated the superiority of using lab data for this purpose.

Subsequent to its decision, the Council entered into a 30-day public comment period to solicit input on potential implementation approaches as they relate to the continued collection of the lab data. The public comment period began on March 20, 2010 and ended on April 20, 2010.

This document summarizes the comments received during the public comment period. Comments are grouped into several general categories to assist in the review process. Attachment A includes a list of the 24 respondents. Superscripted numbers throughout this document reference the respondents as listed in Attachment A.

Support for the Continued Collection of Laboratory Data

In their comment letters both the Hospital and Healthsystem Association of PA (HAP) and the PA Medical Society voiced their support for continued collection of laboratory data for the purpose of risk-adjusting healthcare outcomes. Several individual hospitals specifically stated their support as well. [3, 8, 17, 22]

Laboratory Data Submission Specifications

An overarching theme heard from hospitals focused on a desire for choice as it relates to whether hospitals develop their own mechanisms to extract and submit the lab data or whether they engage a third-party vendor to do so on their behalf. HAP stated, "The hospital community does not support using a single designated vendor for laboratory data extraction, formatting, and transmission."

HAP, along with several other respondents (11 responses) commented specifically on their desire for PHC4 to develop a standard set of data submission specifications so that hospitals can make their own determinations as to whether they will extract and submit the lab data themselves or whether they would seek the expertise of a third-party vendor of their choice to do so for them. [2, 4, 6, 8, 13, 16, 17, 19, 20, 22, 23] It was noted by hospitals within this group that such an approach would serve to accommodate various lab systems among hospitals and yet allow for consistency in data collection.

In the event that hospitals wish to engage a third-party vendor to extract and submit the lab data to PHC4 on their behalf, hospitals indicated their desire to see a list of vendors from which they could choose. Some facilities suggested related themes, including whether the current product could be adapted to extract and submit the data directly to PHC4, and whether PHC4 could

develop a tool for hospitals to use or work with another entity, such as HAP, to create a lab parser or other software product that hospitals could use to extract and submit the data. [3, 4, 7, 8, 13, 17, 19]

Other comments were received addressing specific aspects of the data submission process such as the time needed for implementation, the verification processes, and security assurance.

Need for Timely Release of Data Specifications

HAP and several responders (11 responses) noted concern about completing necessary changes in a timely manner and indicated the need to have the final data specifications provided quickly. It was noted that the hospitals will need to understand what the requirements will be to evaluate the options that will be available to each facility. Hospitals will have to evaluate the amount of time they or their vendors might need to make the changes and these efforts will themselves require time and analysis by the hospitals.[2, 3, 6, 8, 10, 11, 17, 19, 20, 22, 24.]

Data Verification Process and Security

It was noted by HAP and other responders (10 responses) that it would be important for the Council to adopt a data verification process that vendors, hospitals or health systems could use to demonstrate their compliance with PHC4 requirements. Also needed would be ongoing technical assistance from either PHC4 or a vendor, depending on whether the hospital chooses to submit the lab data directly to PHC4 or use a third-party vendor to do so.[2, 6, 8, 10, 13, 15, 18, 19, 20, 23] Responders also emphasized the need for a secure data transmission involving encryption of data elements.[2, 5, 13, 15, 16]

Similar to the UB-04 data collection process, PHC4 staff will develop standard lab data file specifications and a lab data collection manual for use by hospitals, which will assist them in fulfilling the lab data submission requirements. For those hospitals wishing to use a third-party vendor to supply the lab data to PHC4, a list of choices will be provided to them as part of a specific provision in PHC4's reauthorizing legislation (Act 3 of 2009). Act 3 states that "*the council shall maintain a vendor list of at least two vendors that may be chosen by any data source for submission of any specific data elements."* With regard to data verification and security, the same security safeguards and similar data verification processes currently in place for the UB-04 data will be applied to the lab data. Further, PHC4 staff will follow current practice in providing hospitals high levels of technical assistance and outreach regarding lab data reporting requirements.

File Format

As some background, the question regarding file formats was specifically included in the public comments at the request of HAP in an email from HAP to PHC4 dated March 9, 2010.

The file format is defined as the encoding of the data files submitted to the Council. For example, file formats include flat text file (or delimited flat text file), HL7 or XML. Choosing a single, consistent, file format will provide standardization. This standardization will allow a vendor-neutral data submission approach similar to PHC4's administrative data submission process.

In addition to the file format, file specifications would need to be determined to define the data to be extracted and transmitted to the Council. The file specifications would include the file layout (including the technical details such as row lengths, character encoding, etc.) and technical details regarding the data elements, such as the field names, data types, formatting and lengths.

Three file formats were identified in the public comments, listed from most popular to least popular: flat text file, HL7 and XML.

Five responders suggested using the flat text file format.[1, 5, 12, 13, 16] Three responders suggested using the HL7 file format.[2, 3, 24] Three responders indicated they would accept either flat text or HL7 as the file format.[24] One responder suggested using the XML file format.[15]

PHC4 staff recommends using a flat text file format.

The flat file format is recommended because the majority of hospitals preferred this format. Moreover, it is the file format currently used for PHC4's collection of administrative data. This will provide a level of familiarity to hospitals.

Continued use of Current Third-party Vendor to Submit Lab Data

Five responders expressed interest in continuing to use the current product to abstract and submit data files.[4, 7, 9, 17, 19] This becomes possible when the standard data file specifications are published. The current product would need added functionality to export to PHC4's file specifications.

The reasons cited were as follows: a significant investment was already made in the current product; the current product is already installed in many hospitals; and this would require less of an investment in new staff resources at the hospitals.

Four respondents indicated that they potentially would use other lab information systems to extract the lab data for submission. [3, 11, 13, 23]

Timeframe for Preparing for Direct Lab Data Submission

One health system and one hospital commented that additional time may be needed to prepare for lab data submission once the file specifications are released. The suggested timeframes ranged from six to twelve months. [11, 17]

Four responders requested an additional public comment period related to the file specifications when the file specifications become available. The reason cited was for the responders to have the opportunity to provide input into the data file specifications.[6, 20, 22, 23]

Two-way Data Exchange

Four responders suggested that there should be two-way data exchange as part of the functionality of PHC4's system to collect lab data. [3, 12, 15, 21]

One responder suggested making the lab data directly available for researchers.[21] Another responder recommended establishing Web services to allow data providers to obtain their severity scores in a real-time response to their data submissions.[15] Two responders suggested creating a Web-based portal to allow data file submission and feedback.[3, 12]

Building Risk-Adjustment Models Using Laboratory Value Data

Several responders remarked about PHC4 building and using risk-adjustment models based on laboratory data. Specific comments from HAP noted that the continued inclusion of laboratory data for use in a risk-adjustment methodology developed by the Council will augment the Council's ability to more accurately predict the likelihood of death and reduce deviations in predicted outcomes between hospitals.

Several responders (4 responses) suggested that the risk-adjustment methodology developed by PHC4 be tested, especially against the methodology that used the current vendor's severity scores, to evaluate any potential differences in risk adjustment.[2, 3, 6, 8] It was also recommended

that the new calculations for risk-adjustment scores be transparent to allow for hospitals' own internal verification, reporting, and comparison (10 responders).[2, 6, 8, 10, 13, 15, 18, 19, 20, 23] Responders stated a need to be able to apply the new risk-adjustment methodology to their own data, especially on a concurrent basis, to monitor their performance and identify areas for quality improvement prior to the release of PHC4 reports.

Additional comments made by HAP (as well as one other responder) suggested PHC4 analyze and determine which lab values are key drivers for each of the risk-adjustment models developed, on a condition by condition basis.[6, 23] HAP recommended this evaluation so that the values to be collected and reported over time by hospitals could be refined and minimized.

PHC4 notes that it does not intend to deviate from its current model building methodologies and would remain consistent with past techniques used for building risk-adjustment models for the reporting of healthcare outcomes. Recommendations from PHC4's Technical Advisory Group call for the lab data elements that will be included in the future risk-adjustment approach to remain consistent, and this group will be called upon to review future model building exercises. PHC4 will continue its practice of making methods transparent through its public reports and technical documents.

Issues Related to the Cost of Submitting Lab Data to PHC4

The Council asked for specific input regarding the potential issues, including increased or decreased costs, for hospitals in manually abstracting or electronically downloading selected lab data for submission to PHC4. Presently, hospitals are permitted to abstract their lab data (using the current vendor) via either method. Responses to this issue generally recommended against a requirement for one method over the other, although, as highlighted by one responder, the current healthcare environment is focusing on the implementation of electronic health information management.[13]

Responders emphasized that changing current hospitals' systems could result in additional costs/resources and the potential need to temporarily revert to manual abstraction during the updating process.[3, 22] Other concerns were raised for facilities, typically small hospitals, that currently have the capability of submitting the lab data only via manual abstraction.[2, 23] For example, it was suggested that hospitals be supplied electronic solutions in order to submit the lab data.[5]

Related comments emphasized the importance of: 1) using a submission system that could be universally applied by the hospitals to satisfy multiple data collection requirements (for PHC4 and others), thereby avoiding duplication of abstraction/collection efforts,[2, 7, 19] and 2) being able to submit lab data values for all records rather than placing limits on specific patients with identified diagnoses or procedures as this would involve more complexity.[2, 15] However, other opinions varied from this later point by noting that lab data collection should be limited to the data needed for the current PHC4 reports.[8, 11] Several responses also indicated the potential for cost savings due to the elimination of the third-party vendor (e.g., license fees) to transmit the data.[2, 3, 7, 21] It was pointed out that there could be up-front costs for hospitals to develop systems to transmit the data although it would be a one-time cost.

Type of Laboratory Data to be Collected

Comments were solicited regarding whether the Council collects the "first" lab value recorded or the "worst" lab values recorded (that is, the highest and/or lowest values) within a specified time period of admission to the hospital. The worst value was considered as an option since it represents the lab values currently submitted by PA hospitals. The first lab value was also considered as it is receiving attention by other states starting to collect lab data.

Overwhelmingly, responders indicated the worst lab value should be collected, compared to the first value, since it is thought to be a better representation of a patient's severity of illness. Twenty-three responders commented specifically on this issue.[1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17, 19, 20, 21, 23, 24] HAP noted in its response that the hospital community strongly supports the use of worst-value laboratory data as opposed to first-value laboratory data. Among responders, the reasons indicated for using the worst value for risk adjustment of healthcare outcomes included: 1) the worst values were thought to be a better representation of severity of illness, especially since conditions can deteriorate or change after admission based on therapeutic interventions, 2) collecting and using the worst lab values is consistent with PHC4's current requirements, 3) adopting a new approach could lead to extensive internal process changes for some facilities, and 4) changing to a "first value" approach should be based on data-driven analyses conducted to determine the impact of such a change.

There were some comments that voiced slightly different opinions/strategies than those noted above. For example, one facility indicated that it would not have the capability to filter out the worst lab value from its current database.[1] Another noted that without special programming or additional work with a third-party vendor, it would only be able to provide the first lab value.[13] One responder noted it could not single out just the first or the worst or any other specific lab value.[3]

PHC4 staff discussed this issue with its Technical Advisory Group during a conference call on April 26, 2010. TAG members were informed of the comments received regarding this issue and agreed that the worst lab value would be superior to the first value for risk-adjustment purposes since it is thought to be a better representation of a patient's severity of illness. Members unanimously recommended PHC4 collect and use patients' worst lab values for risk adjustment. On a related issue, TAG members unanimously recommended to maintain, for consistency, the current time parameters within which the lab values are collected: for patients admitted prior to 6:00 p.m., hospitals submit appropriate lab value(s) for tests administered on Day 1; for patients admitted on or after 6:00 p.m., hospitals submit appropriate value(s) for tests administered on both Days 1 and 2 of admission.

Cardiac Surgery Cases

Currently, the 60 hospitals that perform open heart surgery submit clinical data beyond the lab data for cardiac surgery cases included in the Council's *Cardiac Surgery in Pennsylvania Report*. Public comment was solicited regarding the potential options to consider in continuing to collect additional clinical data for these cases.

There were 15 comments that addressed potential options for collecting clinical data beyond lab data for cardiac surgery cases. The two most recurrent themes were whether data that hospitals collect for The Society of Thoracic Surgeons' (STS) cardiac surgery database could be shared with PHC4 and whether it was necessary to continue collection of additional clinical data.

Slightly more than half (8) of the respondents, including HAP, suggested that PHC4 investigate the possibility for hospitals to share the data that they collect for the STS cardiac surgery registry with PHC4 and then for PHC4 to collect similar data from hospitals that do not participate in the registry.[3, 6, 13, 16, 17, 19, 20, 23]

One-third (5) of the comments suggested investigation to determine whether it was necessary to continue collection of clinical data beyond the lab data.[5, 6, 13, 19, 20] HAP and two other responders specifically suggested that statistical analysis be conducted to determine if differences in performance between risk-adjustment models that use lab data and present-on-admission indicators versus models with lab data and the additional clinical data warrant the costs associated with collecting additional clinical data.[13, 19, 20]

Two comments addressed the additional costs that are inherent in collecting the additional clinical data.[2, 16] Two responders suggested that a new data collection tool would need to be built,[5, 15] while several other responders noted that they were comfortable with the current process for collecting the additional clinical data.[11, 24] One responder suggested that the additional clinical information could be collected using the PHC4 Web tool that hospitals currently use to verify their open heart data,[13] while another responder felt very strongly that it was not feasible to use the current verification tool.[5] Additional comments suggested collection of particular data elements relevant to cardiac surgery[7] and expansion of the number of diagnosis and procedure codes collected during the extended verification phase.[5]

At the Council's direction, staff can work with the hospitals included in the cardiac surgery report to determine if they are collecting the STS data elements and investigate the possibility of obtaining the STS data from them.

Staff is currently working on a series of analyses that will include a comparison of risk-adjustment models that use lab data and present-on-admission indicators versus models with lab data and the additional clinical data.

Acknowledgements

Responses received during the public comment period proved to be extremely helpful in understanding how the Council might best proceed as it undertakes the important step of collecting laboratory data – with the ultimate goal of continuing to use that data as part of the Council's risk-adjustment methodology. The Council appreciates the thoughtful comments offered by all respondents and believes that this exchange of information will help guide decisions going forward.

Attachment A

List of Public Comment Respondents

1. Abington Memorial Hospital
2. Albert Einstein Healthcare Network
3. Crozer Keystone Health System
4. Ephrata Community Hospital
5. Geisinger Health System
6. Hospital and Healthsystem Association of Pennsylvania
7. Hospital Council of Western Pennsylvania
8. Jefferson Health System
9. J.C. Blair Memorial Hospital
10. Lehigh Valley Health Network
11. Mercy Health System
12. Mount Nittany Medical Center
13. Penn State Milton S. Hershey Medical Center College of Medicine
14. Pennsylvania Medical Society
15. Quantros
16. Robert Packer Hospital
17. St. Clair Hospital
18. St Luke's Hospital & Health Network
19. The Washington Hospital
20. Thomas Jefferson University Hospital
21. University of Pennsylvania Medical Center
22. UPMC University of Pittsburgh Medical Center
23. Wellspan Health
24. West Penn Allegheny Health System *(This respondent included separate responses from five individual facilities: Allegheny General Hospital, West Penn Hospital, Forbes Hospital, Alle Kiski Medical Center, Canonsburg General Hospital)*