EMS Focus Webinar FAQ – Using Data to Measure Value and Improve Care: Two Stories of How EMS Data is Making a Difference

May 15, 2018

The following answers are provided by Brooke Burton, Quality Director, Gold Cross Ambulance in Salt Lake City, Utah

1. This webinar shared the benefits to EMS of connecting to the HIE; do hospitals have similar benefits in having access to EMS data?

Though hospitals have access to EMS data through the cHIE, most direct patient care providers do not. We are working on a direct link between the EMS agency and the hospital, which would give the provider better access to the EMS record. I imagine that the hospitals would benefit more from the direct link, and primary care physicians and other providers would benefit more from the cHIE link. At this point, EMS probably gets more value out of the cHIE relationship than hospitals because EMS gets patient outcomes into their system.

2. Do the hospital data get uploaded to the cHIE or are they entered?

Information automatically populates the cHIE from the electronic health records both in the hospitals and for our EMS system, so no additional data entry is required. One hospital system submits PDFs which don't provide direct outcomes, but which can be accessed through the cHIE. The other participating hospitals upload the data, which are mapped to the applicable fields, and available to our providers when they log in to our records system. Plans are in place for the PDF system to begin uploading data in the near future.

3. Who funded the cHIE project?

The project was funded by a grant from the Office of the National Coordinator for Health Information Technology (ONC). The grant was obtained by Utah Health Information Network (UHIN), which is the entity operating the cHIE.

4. Are all hospitals using the same registration and electronic record platform, or does the cHIE work with numerous platforms?

The cHIE works with multiple electronic health record platforms and is agnostic, allowing it to work with different documentation software platforms.

5. Is the cHIE statewide or local?

It is statewide and linked with other health exchanges in neighboring states.

6. Could you use the cHIE to collect data on drug overdoses and use of opiates with treatment?

It is very possible. One could track the patients transported to the hospital with overdoses and compare various treatments or other statistics with hospital length of stay and disposition information. There is a lot of data now and many different ways to use it for overall improvement.

7. Are there BAAs (business associate agreements) or agreements with other hospitals to use and share patient data?

The contractual aspects of the data sharing are between UHIN and each hospital entity using the system. It is a voluntary system that has been endorsed by the American Association of Healthcare Administrative Management, Medical Group Management Association of Utah, the Utah chapter of the Healthcare Information and Management Systems Society and established federally through the Health Information Technology and Clinical Health (HITECH) Act. By participating in the system, hospitals agree to share the data.

8. What percentage of transported patients do you receive hospital outcome data for? How quickly are outcome data available after an incident?

We receive data on about 50% of patients we transport to participating hospitals. The information is almost real time when an entry is made by EMS or the hospital. Sometimes the data are available too quickly, since the records won't link if the patient is discharged before the EMS crew completes their documentation. This offers a good incentive for crews to complete their records in a timely manner.

9. What challenges exist in connecting the ePCR(s) and the hospital record(s) for a patient encounter, and how are they addressed?

The connection is fairly easy. The crew obtains the unique encounter number for the patient's visit from the patient's wristband or the hospital admissions staff. They then enter that number into our electronic health record and link the record to the patient in

the cHIE. The cHIE also looks at name, date of birth, and other data to verify the match. The biggest challenge is ensuring the field providers enter the correct number, since patients usually have several different numbers associated with their accounts at any given hospital. To add to the confusion, different hospitals have different names for the number we need to obtain. As a solution, we made a laminated card placed in each ambulance detailing the correct number to obtain in each hospital system. Some agencies scan the patient's wristband, thus avoiding data entry errors, but we haven't had a need for scanning guns in our agency.

10. Is there any effort to make the exchange of data real time, to modify the care given in real time to a patient?

At this point, our field providers are not able to access the cHIE data in real time during patient encounters. We've discussed those options, and the system can support that type of access, so there is potential for that in the future.

11. How do you reconcile the John or Jane Doe patients?

One of this system's benefits is the ability to get demographic information updates from the hospital. If our crew is unable to obtain a name, but they can enter the unique visit number, then the system can match the records and send us a demographic outcome update when the hospital obtains that information.

12. How does the cHIE handle feedback to multiple ePCRs?

The cHIE can only link one ePCR record at the receiving facility for direct outcomes, but all of the patient's historical records are available by logging into the cHIE. The cHIE is able to process outcomes for any of the different ePCR vendors.

13. How can you control how quickly an ePCR is closed?

Since several factors affect how quickly an ePCR is closed or finalized, there are several answers to this question. I recommend that an agency have policies in place and clearly communicate expectations of how quickly documentation should be completed. Analytics should be used to monitor the time it takes crews to finish documentation, and performance improvement plans should be put in place to identify and correct root causes of problems completing documentation in a timely manner.

14. If an agency or organization participates, are data for all patients included, or does "voluntary" refer to patient-by-patient participation?

In my experience, hospitals are not sharing data on every patient, which is part of the reason why we are only getting about 50% of the records returned with an outcome. In speaking with the hospitals, there are multiple reasons why they may not share the

data. Individual patients may also opt out of the cHIE, so those records, if sent, are not available for access or data sharing.

The following answers are provided by Jamie Chebra, Director of EMS, JFK Medical Center in Edison, New Jersey

15. Has the REM score been validated?

Yes, it has been validated through several studies, including:

Alter, S. M., Infinger, A., Swanson, D., & Studnek, J. R. (2017). Evaluating clinical care in the prehospital setting: Is Rapid Emergency Medicine Score the missing metric of EMS? *The American Journal of Emergency Medicine*, 35(2), 218-221.

Imhoff, B. F., Thompson, N. J., Hastings, M. A., Nazir, N., Moncure, M., & Cannon, C. M. (2014). Rapid Emergency Medicine Score (REMS) in the trauma population: a retrospective study. *BMJ Open*, 4(5), e004738. doi:10.1136/bmjopen-2013-004738

16. What is the comparison data for the REM scores?

The score is calculated twice per patient; once based on initial contact and the second time at the transfer to the ED.

17. Does the REM score directly relate to the actual treatment given by paramedics? If so, how?

The estimation is that the score change is based on intervention. If a patient with a score of 20 at the time of contact presents to the ED with a score of 15, it can be assumed that something changed that score. It can further be assumed that the variable causing that change is paramedic intervention.