



PENNSYLVANIA EMERGENCY HEALTH SERVICES COUNCIL

Your Voice In EMS

RECOMMENDATION FOR CONSIDERATION

Board Meeting Date: March 20, 2013

Subject: PCR Data Validation

VTR#: 0313-02

Committee/Task Force: EMS Information Task Force

Recommended Goal

Recommended Policy Change

Other:

Recommendation:

The Pennsylvania Department of Health should implement a data validation process for PA NEMSIS data collection.

Rationale [Background]:

Pennsylvania has been a lead participant in the National EMS information System (NEMSIS) project. NEMSIS is a national data repository for patient care report data. The NEMSIS project allows for:

- Improved analysis of EMS procedures and patient care
- Comparison of data across jurisdiction and state boundaries
- Better evaluation of the EMS role in Health Care

This project offers an invaluable performance improvement tool to the Commonwealth's EMS system. The NEMSIS data repository also holds great potential for EMS research projects. A data validation process will help ensure that data collected is reliable for clinical decision making. Data validation is a key component in research.

During a presentation on October 4, 2012 by NEMSIS Technical Assistance Center Director Karen Jacobson, discrepancies were discovered in the Pennsylvania data submitted to NEMSIS. These discrepancies were consistent with other issues discovered by members of the EMS Information Task Force.

The task force has outlined a data validation process that will identify if any errors exist in the data collection. Any errors that may be found can then be analyzed and a plan of correction can be created and implemented. The data validation process is offered as an attachment to this VTR.

Medical Review [Concerns]:

Physician representation is present on the EMS Information Task Force and offered support of this recommendation.

Fiscal Concerns:

The proposed data validation process will have a fiscal impact to the Regional Councils and the Bureau of EMS in regards to training and staff time utilized to conduct data validation. The task force estimates that the number of staff hours required to work through each phase of the data validation process as follows:

- Phase 1: 5 hours
- Phase 2: 4 Hours
- Phase 3: 4 Hours
- Phase 4: 8 hours

The task force would like to emphasize that these are estimates and will vary by region. Staff hours required will be affected by proficiency of staff, number of records to be validated, and any discrepancies that may be discovered.

The Information Task Force offers assistance in training or conduction of data validation to lessen any fiscal impacts to the Regional Councils and the Bureau of EMS.

Educational Concerns:

Agencies and many regional staff will not be familiar with the proposed data validation process. Education will need to be provided to regional council staff and agency management as to their role in the data validation process.

Plan of Implementation:

Upon acceptance of this recommendation, the Department of Health should implement the proposed plan for data validation submitted with this VTR.

The PEHSC Committee/Task Force offers consultation to the Department in regard to the content of this Vote to Recommend (VTR) and its attached documents. The PEHSC Committee/Task Force specifically offers staff or member support to participate in Department deliberations regarding this recommendation in an effort to convey committee/task force discussions.

Board Meeting Comments/Concerns:

No Comments or concerns were expressed.

Signed: J. David Jones
President

Date 4-5-13

For PEHSC Use Only – PA Department of Health Response

Accept: _____ Table: _____ Modify: _____ Reject: _____

Comments:

Date of Department Response: _____

Data Validation Plan

Phase 1: Comparison of the number of PCRs submitted to the regional councils by EMS agencies to the number submitted by regional councils to the DOH, to those visible in NEMSIS Cube.

Process:

- DOH generates reports for PCRs submitted **by service** for a finite period of time.
- DOH generates submission reports in NEMSIS Data Cube for a finite period of time.
- Regional Councils reconcile those figures with the services and/or their records and report the results to the Bureau of EMS within 60 days. (The EMS Information Task Force offers support to the Bureau with data collection.)

Discrepancy Action Plan:

- Break down the figures by month, looking for obvious issues
- Evaluate service volume (reported, reportable, 911 data)
- Evaluate files submitted by service to region for timeframe (number of records in each file)
- Evaluate files submitted to DOH for timeframe (if not the same file submitted by service, for example some regional WebCur users send the service file, other send the output from WebCur to DOH)

Phase 2: Evaluate important elements, observe for logical percentages (for example more D50 given than magnesium) and compare to national trends.

Process

- DOH staff will generate reports for a finite period of time from the NEMSIS Cube (both state and national).
 - The EMS Information Task Force offers support to the Bureau as needed with this step.
- Committee to review for expected results as outline above.
- If not available in the cube, the DOH will generate the reports from DOH data sources.

Elements: Procedures E19_03
 Meds Given E18_03
 Dispatch Complaint
 Age Units E06_15
 Condition Code E07_15
 Location E08_07
 Primary Symptoms E09_13
 Cause of Injury E10_01

Discrepancy Action Plan:

- Observe national trends if possible
- Compare to available regional reports
- Generate vendor specific reports to rule out single vendor problem

Phase 3: Review of discrepancies noted at NEMSIS presentation in Williamsport

Criteria:

- Solu Medrol administration to stroke patients
- Low incidence of blood glucose evaluation on stroke patients
- Inconsistencies in numbers of records in NEMSIS cube for some services (see Phase 1)

Process

- DOH staff will generate reports for a finite period of time from the NEMSIS Cube (both state and national)
- Committee to review for expected results.

Discrepancy Action Plan:

- Observe national trends if possible
- Compare to available regional reports
- Generate vendor specific reports (from NEMSIS Cube, DOH and/or regional data) to rule out single vendor problem

Phase 4: Spot check sampling of data from presentations of chest pain, cardiac arrest and certain traumatic injuries.

Criteria:

- Chest Pain: Provider Primary Impression (E09_15) value 786.50
- Cardiac Arrest: Provider Primary Impression (E09_15) value 427.50)
- Traumatic Injury: Provider Primary Impression (E09_15) value 9605 and Cause of Injury (E10_01) value 9605, Motor Vehicle Traffic Accident
- Traumatic Injury: Provider Primary Impression (E09_15) value 9605 and Cause of Injury (E10_01) value 9610, Pedestrian Accident

Process:

- Regional councils will select services for data audit
- Criteria for services should include 2 larger ALS services, 2 smaller ALS services, 2 BLS services
- Regions should make selections which would include all vendors in their region and may need to add additional services to accomplish this.
- DOH exports data elements for each of the 5 criteria for each service selected
- Regions take the PCR data to the service level to validate that the data from DOH matches the data that was entered.

Discrepancy Action Plan:

- Evaluate service output (NEMSIS file) and examine field and value(s) in question
- Evaluate regional output (if different)
- Determine if user error, service level mapping error, PCR program error, regional processing software error or DOH import mapping error.