Northwest Community EMS System

Performance Improvement Plan

2014

"In God we trust; all others bring data."
Edward Deming

Prepared by:
The Northwest Community EMS System
Provider-Based Performance Improvement (PBPI) Committee

NWC EMS System
Performance Improvement Plan
Monitoring and Evaluation Activities

Foundational values

- EMS can and should be made better.
- Efforts to improve EMS quality should be continuous.
- Every EMS process can yield data and information on how well the process works.
- Data and information are essential to improving EMS quality.

(NHTSA, 1997)

Objectives

The Northwest Community EMS System (NWC EMSS) performance improvement initiatives have been designed to

1. provide uniform and consistently high quality prehospital patient care through a comprehensive multidisciplinary approach which combines prospective, concurrent and retrospective strategies to monitor the structures, processes and outcomes of EMS practice; identify opportunities for improvement; establish and implement corrective action plans; and celebrate achievements;
2. determine future learning needs and to assure that the professional competency of EMS System personnel is measured through valid and reliable instruments on a semi-annual basis;
3. enhance communication at all levels of the System; and
4. improve continuity of care from the prehospital to the hospital environment through concurrent and retrospective monitoring of care in both environments and sharing the strengths and opportunities discovered with all system disciplines.

Assigned responsibilities

The EMS Medical Director (EMS MD) is responsible for all system activities. He delegates authority for guiding the PI process to the Provider Based Performance Improvement (PBPI) Committee composed of system paramedics, paramedic officers, Emergency Communications Registered Nurses (ECRNs), administrators, and educators selected by their EMS agency/hospital for pre-established terms. Current Resource Hospital liaisons are Diana Neubecker and Susan Wood. See attached roster for full membership.

Mission statements

System Motto: "Quality People; Quality Education; Quality Care"

System Mission Statement

The Northwest Community Emergency Medical Services System is a team of highly educated emergency specialists committed to providing quality emergency care to the communities we serve.

We continue to strive for preeminence through a philosophy of total quality, continuous improvement, and advocating the appropriate use of technology and research to compassionately meet emergency care needs.

PBPI Committee Mission Statement

The Northwest Community EMS System Provider Based Performance Improvement (PBPI) Program exists to improve patient care through a peer review process.

PBPI provides an excellent opportunity for System members to actively participate in creating and modifying System structures and processes to improve out of hospital care.

The PBPI Committee's mission will be accomplished, in part, through a survey of selected patient care reports (PCRs) and Communication Logs to determine the degree of variance from prehospital practice standards. Screens shall monitor risk management activities, compliance with documentation standards, patient outcomes and the appropriateness of care.

Scopes of Care

- The NWC EMSS is composed of 25 EMS Agencies, over 1400 paramedics, EMTs & PHRNs, one Resource and five Associate hospitals. Northwest Community Hospital is approved by the Illinois Department of Public Health (IDPH) as the Resource Hospital for this System, which covers approximately 400 square miles. The service area extends from Schiller Park and Des Plaines on the east to Hoffman Estates on the west; Barrington/Lake Zurich/Lincolnshire-Riverwoods on the north to Bloomingdale/ Wood Dale on the south (Fermilab is discontiguous to the main body of the System). NWC EMSS personnel serve a population in excess of one million persons, 24 hours a day, every day of the year.
- Patients range in age from the newly born to the elderly. Acuity ranges from sub-acute (non-emergent) to life-threatening. EMS personnel are educated to assess and respond to a patient's physiological, psychological and emotional responses to illness and/or injury irrespective of a specific medical diagnosis and care is initiated within the context of Standard Operating Procedures and policies that serve as guidelines for practice.
- EMS practice includes emergency medical dispatch procedures, patient access procedures, all assessments, interventions, transportation, and monitoring from the time of established duty until the transfer of responsibility to appropriate medical personnel is complete. Basic and Advanced Life Support care is delivered as defined in the IDPH EMS Rules and Regulations. All EMS Agencies in the Northwest Community EMS System are approved to administer BLS and ALS services via licensed EMT-Bs, EMT-Ps, and PHRNs with privileges to practice in this System. Certified ECRNs and physicians with EMS privileges in this System provide on-line medical control.
- NWC EMSS Educators are responsible for facilitating the following course offerings and continuing education for each discipline whose quality and outcomes must be measured: EMT, paramedic, prehospital registered nurse (PHRN), Emergency Communications Registered Nurse (ECRN), Trauma Nurse Specialist (TNS), Emergency Medical Responders (EMR), and Emergency Medical Dispatcher (EMD).

Aspects of Care

Aspects to be monitored generally fall within the following categories:

- Customer satisfaction: internal and external (Goal: 90% or better)
- EMS crew and managerial satisfaction (rate of turnover, years of service)
- Appropriateness of patient assessments/compliance with treatment standards/patient outcomes including patient comfort
- Individual performance: patient care; invasive skills; modular exams
- Patient prognosis for an out-of-hospital event is equivalent to an in-hospital event
- Adherence to policies and procedures
- Thoroughness and timeliness of documentation
- Dispatch accuracy
- Response times/scene times/transport times/appropriateness of patient disposition
- Communications quality
- EMT wellness/occupational injuries
- EMS cost-effectiveness
- Ambulance inventory: equipment maintenance/effectiveness
- Requests for Clarifications (RFCs)
- Significant exposures/appropriateness of follow-up
- Innovations/research
- Appropriate use of EMS: All requests for service are referred to appropriate resources

- Jan: Year End Data
- Feb: Glucose Meter Check
- Mar: Refusal part 2
- April: Continued work on Glucose and refusal screen
- May: Peds Arrest
- June: Continued work on Peds arrest screen
- July: De-compensated Shock
- August: Trauma
- Sept: Shock part 2
- Oct: Refusal
- Nov: Stroke
- Dec: OB

Sentinel monitoring: All cardiac arrests

- Management and outcomes of patients with life-threatening dysrhythmias: high risk, (done by Hospital EMS Coordinators)

- Management and outcomes of patients receiving the hypothermia protocol

Methods to measure performance/aspects of care

1. Surveys of patients and families
2. Surveys of EMS personnel/ECRNs/Physicians
3. Tracking Request for Clarifications (RFCs)/significant exposures/comments
4. Tracking litigation
5. Monitoring cost/benefit and performance ratios
6. Retrospective data retrieval from PCRs/communication logs
7. Outcome studies from monitoring screens
8. Prospective (concurrent) applied research
9. Competency validation: EMS personnel, ECRNs
10. Sentinel events shall continue to be investigated on an individual basis through a topic-specific study or post-incident analysis. These may include, but are not limited to, use of restraints, medication errors, unexpected death of a patient, malfunction of EMS equipment, and/or incidents that require an RFC or Override.

Indicators

Members of the Committee identify indicators for each aspect of care. They shall be well defined, measurable and specific depending on whether they apply to a process or outcome of care. Data collected through responses to the indicators will determine whether System performance relative to each aspect of care conforms to current standards of prehospital practice.

Thresholds

Thresholds may be established by the Committee based on system performance and shall be compared against benchmarks published in national literature or standards set through statute or rulemaking by the Federal, state or local governments whenever possible. Thresholds may be adjusted based on performance (raise the bar if performance improves), or changing environmental constraints.

Collection and organization of data

The Committee will determine collection methods, sampling techniques, sample sizes, and the frequency and timing of data collection. The NWC EMSS office shall create and distribute measurement instruments.

For retrospective chart reviews, a peer reviewer shall examine PCRs or Communications Logs that meet the population criteria and determine compliance with established indicators. Sample sizes are generally established as convenience samples of all patients that meet the study criteria up to a maximum of 15 records. Some studies, such as effectiveness of vascular access and advanced airway attempts and outcomes of life-threatening dysrhythmias have a 100% sample size.

Concurrent monitoring of performance is accomplished through immediate critique and feedback of calls when patients are delivered to an ED within the System. System preceptors provide additional concurrent monitoring of all student paramedics and ECRNs.

The EMS MD shall notify the appropriate chief(s)/administrators of EMS Agencies whose representatives have not attended the monthly meeting and/or who are delinquent in submitting their data.

Evaluation of Care

The Committee shall perform data analysis to determine the percentage of compliance and root causes of variances. They are responsible for identifying barriers that may impede performance, and determining process limitations that may contribute to less than optimal performance. The evaluation will include an analysis of patterns or trends that can be generalized to the whole system. They shall form their recommendations for improvement into a meaningful report for distribution to the system or through continuing education. Provider-specific performance will be compared to System means.

Confidentiality

Only those persons who have been designated as screeners, are members of the PBPI Committee, or have a need to know under the provisions of HIPAA as approved by the EMS MD or his designee or Chiefs/administrators of an individual EMS agency have access to electronic PCRs (ePCRs) for the purpose of reviewing records for quality indicators. All information obtained, including any appended materials, is furnished as a report of quality management and is privileged and confidential, to be used solely in the course of internal quality control for the purpose of reducing morbidity and mortality and improving the quality of patient care in accordance with Illinois Law (735IL CS 5/8-2004 et seq).

Corrective action recommendations

The Committee shall submit recommendations for commendations or corrective action to the EMS MD for his review and approval and to other system committees/boards as appropriate. All root causes of variances stemming from a learning deficit and all recommendations requiring a change in practice shall be communicated to EMS personnel through continuing education offerings.

Corrective action plans shall be specific in terms of the behaviors that need to change; the methods selected to achieve the desired change; the individuals responsible for implementing the recommended actions; and the time given to correct the behavior before the activity will be remonitored.

Remonitoring strategies and documentation of improvement

The Committee will assess the effectiveness of corrective actions by remonitoring and suggesting improvements as long as it appears necessary. Aspects and/or indicators that consistently fall within established thresholds shall only be monitored on a periodic basis.

Communication of relevant information

Performance improvement strategies shall emphasize the identification and removal of process barriers that diminish performance. General results of each monitor shall be communicated to all System members. Agency administrators shall receive provider-specific data so they can compare their performance against system means. If calls surface that have deviations from standards that are not sufficiently explained on the patient care report, the individual crew may be contacted to complete an addendum or to receive coaching on their care.

IDPH shall receive data reports in compliance with State rulemaking.

Annual review: This plan will be reviewed and revised annually by the PBPI Committee.

Meetings: The Committee meets on the first Wednesday of each month at 9:00 am. Minutes are distributed to all Committee members, alternates, screeners, System administrators and educators. They will also be uploaded to the system web site as able.

System interfaces

Chair 2013: Joe Albert (EGVFD)
Vice Chair: Vacant
Secretary: Nichole Junge (RMFD)

CARS Committee: Markus Rill (PHFD)
Chiefs/Administrators: Joe Albert (EGVFD)
Provider EMS Coordinators: Luke Walker (WDFD)

Education Committee: Vacant
Advisory Board: Vacant

Resource Hospital liaison: Susan Wood

Region IX CQI Committee: Diana Neubecker

4/09; 1/10; 12/10
JA Rev. 12/11