

**I. SCOPE / PURPOSE**

Armstrong Ambulance Service strives to provide the best possible care to the patients and communities we serve. This high standard of service is achieved through a system of continuous quality evaluation and improvement. This policy applies to all departments.

**II. POLICY**

- A. Armstrong supports a multi-faceted Continuous Quality Improvement (CQI) program which incorporates all departments, including but not limited to Clinical Services, Operations, Patient Billing and Administrative functions.
- B. CQI initiatives are assessed by measuring Key Performance Indicators (KPIs) which are reviewed on a quarterly basis. A list of KPIs can be found in Appendix A and may change according to company needs.
- C. Copies of all quarterly KPI reports will be made available to the Administrative Services Manager for inclusion in the Annual Report and CAAS application, as applicable.

**III. OBJECTIVES**

- A. To set performance standards and indicators related to business operations and patient care;
- B. To recognize, reward, and reinforce positive behaviors;
- C. To identify trends in pre-hospital care;
- D. To collect and organize data in an attempt to obtain outcome-based information;
- E. To establish thresholds for evaluation related to the indicators in order to tailor educational and system improvements;
- F. To oversee action taken to improve patient care, and assess effectiveness of these actions;
- G. To communicate information among participating agencies; and,
- H. To provide feedback and promote training for clinical and operational excellence.

**IV. PROCEDURE****A. Clinical CQI Program**

Armstrong Ambulance Service will appoint the Clinical Director to coordinate the Clinical CQI program. The Clinical Director will be an experienced provider with the ability to train and orient new providers in the system. The Clinical Director will consult directly with the Affiliate Hospital Medical Directors as required by Medical Control Affiliation Agreements. When required, an Operations Manager will assist the Clinical Director with specific CQI initiatives.

Coaching and/or remediation related to all aspects of pre-hospital care is intended to assist the EMS provider in improving cognitive knowledge, psychomotor skills, and/or affective behavior in their interactions with patients, family members and other caregivers. Although the focus of the Clinical CQI program is improvement, disciplinary action may be utilized in certain circumstances.

**Components of the Clinical CQI Program**

## a. Patient Care Report (PCR) Reviews:

*Armstrong will conduct an initial review of patient care reports as trips records are synced with the server. Trips will be reviewed for completeness of demographic and billing information and compliance with dispatch protocol.*

*Additionally, trip records will be reviewed by Clinical Services for appropriateness of treatment and documentation. The Clinical Director will train and oversee a team of select providers to assist in CQI call reviews. Criteria for performing PCR reviews can be found in Appendix B.*

## b. ALS Skills &amp; Trips Reporting

*In accordance with its Medical Control Agreements with affiliated hospitals, Armstrong will report data regarding ALS skills (i.e. intubation rates) as required. It will also provide PCRs for hospital QA/QI review as required by the agreement. This data will be reviewed for trends in treatment, and remediation where appropriate.*

## c. Affiliate Hospital CQI

*In accordance with 105 CMR 170.300, Armstrong maintains an affiliation agreement for medical direction and control with a licensed area hospital in each of the EMS Regions in which it operates an ambulance base. As required by the agreement(s), Armstrong will provide trip data to the hospital(s) for independent CQI review. Trends in clinical performance that require attention will be communicated to Armstrong by the affiliate hospital medical director or his designee. Armstrong will implement remediation plans as necessary to correct any deficiencies.*

**B. Communications Center CQI**

The Communications Center quality improvement process shall follow a standardized procedure as detailed below. Armstrong Ambulance seeks to provide all dispatch personnel with the understanding and skills as they relate to the efficient and effective provision of quality assurance for the Medical Priority Dispatch System (MPDS).

**1. Quality Improvement Case Review**

- a. A sampling of at least 25% of EMS cases per week (no less than 25 cases per week) shall be randomly selected and evaluated by the EMD Quality Improvement Unit (QIU) for all Armstrong Ambulance personnel.
- b. An approximately equal number of calls shall be reviewed for each individual EMD.
- c. New call takers will have 100% of cases reviewed for the first 3 months after being cleared through the call taker clearing process.
- d. 100% of "ECHO" determinant level calls will be reviewed.

**2. Case Review Feedback Process**

- a. Completed Case Evaluation Records (CERs) generated by the AQUA database will be forwarded to Dispatchers on a regular basis.
- b. The Reviewer will distribute each CER via e-mail to the relevant dispatcher.
- c. New call taker cases are reviewed by a third-party Reviewer provided by Professional Ambulance (PRO).
  - (1) If the compliance level of a new call taker call falls into the Partial Compliance, Low Compliance or Non-Compliant category, the Reviewer will also CC the PRO Director of Communications and Armstrong Communications Manager on the e-mail.
- d. If the call falls in the Partial Compliance, Low Compliance or Non-Compliant Category for all other Armstrong Dispatchers, the Reviewer will arrange a time with the dispatcher to review the call together.
- e. Once the call has been reviewed, the Reviewer will document on the Weekly EMD report when the follow up occurred and whether it was conducted in person or via a phone call.

**C. Operations CQI Program****1. Daily Reports**

*The Armstrong Daily Report will be automatically generated each morning, summarizing the call activity for the previous day. The report is automatically emailed to the Armstrong leadership team. This report will include information on call volume, on-time performance, delayed responses, lost calls and out of chute times, and may change according to business needs.*

*Managers on the leadership team are expected to follow up on any reported data that falls outside the established acceptable criteria (i.e. chute times > 60 sec). Follow up investigation may include tape reviews, GPS tracking, discussion with crew members, and disciplinary action when necessary.*

**2. Staffing Analysis**

*The Director of Operations will conduct regular reviews of the staffing levels as they relate to operational and financial performance, including overtime reporting, open shifts, and peak time staffing. The data will be tracked for trends at least monthly, and reported during operations staff meetings. Information will be used to advise HR of hiring needs.*

**3. Fleet Performance**

- a. MVAs – Motor Vehicle Accidents will be monitored quarterly and tracked for trends relating to type, cause and severity.
- b. Fleet Preventive Maintenance - Armstrong Ambulance will maintain all fleet vehicles in accordance with the manufacturer's recommended maintenance schedule. Fleet maintenance records will be reviewed at least quarterly for compliance with these standards. Any vehicles that are found to be beyond the limits of the scheduled maintenance recommendations will be scheduled for service within 3 business days.

4. DME Preventive Maintenance

*Armstrong Ambulance will perform preventive maintenance on all Durable Medical Equipment in accordance with the manufacturer's recommended maintenance schedule. If no recommendations are made, the company will inspect the items semi-annually. DME maintenance records will be reviewed at least quarterly for compliance with these standards. Any items that are found to be beyond the limits of the scheduled maintenance recommendations will be scheduled for service within 3 business days.*

5. Special Contract Reporting

*Armstrong will provide specialty reports summarizing operational performance specific to certain contracted customers, including fire departments, hospitals and private institutions. Data for special contracts will be reviewed at least monthly, and tracked for trends. Reports will be submitted to customers as agreed upon.*

**D. Patient Accounts CQI**

1. Financial Performance

*The Patient Accounts Manager will review several KPIs measuring financial performance (i.e. Net Collections, DSO) at least monthly, or as requested by upper management.*

2. Insurance Claims

*The Patient Accounts Manager will review insurance claims for trends in the number of denials/rejections and unbillable claims. Trends that require remediation will be brought to the attention of the appropriate department director.*

3. Productivity

*The Patient Accounts Manager will monitor department productivity at least monthly by tracking claims volume and billed claims, both for the whole department and for individual employees.*

**E. Human Resources CQI**

1. Work-related Injuries & Lost Time Accidents

*The Human Resources Director will review all work related injuries and lost time accidents on a monthly basis. Results will be reviewed at monthly safety team meetings.*

2. Employee Turnover

*The Human Resources Director will review rate of employee turnover at least quarterly. Turnover rates that exceed the company target will be reported to upper management.*

3. Compliance with Mandatory Programs

*The Human Resources Director will monitor employee's participation in mandatory new employee orientation program and annual performance reviews. Employees who fail to meet requirements within designated time frames will be removed from the schedule until they are met.*

**F. Employee Credentials & Education Compliance**

1. Credentials

*Armstrong Ambulance Service will utilize current scheduling software and/or employee interface to monitor employees' expiring credentials. Managers will receive weekly alerts of persons whose credentials have expired or are about to expire.*

## Continuous Quality Improvement (CQI) Program

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2. Compliance with Mandatory Education Initiatives

*The Clinical Services Department will review at least quarterly, or by established deadlines, employee's compliance with mandatory education initiatives. Employees who have not met these requirements will be removed from the schedule until they do so.*

**G. Capital Purchases**

1. Armstrong will formulate a budget for capital purchases each year. The Director of Logistics & Planning will provide a quarterly report showing actual spending versus planned spending for capital items.

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**CONTACT / DEPARTMENT:** Chief Executive Officer

**REFERENCES:** Appendix A – KPI Matrix  
Appendix B – PCR Audit Criteria  
Affiliation Agreement – Lahey Clinic Medical Center  
Affiliation Agreement – Hallmark Health

**REVISION LEVEL:** 04

**REVISION DATE:** DECEMBER 3, 2018

**REVIEW SCHEDULE:** ANNUAL

**APPROVED BY:**   
Richard Raymond, CEO

PCR Selection Criteria for CQI Review (Page 1 of 2)

Category	Priority	Criteria
Paramedic-Basic Response	All	All per CMR 170.305 (C)(2)(f)
Narcotics	1- Hot Response	Morphine Narcan Valium Versed Fentanyl Ativan
Cardiac	1- Hot Response	Defibrillation - Emergency Cardioversion 12 Lead - STEMI / Unknown only
Chest Decompression	1- Hot Response	
Airway	1- Hot Response	BiPAP CO Monitor CPAP Cricothyrotomy Intubation Intubation Confirmation King Tube Ventilator - HT70
Heartrate	1- Hot Response	<= 50 >= 150
Respiratory Rate	1- Hot Response	<= 10 >= 33
Selective C-Spine		
SPO2	1- Hot Response	< 90
Age	1- Hot Response	<= 16
Triage	1- Hot Response	Triage to BLS Triage to ALS

PCR Selection Criteria for CQI Review (Page 2 of 2)		
<b>Medications</b>	1- Hot Response	Adenocard Alupent Amiodarone Antibiotic Ativan Atropine Benadryl Blood Product Calcium Chloride Cardizem Cyanokit / Hydroxocobalamin Demerol/Meperidine Dextrose 10% Dextrose 25% Dobutamine Dopamine EPI 1:1,000 EPI 1:10,000 EpiKit EpiPen Fentanyl Glucagon Glycoprotein IIb/IIIa Inhib. Haldol Insulin Ketamine Lasix Lidocaine Bolus Lidocaine Infusion Lopressor Magnesium Sulfate Mannitol Morphine Narcan Other Medication Potassium Chloride Procainamide Racemic Epinephrine Sodium Bicarbonate Solucortef Thiamine Valium Vasopressin Versed Zofran <b>Narcan/Albuterol Glucose EpiPen BLS</b>