

Organization and Management for Hospitals and EMS Agencies

For The Greater Kansas City Metropolitan Area

A Community Plan for Diversion

Approval Date: March 27, 2002

Implementation Date: May 1, 2002

Revised: January 27, 2004

Revised: February 14, 2005

Revised: March 29, 2005

Revised: June 1, 2005

Revised: March 13, 2007

Revised: March 30, 2007

Revised: February 13, 2008

Revised: May 21, 2009

Revised: November 16, 2009

COMMUNITY PLAN FOR AMBULANCE DIVERSION FOR THE GREATER KANSAS CITY METROPOLITAN AREA

BACKGROUND

The Diversion Work Group of the Health Alliance of MidAmerica and Mid-America Regional Council Emergency Rescue (MARCER) Committee have adopted ambulance diversion guidelines for the greater Kansas City metropolitan area.

Each metropolitan EMS agency has a set of protocols and policies approved by their medical director and/or medical control board. These include ambulance routing protocols. The specific protocols utilize the “hospital diversion status” information supplied by a region wide, real-time tracking system and help the paramedic on the street make routing decisions with or without radio contact with a medical control physician. The ambulance routing protocols of the largest metropolitan EMS systems (Kansas City, Missouri EMS System with its Emergency Physicians Advisory Board, the Kansas City, Kansas EMS System with its Wyandotte County Medical Control Board and the Johnson County EMS System with its Johnson County Medical Control Board), while similar, are not the same. In addition, there are multiple smaller EMS agencies with their own protocols.

EMSYSTEM[®]

MARCER, with the endorsement and cooperation of multiple agencies, organizations and hospitals, has implemented the EMSsystem[®] across the Kansas City metropolitan region. “The EMSsystem[®] is a Web-based program providing real-time information on hospital emergency department status, hospital patient capacity, availability of staffed beds and available specialized treatment capabilities. The EMSsystem[®] is used to coordinate “routine” and emergency medical operations (e.g. mass casualty incidents or MCIs) throughout the region.”

The EMSsystem[®] is an information system. “With EMSsystem[®], the definition of hospital status is standardized across the entire Kansas City metropolitan area. Emergency medical providers and/or emergency medical systems should continue to follow their local policies and procedures regarding the determination of hospital destinations. It is up to each EMS agency to determine what they will do with the status information on and further communicate their operational plans to their respective hospitals of interest. provides standardized information to facilitate patient routing decisions.”

POLICY

1. Patient care and safety should be the central consideration in all diversion decisions.
2. The decision to divert should be based on the immediate capabilities and capacities of the emergency department and institution to care for patients. (An exception is

trauma diversion, in which availability of an operating room or appropriate surgeon may limit the ability to function as a trauma center.)

3. Patients who are in cardiac arrest will be taken to the closest appropriate hospital, unless the hospital is “out of service.” Patients who are “unstable” may still be taken to the closest appropriate hospital, unless it is “out of service” or on “trauma diversion” (for “unstable” trauma patients only).
4. The patient shall be informed when the hospital of his or her choice is on diversion and that, in such cases, resources normally utilized for treatment may not be available. Based upon local EMS agency policies, if a patient demands transport to a hospital that is on diversion, and if the patient is refusing transport because their hospital of choice is on diversion status, then the medic may take the patient to the hospital of the patient’s choice. EMS agencies shall follow their local policies regarding appropriate documentation of such patient requests.
5. Level I or Level II trauma centers may close to ambulances carrying patients who meet EMS trauma routing criteria.
6. Level I or Level II trauma centers may remain open ONLY for EMS trauma routing, while the ED is closed to all other ambulance traffic.
7. No facility can divert patients on the basis of ability to pay.
8. Hospitals going on a divert status must do so prior to being notified of an ambulance’s impending arrival (i.e. there should be no “diversions in route”). During multicasualty incident (MCI) the EMS agency may distribute patients to multiple facilities in order to optimize utilization of resources. This should not be interpreted as a “diversion en route”.
9. Each hospital should develop its own internal policy regarding ambulance diversion.
10. Diversion notifications should be made to all EMS providers, hospitals and EMCCs (EMSystem[®] Coordination Centers) through the EMSystem[®]. (If there is a local problem with the EMSystem[®], the appropriate EMCC can be contacted by phone or FAX and enter the notification into the EMSystem[®].)
11. If all hospitals within a predefined catchment area are closed, then all are “forced open” and the patient will be taken to the closest appropriate hospital within the catchment area (with the exception of hospitals that are out of service).
 - A. If all hospitals in a catchment area are “closed to ambulances” and therefore all are “forced open,” then ambulances transporting patients to the now “forced open” hospitals will be distributed in a fashion so to equalize as much as possible the number of patients going to those now “forced open” hospitals.
 - B. If all hospitals in a catchment area are “closed to ambulances” and therefore all are “forced open,” ambulances stationed in and/or normally transporting to

- hospitals in other catchment areas, will make every effort (within the bounds of this policy and their own EMSsystem[®] policy) to not transport patients to hospitals that are “forced open” only because all hospitals in their catchment area were closed.
- C. If a trauma center is in a catchment area in which all hospitals are now “forced open” only because all have “closed,” it does not automatically mean that the trauma center is open for trauma. (There are specific criteria that must be met in order to be designated a trauma center.) That decision is made by the involved trauma center.
12. In the event hospital EDs across the region become saturated as defined by any time one half of the metropolitan area catchment hospitals are “Closed to Ambulances” or during a large scale mass casualty incident occurrence, the EMSsystem[®] Administrator has the authority to temporarily suspend the “Closed to Ambulance” option of the community plan. The suspension of “Closed to Ambulance” would be for an eight (8) hour period and then re-evaluated. The temporary suspension of the community plan does not affect other EMSsystem[®] categories related to trauma or out of service conditions.
13. The Kansas City community plan for ambulance diversion makes a clear distinction between emergency transport of patients who require emergency care and individual hospital policies regarding the transportation and receiving of patients for direct admission to the hospital. Specific examples include patients who require hospital admission from a primary care physician’s office, recently discharged surgical patients, or patient transport from a nursing home to a hospital for non-life threatening conditions. Hospitals whose emergency departments become overwhelmed and are “closed to ambulances” may continue to accept such patients by ambulance for direct admission to the hospital. Since direct admission policy and procedures may vary from one hospital to another, EMS agencies and hospitals are encouraged to work closely together to coordinate direct admissions to avoid additional congestion in the ED.
14. MARCER and the Health Alliance of MidAmerica have jointly developed a process to track hospital diversions, to monitor trends, to monitor compliance with protocols and to produce appropriate reports for routine review.

DEFINITIONS

Diversion – The rerouting of an ambulance(s) from the intended receiving facility to an alternate receiving facility due to a temporary lack of critical resources in the intended receiving facility.

Diversion Categories:

OPEN – The hospital ED is open to all ambulance traffic.

Note: All hospitals must update their “OPEN” status at least two times a day at 0800 and 2000.

FORCED OPEN – The hospital ED has been changed to a Forced Open status due to all hospitals within their catchment area being closed to ambulances.

Note: Hospitals that are “FORCED OPEN” must remain open for at least one (1) hour before changing their status back to “CLOSED TO AMBULANCES.”

TRAUMA DIVERSION – Level I or Level II trauma centers may close to ambulances carrying patients who meet EMS trauma routing criteria.

Note: The EMSsystem[®] must be updated each hour (at one hour intervals) when on “TRAUMA DIVERSION” status.

TRAUMA ONLY – Level I or Level II trauma center is open ONLY for EMS trauma routing while the ED is closed to all other ambulance traffic.

Note: The EMSsystem[®] must be updated each hour (at one hour intervals) when on “TRAUMA ONLY” status.

CLOSED TO AMBULANCES – The emergency department is functioning but cannot accept ambulance patients due to a temporary resource limitation.

Note: The EMSsystem[®] must be updated each hour (at one hour intervals) when on “CLOSED TO AMBULANCES” status.

OUT OF SERVICE – The emergency department has suffered structural damage, loss of power, an exposure threat or other conditions that precludes the admission and care of any new patients.

Note: The EMSsystem[®] must be updated each hour (at one hour intervals) when on “OUT OF SERVICE” status.

Hub Hospital – The hub hospital is defined as the preferred location for emergency care. The preferred hospital location factors may include:

- transport for trauma care
- transport for specialty care
- patient choice
- direct admissions
- proximity
- children’s hospital

Catchment Area – Catchment areas are comprised of one hub hospital and three or more hospitals that are related by multiple factors such as ground time, capabilities and traffic flow for diversion purposes. A hospital may be part of more than one group. These catchment hospitals are to be defined and reviewed at least annually by MARCER. Attachment A contains a list of participating hospitals and their respective catchment designations.

Unstable – unable to establish or maintain an airway
unable to ventilate
unremitting shock
as otherwise defined in appropriate EMS agency protocols, (including
as determined with medical control contact)

PROCEDURES

1. The decision to initiate or terminate a diversion status rests with the individual hospital according to their written policies.
2. Criteria to determine the necessity of implementing the hospital diversion plan include: ED bed saturation; number of patients in the ED waiting area, as well as patient waiting times; number of ambulance patients waiting or en route; acuity of patients waiting to be admitted; and ED staffing capabilities. Forms for tracking this information are available on the EMSSystem[®] or at the MARCER web site.
3. The diversion is initiated or terminated using the EMSSystem[®] according to the EMSSystem[®] Protocols and Policies.
4. For participating Missouri hospitals in the Kansas City region, the EMSSystem[®] will automatically notify the Missouri Department of Health and Senior Services (DHSS) upon commencement of diversion status via an electronic mail message. In the event the EMSSystem[®] is not operational at the commencement time of diversion, participating Missouri hospitals will send DHSS a fax notification or, by other electronic means, report the commencement of diversion.
5. The appropriate EMCC and/or EMS dispatch center assures that ambulance crews in the field are informed of hospital diversion status on a “real-time” basis through their own written policies, protocols or standard operating procedures.
6. The ambulance crews in the field use all appropriate information to make the destination determination. In some systems this may also include on-line contact with a medical control physician.
7. If all but one hospital in a catchment area is “closed to ambulances,” the appropriate EMCC will contact the hospitals involved in that catchment area via the EMSSystem[®], inform them of that fact and request an update of their diversion status.
8. If all hospitals in a catchment area are “closed to ambulances,” the appropriate EMCC will contact the hospitals in that catchment area via the EMSSystem[®], inform them of that fact and request an update of their diversion status. If, within 10 minutes of this contact, none of the hospitals in the catchment area have changed their status to either “open” or “trauma diversion” then the EMCC will change all of the hospitals in the catchment area to “forced open.”

9. Within eight (8) hours of termination of the diversion, participating Missouri hospitals in the Kansas City region will report the following information to the Missouri DHSS via the EMSsystem[®] or by other electronic means:
 - A. diversion start time
 - B. name of individual who made the decision to implement the diversion status
 - C. reason for the diversion status
 - D. time the diversion was terminated
 - E. name of the individual who made the decision to terminate the diversion status

REFERENCES

- 1) National Association of Emergency Medical Services Physicians Position Paper: Ambulance Diversion; approved by the NAEMSP Board of Directors, July 26, 1995
- 2) EMSsystem[®] Protocols and Policies; MARCER, June 2000
- 3) American College of Emergency Physicians Policy Education Resource Paper: Guidelines for Ambulance Diversion; AEM 36:4 376-377
- 4) East Metro Ambulance Diversion Policy; East Metro Hospital, St. Paul, MN, June 30, 2000
- 5) Emergency Department Diversion Guidelines of the St. Louis Emergency Physicians Association; St. Louis, MO August 2000

Attachment A

**Kansas City Metropolitan Region
REGIONAL CATCHMENT AREAS FOR HOSPITAL DIVERSION**

Hub Hospital	Catchment Area
Centerpoint Medical Center	Centerpoint Medical Center Lee's Summit Medical Center Saint Luke's East – Lee's Summit St. Mary's Medical Center Truman Medical Center, Lakewood
Lee's Summit Medical Center	Centerpoint Medical Center Lee's Summit Medical Center Research Medical Center* Saint Luke's East - Lee's Summit Truman Medical Center, Lakewood
Liberty Hospital	Liberty Hospital North Kansas City Hospital* Saint Luke's Northland Hospital – Barry Rd*
Menorah Medical Center	Menorah Medical Center Olathe Medical Center Overland Park Regional Medical Center St. Joseph Medical Center Saint Luke's South Hospital
North Kansas City Hospital	Liberty Hospital* North Kansas City Hospital Saint Luke's Northland Hospital – Barry Rd* Truman Medical Center, Hospital Hill
Olathe Medical Center	Menorah Medical Center* Olathe Medical Center Overland Park Regional Medical Center Saint Luke's South Hospital* St. Joseph Medical Center

Hub Hospital	Catchment Area
Overland Park Regional Medical Center	Menorah Medical Center Olathe Medical Center Overland Park Regional Medical Center St. Joseph Medical Center Saint Luke's South Hospital Shawnee Mission Medical Center
Providence Medical Center	Overland Park Regional Medical Center* Providence Medical Center Shawnee Mission Medical Center* University of Kansas Hospital*
Research Medical Center	Research Medical Center St. Joseph Medical Center Saint Luke's Hospital of Kansas City Truman Medical Center, Hospital Hill
St. Joseph Medical Center	Menorah Medical Center Olathe Medical Center Overland Park Regional Medical Center Research Medical Center St. Joseph Medical Center
Saint Luke's Hospital of Kansas City	Research Medical Center Saint Luke's Hospital of Kansas City Truman Medical Center, Hospital Hill University of Kansas Hospital
Saint Luke's East - Lee's Summit	Centerpoint Medical Center Lee's Summit Medical Center Saint Luke's East - Lee's Summit Truman Medical Center, Lakewood
Saint Luke's Northland Hospital – Barry Road	Liberty Hospital* North Kansas City Hospital* Saint Luke's Northland Hospital – Barry Road
Saint Luke's South Hospital	Menorah Medical Center Olathe Medical Center* Overland Park Regional Medical Center St. Joseph Medical Center Saint Luke's South Hospital

Hub Hospital	Catchment Area
Shawnee Mission Medical Center	Overland Park Regional Medical Center Olathe Medical Center* Saint Luke's South Hospital* Shawnee Mission Medical Center University of Kansas Hospital
St. Mary's Medical Center	Centerpoint Medical Center Lee's Summit Medical Center * Saint Luke's East – Lee Summit * St. Mary's Medical Center Truman Medical Center, Lakewood*
Truman Medical Center, Hospital Hill	North Kansas City Hospital Research Medical Center Saint Luke's Hospital of Kansas City Truman Medical Center, Hospital Hill University of Kansas Hospital
Truman Medical Center, Lakewood	Centerpoint Medical Center Lee's Summit Medical Center Saint Luke's East - Lee's Summit St. Mary's Medical Center Truman Medical Center, Lakewood
University of Kansas Hospital	Research Medical Center Saint Luke's Hospital of Kansas City Shawnee Mission Medical Center Truman Medical Center, Hospital Hill University of Kansas Hospital

- Children's Mercy Hospital — As the only pediatric hospital, it is not included in any catchment area.
- Veteran's Administration Hospital — Not included in any catchment area.
- Bates County Memorial Hospital (Butler, Missouri), Cass Medical Center (Harrisonville, Missouri), Cushing Memorial Hospital (Leavenworth, Kansas), Excelsior Springs Medical Center (Excelsior Springs, Missouri), Lafayette Regional Health Center (Lexington, Missouri), Lawrence Memorial Hospital (Lawrence, Kansas), Research Belton Hospital (Belton, Missouri) and Saint John Hospital (Leavenworth, Kansas) — not included in any catchment area due to geographic distance to the metropolitan region.

- Research Medical Center Brookside Campus (formally Baptist Lutheran Medical Center) and Lee's Summit Medical Center–Summit Ridge Campus (former site for Lee's Summit Hospital) — not included in any catchment area due to limited inpatient capabilities.

* Indicates a greater than 15 minute drive time.

Approved: 3-27-02

Revised: 1/27/04

Revised: 2/15/05

Revised: 3/29/05 – Addition of Saint Luke's East - Lee's Summit Campus to catchment areas

Revised: 6/1/05 – Addition of new Trauma Only status

Revised: 3/13/07 – Addition of Centerpoint Medical Center to catchment areas and pending removal of Independence Regional Medical Center and Medical Center of Independence due to expected closure in late spring 2007. Removal of Baptist Lutheran Medical Center (now Research Medical Center Brookside Campus) due to limited inpatient capabilities.

Revised: 3/30/07 – Addition of Olathe Medical Center to Menorah Medical Center catchment area

Revised: 2/13/08 – Clarification of protocols and time frames for each EMSystem[®] status category, removal of Independence Regional Medical Center and Medical Center of Independence due to opening of Centerpoint Medical Center, plus notation of ED at Lee's Summit Medical Center – Summit Ridge Campus.

Revised: 5/21/09 – Add EMS trauma routing criteria language

Revised: 11/16/09 – Add provision to temporarily suspend "Closed to Ambulance" during region saturation