



Inter-Facility Transfers for Pediatric Patients

Intervention Bundle #3



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Introduction

BACKGROUND

The Institute of Medicine's "Emergency Care for Children, Growing Pains" report highlighted that 1 out of 3 Americans sought emergency care in 2003.¹

Approximately 27% of all emergency department (ED) visits consist of children younger than age 18;¹ 69% of all pediatric visits occur in EDs that see less than 14 children per day.² Though research has shown outcomes for critically ill and injured children are optimized at hospitals with specific pediatric resources and expertise,^{3,4} pediatric specific critical care areas are only available in 10% of all hospitals.⁵ Therefore, inter-facility transfer of critically ill and injured children from receiving emergency departments to pediatric specialty facilities is an essential component of pediatric emergency care.⁶ Yet, every effort should be made to keep children within their community, close to their medical home when appropriate.

Inter-facility transfer plans/guidelines ensure that providers move seamlessly into a coordinated plan to assure the availability of the right resources and right care at the right time. An inter-facility transfer plan/guideline consists of processes for identifying those patients deemed fit for an inter-facility transfer as well as the steps to be implemented to facilitate the safe inter-facility transfer of the patient to a specified facility with the needed resources. The need for inter-facility transfer guidelines are also paramount when planning for surge capacity during a mass casualty event.

¹ Institute of Medicine. Emergency Care for Children. Growing Pains. Washington, DC: The National Academies Press; 2007. Committee on the Future of Emergency Care in the United States Health System.

² Gausche-Hill M, Schmitz C, Lewis RJ. Pediatric preparedness of US emergency departments: a 2003 survey. *Pediatrics*. 2007;120

³ Kanter RK. Regional variation in child mortality at hospitals lacking a pediatric intensive care unit. *Critical Care Medicine* 2002;30:94Y99.

⁴ Pracht EE, Tepas JJ 3rd, Langland-Orban B, et al. Do pediatric patients with trauma in Florida have reduced mortality rates when treated in designated trauma centers? *Journal of Pediatric Surgery*. 2008;43:212Y221.

⁵ Kimberly Middleton. Advance Data. (2006) Availability of Pediatric Services and Equipment in Emergency Departments: United States, 2002-03. US Department of Health and Human Services.

⁶ Woodward GA, Insoft RM, Pearson-Shaver AL, et al. The state of pediatric interfacility transport: consensus of the second National Pediatric and Neonatal Interfacility Transport Medicine Leadership Conference. *Pediatric Emergency Care*. 2002;18:38Y43.

In 2013, the Emergency Medical Services for Children (EMSC) Program in partnership with the American Academy of Pediatrics, the American College of Emergency Physicians, and the Emergency Nurses Association launched the National Pediatric Readiness Project (NPRP) to ensure high quality emergency care for children regardless of their geographic location. The project began with a national assessment based on the 2009 “Guidelines for Care of Children in the Emergency Department,” to determine the capacity of our nation’s emergency departments to meet the needs of children.⁷ The 2013 National Pediatric Readiness Assessment had a remarkable 83% of EDs across the US participate. This was a clear indication of the nation’s desire to ensure high quality emergency care for children.

Common gaps identified included:

- Presence of physician (47.5%) and nurse (59.3%) pediatric emergency care coordinators (PECC);
- Presence of quality improvement plans that include children (45.1%);
- Presence of inter-facility transfer guidelines (70.6%).

⁷ Joint policy statement guidelines for care of children in the emergency department. Pediatrics. 2009;124:1233Y1243

SUBJECT MATTER EXPERTS

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CONSIDERATIONS

This intervention bundle was designed exclusively for sites participating in the Pediatric Readiness Quality Collaborative, and as such, this content should not be used for other purposes or by other sites without written consent from the EMSC Innovation and Improvement Center.

Each physician/practitioner must use his or her independent judgment in the management of any specific patient and is responsible, in consultation with the patient and/or the patient family, to make the ultimate judgment regarding care.

This intervention bundle may conflict with "existing" local quality improvement efforts. You are encouraged to seek support from ED and hospital leadership regarding the adoption of the proposed change strategies as standard practice for your emergency department.

Family centered care is the cornerstone of this intervention bundle. A collaboration with receiving sites and a focus on patient/family engagement will be integral for success.

Key Terms

Referring centers initiate the inter-facility transfer of a patient for specialized services and/or additional resources offered by another facility (**Receiving centers**).

BLS ambulances are staffed by providers who are trained in CPR and AED usage, basic airway management including bag-mask ventilation, basic trauma care including spinal immobilization and splint application. Most BLS providers will not administer medications during transport.

ALS ambulances are staffed by paramedic providers who are trained in advanced airway management including supraglottic and tracheal airways, airway suctioning, procedural skills including IV/IO placement, medical management of critical illness with medications via IV, IO, subcutaneous, and inhaled routes, and pain management with narcotic medications.

Critical Transport may use air or ground transport services and are typically staffed by a paramedic and nurse and/or respiratory therapist. The teams are trained in advanced airway management including ventilators and tracheostomies, medical management of critically ill patients including managing multiple continuous IV drips, blood product administration, advanced procedural skills, and critical thinking skills.

Pediatric Transport Team may use air or ground transport services and are typically staffed by a nurse with pediatric-specific training, a respiratory therapist and/or paramedic. The teams are trained in advanced airway management of children of all ages including neonates, medical management of critically ill children including managing multiple continuous IV drips, ventilators and other hardware (e.g., VP shunts, G-tubes, etc.), blood product administration, advanced procedural skills, and critical-thinking skills.

Telehealth refers to the provision of healthcare remotely via any number of telecommunication services (i.e., video conferencing) in order to provide clinical health care, patient and professional health-related education, public health and/or health administration.

Aim Statement

By December 2019, 100% of the sites implementing the inter-facility transfer bundle will have a comprehensive plan that addresses the following pediatric-specific components:

- Defined process for initiation of transfer, including the roles and responsibilities for referring and receiving centers;
- Process for initiating transfers;
- Process for selecting the appropriate receiving center;
- Process for selecting an appropriately staffed transport service;
- Process for patient transfer (including obtaining informed consent);
- Plan for transfer of copy of signed informed consent;
- Plan for transferring medical records;
- Plan for transferring personal belongings;
- Plan for providing patients and families with information regarding the transfer process along with details about the receiving center.

Quality Measures

- Structural Measure #1: Presence of an inter-facility transfer plan that encompasses all nine of the pediatric specific components
- Structural Measure #2: Established minimum criteria for patients who should be transferred (i.e., medical, surgical, and burn cases) to another facility.
- Process Measure #1: Timeliness of transfer (Median time from arrival to transport)
- Process Measure #2: Percentage of transfers that met site-specific minimum criteria
- Process Measure #3: Percentage of families who received a transfer informational packet
- Outcome Measure #1: Percentage of transferred patients who were discharged from the receiving center's emergency department*
- Outcome Measure #2: Percentage of patients that were admitted and discharged from the receiving center's inpatient/acute care units within 24-hours of arrival time*

**Optional Measures – Strongly Encouraged*

Data Collection

#	Variable / Question	Data Type	Response Value
1	Select intervention bundle for reporting period	site	1 - Weight in Kilograms / 2 - Abnormal Vitals / 3 - Inter-facility Transfers / 4 - Disaster Planning
2	Select key drivers for reporting period	site	1 - Policies and Procedures / 2 - Education / 3 - Communication & Follow-Up / 4 - Patient/Family Engagement / 5 - EMR Optimization & Technology
3	Indicate PDSA cycle number for reporting period	site	1-5 and Date
4	Smart aim achieved during reporting period	site	1 - Yes and Date/ 2 - No and Date
5	Interfacility Transfer Guidelines	site	1 - Yes (Upload) / 2 - No
6	Interfacility Transfer Guidelines Components	site	Drop down of target components
7	Established criteria for pediatric inter-facility transfer	site	1 - Yes / 2 - No
8	Established guidelines for mode of pediatric inter-facility transfer	site	1 - Yes / 2 - No
9	Patient ID	patient	Pre-populated
10	Date of Birth	patient	MM: DD: YYYY
11	Date/Time of Arrival (door time)	patient	MM: DD: YYYY hh:mm
12	Mode of Arrival	patient	1 - Ambulance, either air or ground / 2 - Walk-in, this include car, taxi, bus, or foot / 3 - Other or Unknown
13	Triage Level	patient	Site-specific
14	Triage Time	patient	MM: DD: YYYY hh:mm
15	Telehealth capabilities at site	site	1 - Yes / 2 - No
16	ICD-10 Code	patient	ICD-10 broad categories
17	Patient met criteria for transfer	patient	1 - Yes / 2 - No
18	Reason for Transfer (check all that apply)	patient	1- Age/2- Specific Specialty/3- Emergency Intervention/Procedure (i.e., diagnostic procedures/surgical procedure/sedation)/4-Critical Care/5- Mental Health/6-Disaster/7-Inpatient management/8-Trauma / 9 - Other (free text)
19	Time of 1st contact with receiving center (optional)	patient	MM: DD: YYYY hh:mm

#	Variable / Question	Data Type	Response Value
20	Time transfer services confirmed (i.e., when transporting team has been confirmed / ems or transport team contacted) (optional)	patient	MM:DD: YYYY hh:mm
21	Reason for delayed transfer (optional)	patient	1 - Availability of transfer services / 2 - Weather / 3 - Patient stabilization / 4 - Family unavailable / 5 - other (free text) / Bed availability at receiving facility
22	Formal Telehealth Consultation (video conferencing)	patient	1 - Yes / 2 - No / 3- N/A
23	Reason for telehealth	patient	1- Mental Health/2-Trauma/3-Medical Consultation
24	Time of departure from referring center	patient	MM: DD: YYYY hh:mm
25	Mode of transfer	patient	1-Air General Critical Care/2-Ground ALS/3-Ground BLS/4-Private vehicle/5-Law Enforcement/6-Ground General Critical Care/7-Other (free text) / 8 - Air Pediatric-specific Transport Team / 9 - Ground Pediatric-specific Transport Team
26	Did receiving center return Transfer Feedback Form	patient	1 - Yes / 2 - No
27	ICD-10 Code (Receiving Center) - 45 days post transfer	patient	ICD-10 broad categories
28	ED Diagnosis (Receiving Center)	patient	Free text
29	Procedures (conducted at receiving facility) (i.e., spinal tap; joint tap; airway management (intubation))	patient	1 - Diagnostic Imaging / 2 - Diagnostic Procedures / 3 - Surgical Procedures / 4 - Sedation / 5 - Other (free text)
30	Disposition time from receiving facility	patient	MM: DD: YYYY hh:mm
31	Disposition from receiving facility	patient	1 - Discharged home / 2 - Transferred to another facility / 3 - Admitted to ICU / 4 - Admitted to floor / 5- Died / 6 - Disposition to operating room
32	Referring center transfer evaluation completed by family?	patient	1 - Yes / 2 - No (if no then free text justification)
33	Family received transfer packet	patient	1 - Yes / 2 - No
34	Family score on comfort level of reason of reason for transfer?	patient	1 to 5
35	Family score on comfort level with details regarding receiving center?	patient	1 to 5
36	Family overall evaluation score	patient	1 to 5

Intervention Strategies

KEY DRIVER 1: POLICIES AND PROCEDURES

Change Strategies:

- Assess availability of pediatric-specific resources and existing gaps in the center's ability to provide comprehensive pediatric care (i.e., availability of a pediatric critical care unit, pediatric specialty care, burn unit)
- Compile a list of common pediatric diagnoses and cases that routinely warrant a inter-facility transfer
- Based on stakeholder consensus and factors listed above, establish a minimum criteria for pediatric cases that should be transferred to a receiving center
- Convene a group of key stakeholders to develop an inter-facility transfer plan that addresses the following components:
 - Defined process for initiation of transfer, including the roles and responsibilities for referring and receiving centers;
 - Process for initiating transfers;
 - Process for selecting the appropriate receiving center;
 - Process for selecting an appropriately staffed transport service;
 - Process for patient transfer (including obtaining informed consent);
 - Plan for transfer of copy of signed informed consent;
 - Plan for transferring medical records;
 - Plan for transferring personal belongings;
 - Plan for providing patients and families with information regarding the transfer process along with details about the receiving center.
- Required Task for Bundle Implementation: Development of checklist to assist care team during an actual transfer (Refer to IFT Toolkit)
- Required Task for Bundle Implementation: Provide an informational packet to family members of all children being transferred. The packet should contain -
 - Copy of signed transfer consent including reason for transfer
 - Name, address, phone number and directions to receiving center including specifics of where family is to report (admitting, ED, CCU, etc.)
 - Names of referring and accepting physician and positions at facility (i.e. ED Attending, private pediatrician, specialty physician, etc.)

KEY DRIVER 2: EDUCATION

Change Strategies:

- Develop training/educational content for care team that covers the following concepts:
 - transfer criteria and importance/need for pediatric transfers
 - preferred receiving centers and importance of family input/insurance guidance to aid choices when possible
 - patient transport modes and strategies for selecting the appropriate method for transfer
 - review transfer guidelines/checklist/family packet
- Consider virtual webinars or periodic conference calls to ensure that referring and receiving centers are apprised of changes or updates to the transfer process
- Integrate table top exercises regularly with staff to assist in reinforcement of facility transfer processes

KEY DRIVER 3: COMMUNICATION & FOLLOW-UP

Change Strategies:

- Establish a feedback loop between referring and receiving centers that includes local QI coordinator/educator for both locations
- Integrate the PRQC's Transfer Follow-Up Form into existing transfer process. This form provides specific information on patient care rendered at receiving center as well as disposition. The form will help outline which practices/actions positively impacted a transfer as well as opportunities for improvement should be noted.
- Develop a process for monitoring the return of the Follow-Up Form for all patients transferred
- During regular staff meetings, highlight lessons learned during recent inter-facility transfers and feedback from the Transfer Follow-Up Form.

- Consider including all patient transfers as sentinel events for discussion/review at QI meetings

KEY DRIVER 4: PATIENT/FAMILY ENGAGEMENT

Change Strategies:

- Create a checklist for families that outlines the transfer process and includes considerations based on the patient/family preferences
- Review existing model(s) of family transfer/informational packets
- Create family transfer/informational packets in advance and have personalized content based on facilities that are routinely used (i.e., avoid generic content)
- Work with your state's EMSC family representative to assist in the development and validation of the family transfer/informational packet.
- Integrate a feedback program, whereby families share their experiences with transfer process. Be mindful when the questionnaire/interview occurs (i.e., ensure that it is administered at a time that is respectful of patient/family concerns).

KEY DRIVER 5: EMR OPTIMIZATION & TECHNOLOGY

Change Strategies:

- Consider a telehealth consultation for assessment of need and care/resuscitation interventions prior to transfer
- Optimize EMR to include fields for decision time for transfer/time receiving center is notified
- Create electronic forms for transfer packets within hospital's patient portal (e.g., MyChart)
- Inquire about existing patient satisfaction surveys that assess transfer process (e.g., PressGaney surveys)

Resources

ESSENTIAL READING

EMSC Inter-facility Toolkit

<https://bcm.box.com/v/ifttoolkit>

<https://emscimprovement.center/resources/publications/interfacility-transfer-tool-kit/>

Coming Soon!

- PRQC Feedback Template for Referring & Receiving Sites
- Preliminary list of content for family information/transfer packet
- Template for patient/family evaluation of transfer experience