

Minimum Pediatric Care Standards for New York State Hospitals, Emergency Departments and Intensive Care Units

2015 GUIDANCE DOCUMENT



*Emergency Medical Services for
Children Advisory Committee
New York
September 2015*



**Department
of Health**

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Transfer Guidance



Department of Health

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Governor

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Commissioner

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Executive Deputy Commissioner

September 2015

Dear Hospital Administrator:

As you likely know, the State Public Health and Health Planning Council (PHHPC) adopted new minimum standards for Hospital Pediatric Care under Title 10, Section 405 of the New York Codes, Rules and Regulations (NYCRR), effective April 1, 2014.

Following adoption by the PHHPC and approval by the Commissioner of Health, the New York State Department of Health (Department) tasked the State Emergency Medical Services for Children (EMSC) Advisory Committee – established in 1998 by the Commissioner, and continued in 2006 by the Legislature and the Governor under Article 30-C of the New York State Public Health Law, to advise the Department and the Commissioner on all aspects of emergency health care for children – with developing a guidance document to assist hospitals in meeting these new regulations, as well as specific guidelines to assist them in effecting interfacility transfer when needed.

This document, *Minimum Pediatric Care Standards for New York State Hospitals, Emergency Departments and Intensive Care Units: 2015 Guidance Document*, and its appendix, *Pediatric Consultation and Interfacility Transfer Guidelines*, were designed to meet this charge. The Guidance Document recapitulates the new pediatric regulations, and provides detailed recommendations from the State EMSC Advisory Committee regarding their implementation. The Appendix contains a wealth of information regarding the need for, process of and conditions that should precipitate consultation with pediatric medical and surgical subspecialists prior to potential transfer, as well as the appropriate procedures for such transfer, should it be determined by the sending and receiving physicians that transfer to a hospital with high-level pediatric resources, such as a Pediatric Intensive Care Unit (PICU), Pediatric Trauma Center (PTC), or other high level pediatric resource, is advisable.

A key component of the new minimum standards for Hospital Pediatric Care is a new Section 402.22(b) describing minimum standards for Pediatric Intensive Care Unit (PICU) Services. These new minimum standards were developed in the face of conclusive scientific evidence, which is summarized in the attached report, *Pediatric Regional Critical Care Hospitals: White Paper on Evidence and Improvement Opportunities in New York*, that critical care for high-risk pediatric conditions – such as severe sepsis, septic shock, and major trauma, among numerous other conditions, including those cited in the *Pediatric Consultation and Interfacility Transfer Guidelines* referred to above – achieves better outcomes when provided in higher volume PICUs.

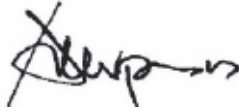
The Department recognizes the complexity of implementing these new regulations. However, it also recognizes that the need to provide the right patient with the right care, at the right place, at the right time when a health emergency arises, is a benefit we must extend to our youngest, most vulnerable citizens. We wish you and your staff all possible success in implementing these regulations as soon as possible, and stand ready to offer any assistance you may require in reaching this worthy goal.

Should any questions arise, please contact Martha Gohlke, EMSC Program Manager, Bureau of Emergency Medical Services and Trauma Systems (BEMSTS), by telephone at (518) 402-0996, or e-mail at martha.gohlke@health.ny.gov. Ms. Gohlke will ensure that your question is directed to the appropriate expert and receives a timely and helpful response. We thank you in advance for your commitment to and dedication in meeting the vital emergency health care needs of all New York State's children.

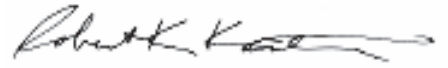
Sincerely,



Howard A. Zucker, M.D., J.D.
Commissioner of Health



Arthur Cooper, M.D., M.S.
Chair, EMSC Advisory Committee



Robert K. Kanter, M.D.
Task Force Lead

Minimum Pediatric Care Standards for New York State Hospitals, Emergency Departments and Intensive Care Units

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The Federal Emergency Medical Services for Children (EMSC) Program – established in 1984 under Section 1910 of the Public Health Service Act, 42 USC 300w-9, by Public Law 98-555, authored by Senators Daniel Inouye (D-Hawaii), Orrin Hatch (R-Utah), and Lowell Weicker (R-Connecticut) – recognizes six phases of emergency medical services (EMS) for children: prevention, access (911), prehospital (EMS) care, emergency department care, in-hospital care (critical care and acute care), and rehabilitation. As envisaged, the program seeks to support the medical needs of the emergently ill or injured child across the entire spectrum of acute health care. The aim of the EMSC program is to ensure that, with respect to emergency care, every child should receive the right care, in the right place, at the right time. Numerous studies, most recently the Pediatric Readiness Project conducted by the Federal EMSC Program, document numerous ongoing shortfalls in the facilities, equipment, and staffing needed to care for acutely ill and injured children throughout the United States, including New York State.¹ For this reason, the New York State Department of Health supported the efforts of the State EMSC Advisory Committee – established in 1998 by the Commissioner of Health and continued under Article 30-C of the New York State Public Health Law, authored by Assembly member Richard Gottfried (D-New York) and Senator Kemp Hannon (R-Garden City) – in adopting minimum regulatory standards for hospitals to address these vital, unmet needs.

These new regulations, contained in Part 405 of Title 10 of the New York Codes, Rules, and Regulations (NYCRR), were designed to meet the intent of the Federal guidelines for EMSC, are consistent with appropriate pediatric professional specialty/subspecialty guidelines, and are effective April 1, 2014. While the majority of these new regulations pertain to pediatrics, in some instances the new regulations pertain to patients of all ages. The sections of these new regulatory standards that specifically relate to pediatrics are indicated in **bolded font** (new language is underlined; existing language is not underlined). Following these regulatory standards are recommendations from the State EMSC Advisory Committee intended to provide hospitals with guidance and suggestions for compliance with these new regulations.

Additionally, contained in the Appendices to this document are general guidelines from the State EMSC Advisory Committee regarding pediatric consultation and interfacility transfer, and specific guidelines from the State Trauma Advisory Committee regarding interfacility transfer of seriously injured pediatric trauma patients.

¹Accessible at http://www.pediatricreadiness.org/State_Results/New_York.aspx.

Part I

Hospital Inpatient Services for Pediatric Patients

Part I of this Guidance Document reviews the new regulatory standards that relate to hospital inpatient services for pediatric patients. These new regulatory standards reflect the Department's position that pediatric hospital inpatient services for children are sufficiently different from adults that they merit separate description. Again, while the majority of these new regulations pertain to pediatrics, in some instances the new regulations pertain to patients of all ages. The following guidance is provided by the State EMSC Advisory Committee, at the request and with the approval of the Department, to assist hospitals in implementing these regulations:

405.1 Introduction.

(e) The requirements of this Part relating to patient care and services shall apply to patients of all ages, newborns, pediatric, and geriatric patients.

EMSC Committee Recommendations: This requirement emphasizes the need for hospitals caring for pediatric patients of all ages, including newborns, infants, children, and adolescents, to have, in all pediatric care areas, the appropriate staff, space, and size-appropriate equipment to care for them.

405.6 Quality assurance program.

(b) The activities of the quality assurance committee shall involve all patient care services and shall include, as a minimum:

(1) review of the care provided by the medical and nursing staff and by other health care practitioners employed by or associated with the hospital. Such review shall include a determination that the hospital is admitting only those patients for whom it has appropriate staff, resources, and equipment, and transferring those patients for whom the hospital does not have the capability to provide care, except under conditions of disasters and/or emergency surge that may require admissions to provide care to those patients;

EMSC Committee Recommendations: This regulation applies to all patients, but is especially important for pediatric patients, because it emphasizes the need for hospitals caring for pediatric patients to assure ongoing and focused reviews of pediatric care, in all areas where pediatric patients are cared for (e.g., pediatric inpatient units, surgical services and anesthesia, radiologic and nuclear medicine services, emergency services, outpatient services, pediatric intensive care units, etc.). Emphasis of the reviews should include not only the appropriateness of actual care rendered, but also whether transfer to a facility with more pediatric resources and experience would have been more appropriate.

405.7 Patients' rights.

(d) Each hospital shall be required to post in conspicuous place and provide a pediatric patient's parent or other medical decision maker with a copy of Parent's Bill of Rights advising that, at a minimum and subject to laws and regulations governing confidentiality, that in connection with every hospital admission or emergency room visit:

- (i) The hospital must ask each patient or the patient’s representative for the name of his or her primary care provider, if known, and shall document such information in the patient’s medical record;**
- (ii) The hospital may admit pediatric patients only to the extent consistent with their ability to provide qualified staff, space, and size appropriate equipment necessary for the unique needs of pediatric patients.**
- (iii) To the extent possible given the patient’s health and safety, the hospital shall allow at least one parent/guardian to remain with the patient at all times.**
- (iv) All test results completed during the patient’s admission or emergency room visit will be reviewed by a physician, physician assistant or nurse practitioner who is familiar with the patient’s presenting condition.**
- (v) Patients may not be discharged from the hospital or emergency room until any tests that could reasonably be expected to yield “critical” value results – results that suggest a life-threatening or otherwise significant condition such that it requires immediate medical attention – are reviewed by a physician, a physician assistant (PA) and/or nurse practitioner (NP) and are communicated to the patient, his or her parents or other decision-makers, as appropriate.**
- (vi) Patients may not be discharged until they receive a written discharge plan, which will also be verbally communicated to patients, their parents, or other medical decision-makers, which will identify critical value results of laboratory or other diagnostic tests ordered during the patient’s stay and identify any other tests that have not yet been concluded.**
- (vii) The communication of critical value results and the discussion of the discharge plan must be accomplished in a manner that reasonably assures that the patient, the parents, or other medical decision makers understand the health information provided in order to make appropriate health decisions.**
- (viii) Hospitals shall provide all lab results to the patient’s primary care provider, if known.**
- (ix) A patient, his or her parent or other medical decision maker has the right to request information about the diagnosis, possible diagnoses that were considered and complications that could develop as well as information about any contact that was made with the patient’s primary care provider.**
- (x) On discharge, the hospital must provide a patient, his or her parent or other medical decision maker a phone number that the patient, his or her parent or other medical decision maker could call for advice in the event that complications or questions arise.**

EMSC Committee Recommendations: These requirements emphasize that hospitals providing care for pediatric patients should be engaged in the practice of patient- and family-centered care. Patient- and family-centered care for pediatric patients recognizes the family being the child’s primary source of strength and support. Since the focus is on participation and collaboration, patient- and family-centered care means working with patients and families rather than doing to and for them. Patient- and family-centered care is an approach to the planning, delivery and evaluation of health care that is grounded in mutually beneficial partnerships among health care providers, patients, and families. It facilitates complete, concise, and clear communication with

parents or other medical decision makers about their child’s medical condition and needs. It also offers a framework within which to examine policies, programs, and practices. It recognizes the importance of meeting the psychosocial and developmental needs of children and the role of their families in promoting the health and well-being of their children. It is guided by four concepts: dignity and respect, informational sharing, participation and collaboration. The ultimate goal is to empower each child and family to discover their own strengths, build confidence, and make choices and decisions about their health.²

In the context of patient- and family-centered care, this requirement particularly emphasizes the importance of communicating to families and their children’s primary care providers the findings, diagnoses, recommended medications, and critical lab results that pertain to their children, including those that are still pending, as well as a suitable discharge plan including information on how to access a health care provider in the event of complications or questions. The importance of the primary care provider is especially crucial in assisting families with ongoing coordination of care and accurate interpretation of information.

405.9 Admission/discharge.

(b) Admission.

(7) Pediatrics. (i) The hospital shall admit pediatric patients consistent with its ability to provide qualified staff, space, and size appropriate equipment necessary for the unique needs of pediatric patients. The hospital shall establish a separate pediatric unit if the hospital regularly has 16 or more pediatric patients at one time or if pediatric patients cannot be adequately cared for in other than separately certified pediatric beds. If a hospital cannot meet these requirements the hospital must develop criteria and policies and procedures for transfer of pediatric patients.

(ii) Hospitals maintaining certified pediatric beds shall assure that admission to those beds is limited to patients who have not yet reached their 21st birthday except in instances when there are no other available beds within the hospital. In such instances, the hospital shall afford priority admission to the pediatric bed to patients 20 years of age or younger.

(iii) Children under the age of 14 shall not be admitted to a room with patients 21 years of age or over except with the knowledge and agreement of the child's attending practitioner and parent or guardian and the concurrence of the other patients occupying the room and their attending practitioners.

(iv) In the event a separate unit is not available, arrangements for the admission of all children shall be made consistent with written policies and procedures to ensure the safety of each patient.

EMSC Committee Recommendations: These requirements emphasize the need for early transfer of pediatric patients for which a hospital cannot provide sufficient staff, space, and size appropriate equipment for adequate pediatric care. For additional guidance regarding specific pediatric conditions necessitating pediatric interfacility transfer, and the consultation and transfer

²American Academy of Pediatrics Committee on Hospital Care and Institute for Patient- and Family-Centered Care. Patient- and family-centered care and the pediatrician’s role. *Pediatrics* 2012;129(2):394-404. Accessible at <http://pediatrics.aappublications.org/content/129/2/394>.

process, see the Appendix to this Guidance Document, *Pediatric Consultation and Interfacility Transfer Guidelines*, as well as the Federal EMSC Program Resource, *Inter Facility Transfer Tool Kit for Pediatric Patients*.³

(v) The hospital shall develop policies and procedures enabling parents/guardians to stay with pediatric patients. To the extent possible given the patient’s health and safety, the hospital shall allow at least one parent/guardian to remain with the patient at all times.

EMSC Committee Recommendations: This requirement emphasizes the importance of patient- and family-centered care for pediatric patients, and that such care should be available 24 hours/day, 7 days/week.

405.12 Surgical Services.

(a)(6) Precautions shall be clearly identified in written policies and procedures specific to the department and the post anesthesia care unit (PACU) and include but are not limited to:

(a)(6)(iii) availability in the operating room suites and PACU of appropriate resuscitation, airway and monitoring equipment including a resuscitation cart with age and size appropriate medications, equipment and supplies;

(b) Operation and service delivery. Policies governing surgical services shall be designed to assure the achievement and maintenance of generally accepted standards of medical practice and patient care. The policies shall assure that service and equipment routinely available in the operating suite and PACU are age and size appropriate.

EMSC Committee Recommendations: These requirements emphasize the need for age and size appropriate medications, equipment, and supplies to be available in all operating room suites and post anesthesia care units (PACUs) caring for patients of *all ages, including pediatric patients*.

405.13 Anesthesia

(2)(iv) All equipment and services provided shall be age and size appropriate.

EMSC Committee Recommendations: This requirement emphasizes the need for age and size appropriate anesthesia equipment and services to be immediately available in all areas where anesthesia is provided for patients of *all ages, including pediatric patients*.

405.14 Respiratory Care Services.

(b)(5) All equipment and services provided shall be age and size appropriate.

EMSC Committee Recommendations: This requirement emphasizes the need for age and size appropriate respiratory care equipment and services in all areas where respiratory care is provided for patients of *all ages, including pediatric patients*.

405.15 Radiologic and nuclear medicine services.

(3) Safety for patients and personnel. Written policies and procedures shall be developed and implemented and available for review. The policies and procedures for newborns and

³Emergency Medical Services for Children National Resource Center. *Inter Facility Transfer Tool Kit for Pediatric Patients*. Accessible at http://www.emscnrc.org/files/PDF/EMSC_Resources/Inter_Facility_TransferTool_Kit.zip.

pediatric patients shall include standards for clinical appropriateness, appropriate radiation dosage and beam collimation, image quality and patient shielding. A policy and procedure shall be developed to ensure that the practitioner's order for an imaging study is specific as to the body part(s) that are to be imaged.

Quality improvement audits shall verify that these policies and procedures are being followed. Quality improvement activities shall include a review of the adequacy of diagnostic images and interpretations.

(3)(iii) Personnel shall be instructed in radiation safety principles and practices. The radiation safety principles shall be adequate to ensure compliance with all generally accepted standards of practice as well as pertinent laws, rules and regulations. Policies and procedures shall be developed to minimize the radiation exposure that is necessary to produce high quality imaging studies on patients of all ages.

(4) Personnel. The hospital shall provide qualified personnel adequate to supervise and conduct the services. For radiologic tests, the following personnel standards shall apply for the purposes of this subdivision:

(4)(v) The chief of radiology, in conjunction with the radiation safety officer, shall ensure that all practitioners who utilize ionizing radiation equipment within the hospital are properly trained in radiation safety procedures for patients of all ages.

EMSC Committee Recommendations: The preceding requirements emphasize the need to assure that pediatric imaging be conducted in a manner consistent with currently accepted pediatric radiological safety standards, such as the Image Gently® protocols promulgated by the Alliance for Radiation Safety in Pediatric Imaging.^{SM 4}

405.17 Pharmaceutical services.

(a)(2)(i) For patients of all ages weight shall be measured in metric units. Up-to-date drug information reference systems relating to drug interactions, drug therapies, side effects, toxicology, dosage, indications for use, and routes of administration are available to the professional staff. Pediatric dosing resources shall include age and size appropriate fluid and medication administration and dosing. Pediatric dosing must be weight-based, should include the calculated dose, the dosing determination, such as the dose per weight (e.g., milligrams per kilogram) or body surface area, to facilitate an independent double check of the calculation, and should not exceed adult maximum dosage, or in emergencies, length-based.

EMSC Committee Recommendations: This requirement emphasizes the need for careful calculation and double checking of pediatric drug and fluid doses prior to administration. It also stipulates that the metric system must be used in lieu of the English system for measurement of weight because confusion between metric (per kilogram) and English (per pound) units has been shown by the Institute for Safe Medication Practices to be the main reason for medication errors in children.

⁴The Alliance for Radiation Safety in Pediatric Imaging.SM Image gently.[®] Accessible at <http://www.imagegently.org>.

405.19 Emergency services.

(b)(2) At least one clinician on every shift must have the skills to assess and manage a critically ill or injured pediatric patient and be able to resuscitate an infant or child. The emergency service shall be directed by a licensed and currently registered physician who is board-certified or board-admissible for a period not to exceed five years after the physician first attained board admissibility in emergency medicine, surgery, internal medicine, pediatrics or family practice, and who is currently certified in advanced trauma life support (ATLS), or has current training and experience equivalent to ATLS. Such physician shall also have successfully completed a current course in advanced cardiac life support (ACLS) and pediatric advanced life support (PALS) or have had current training and experience equivalent to ACLS and PALS. A licensed and currently registered physician who is board-certified or board-admissible in psychiatry for a period not to exceed five years after the physician first attained board-admissibility, in psychiatry may serve as psychiatrist director of a separately operated psychiatric emergency service. Directors of separately operated psychiatric emergency services need not be qualified to perform ATLS, ACLS and PALS or have current training and experience equivalent to ATLS, ACLS and PALS.

EMSC Committee Recommendations: This requirement emphasizes the need for emergency department and emergency service physicians, physician assistants, nurse practitioners, and nurses to have current (up-to-date) education and training in pediatric resuscitation. PALS must be taken every two years to maintain current certification.

(c)(5) The emergency service, in conjunction with the discharge planning program of the hospital, shall develop and implement written policies and procedures, including written patient criteria and guidelines, for transfer of those patients for whom the hospital does not have the capability to care. Such policies and procedures shall specify the circumstances, the actions to be taken, and the appropriate contact agencies and individuals to accomplish adequate discharge planning for persons in need of post emergency treatment or services, but not in need of inpatient hospital care.

EMSC Committee Recommendations: This requirement emphasizes the need for early transfer of patients of *all ages, including pediatric patients*, for which a hospital cannot provide sufficient staff, space, and size appropriate equipment for adequate pediatric care. For additional guidance regarding care of children in the emergency department, including recommendations for the appropriate staff, space, and size appropriate equipment for adequate pediatric care, see the Federal EMSC Program Checklist, “Guidelines for Care of Children in the Emergency Department,” based on the American Academy of Pediatrics (AAP), American College of Emergency Physicians (ACEP), and Emergency Nurses Association (ENA) “Joint Policy Statement – Guidelines for Care of Children in the Emergency Department.”^{5,6} For additional guidance regarding specific pediatric conditions necessitating pediatric interfacility transfer, and the consultation and transfer process, see the Appendix to this Guidance Document,

⁵Accessible at <http://www.pediatricreadiness.org/files/PDF/Checklist.pdf>.

⁶American Academy of Pediatrics Committee on Pediatric Emergency Medicine, American College of Emergency Physicians Pediatric Committee, Emergency Nurses Association Pediatric Committee: Joint policy statement – guidelines for care of children in the emergency department. *Pediatrics* 2009;124(4):1233-1243. Accessible at <http://pediatrics.aappublications.org/content/124/4/1233>.

Pediatric Consultation and Interfacility Transfer Guidelines, as well as the Federal EMSC Program Resource, *Inter Facility Transfer Tool Kit for Pediatric Patients*.⁷

(d)(1)(i) The emergency services attending physician shall meet the minimum qualifications set forth in either clauses (a) or (b) of this subparagraph.

(a) The emergency services attending physician shall be a licensed and currently registered physician who is board-certified in emergency medicine, surgery, internal medicine, pediatrics or family practice and who is currently certified in advanced trauma life support (ATLS) or has current training and experience equivalent to ATLS. Such physician shall also have successfully completed a course and be current in advanced cardiac life support (ACLS) and pediatric advanced life support (PALS) or have had current training and experience equivalent to ACLS and PALS. A licensed and currently registered physician who is board-certified in psychiatry may serve as psychiatrist attending in a separately operated psychiatric emergency service. A licensed and currently registered physician who is board-admissible in one of these specialty areas and is currently certified in ATLS or who has current training and experience equivalent to ATLS and has successfully completed a course and is current in ACLS and PALS or has had current training and experience equivalent to ACLS and PALS, may be designated as attending physician for a period not to exceed five years after the physician has first attained board-admissibility. The requirement to be qualified to perform ATLS, ACLS and PALS shall not be applicable to qualified psychiatrist attendings in a separately operated psychiatric emergency service. Physicians who are board-certified or admissible, for a period not to exceed five years after the physician first attained board-admissibility, in other specialty areas may be designated as attending physicians for patients requiring their expertise.

(b) The emergency services attending physician shall be a physician who:

(1) is licensed and currently registered;

(2) has successfully completed one year of post-graduate training;

(3) has, within the past five years, accumulated 7,000 documented patient contact hours or hours of teaching medical students, physicians-in-training, or physicians in emergency medicine. Up to 3,500 hours of documented experience in hospital-based settings or other settings in the specialties of internal medicine, family practice, surgery or pediatrics may be substituted for the required hours of emergency medicine experience on an hour-for-hour basis;

(4) has acquired in each of the last three years, an average of fifty hours or more per year of continuing medical education pertinent to emergency medicine or to the specialties of practice which contributed to meeting the 7,000 hours requirement specified in subclause (3) of this clause;

(5) is currently certified in ATLS or has current training and experience equivalent to ATLS; and

(6) has successfully completed a course and is current in advanced cardiac life support (ACLS) and pediatric advanced life support (PALS) or has had current training and experience equivalent to ACLS and PALS.

⁷Emergency Medical Services for Children National Resource Center. *Inter Facility Transfer Tool Kit for Pediatric Patients*. Accessible at http://www.emscnrc.org/files/PDF/EMSC_Resources/Inter_Facility_TransferTool_Kit.zip.

(2)(ii) Emergency services supervising nurses shall be licensed and currently registered and possess current, comprehensive knowledge and skills in emergency health care. They shall have at least one year of clinical experience, be able to demonstrate skills and knowledge necessary to perform basic life support measures, and be current in ACLS and PALS or have current training and experience equivalent to ACLS and PALS;

(2)(iii) Registered professional nurses in the emergency service shall be licensed and currently registered professional nurses who possess current, comprehensive knowledge and skills in emergency health care. They shall have at least one year of clinical experience, have successfully completed an emergency nursing orientation program and be able to demonstrate skills and knowledge necessary to perform basic life support measures. Within one year of assignment to the emergency service, each emergency service nurse shall be current in ACLS and PALS or have current training and experience equivalent to ACLS and PALS.

(3)(iii)(a) the licensed physician assistants and the nurse practitioners in the emergency service shall be current in ACLS and PALS or have had current training and experience equivalent to ACLS and PALS when determined necessary by the hospital to meet anticipated patient needs or when a physician assistant or nurse practitioner is serving as the sole practitioner on duty in a hospital with less than 15,000 unscheduled emergency visits per year;

EMSC Committee Recommendations: The preceding requirements emphasize the need for emergency department and emergency service physicians, physician assistants, nurse practitioners, and nurses to have current (up-to-date) education and training in pediatric resuscitation. PALS must be taken every two years to maintain current certification.

It is suggested that emergency department and emergency service physicians, physician assistants, nurse practitioners, and nurses who are not board-certified or board-admissible in their respective fields should, at a minimum, also have successfully completed a course in pediatric emergency care, such as the *Advanced Pediatric Life Support (APLS) Course* of the American Academy of Pediatrics and the American College of Emergency Physicians, the *Emergency Nursing Pediatric Course (ENPC)* of the Emergency Nurses Association, or an equivalent course.

(e)(3) Hospitals that have limited capability for receiving and treating patients in need of specialized emergency care shall develop and implement standard descriptions of such patients, and have triage and treatment protocols including consultation and formal written transfer agreements with hospitals that are approved as being able to receive and provide definitive care for such patients. Patients in need of specialized emergency care shall include, but not be limited to:

(e)(3)(iii) high risk maternity patients or neonates or pediatric patients in need of higher level care;

(f) (iv) adequacy of staff training and continuing education to meet the needs of patients of all ages presenting for emergency services.

EMSC Committee Recommendations: The preceding requirements emphasize the need for pre-transfer consultation with appropriate pediatric medical and surgical subspecialists (e.g., pediatric emergency medicine physicians, pediatric critical care medicine physicians, pediatric hospital medicine physicians, pediatric transport medicine physicians, pediatric hematology/oncology

physicians, pediatric surgeons, etc.). Such physicians typically practice in hospitals with pediatric intensive care units (PICUs) approved by the Department as able to receive and provide definitive care for critically ill or injured neonatal and/or pediatric patients. When patient transfer is deemed appropriate by the sending physician in consultation with the receiving pediatric subspecialist physician, such transfer should be effected in a timely manner by appropriate transport personnel, consistent with the provisions Federal *Emergency Medical Treatment and Active Labor Act* (EMTALA), 42 USC 1395dd, enacted in 1986 under Section 1867 of the Social Security Act by Section 9121 of Public Law 99-272, the Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1995, as well as the needs and resources of the involved regional emergency medical services (EMS) systems as determined in collaboration with the appropriate regional emergency medical advisory committees (REMACs). For additional guidance regarding the consultation and transfer process, as well as specific pediatric conditions for which interfacility transfer may be deemed appropriate, see the Appendix to this Guidance Document, *Pediatric Consultation and Interfacility Transfer Guidelines*, as well as the Federal EMSC Program Resource, *Inter Facility Transfer Tool Kit for Pediatric Patients*.⁸

It is suggested that hospitals with PICUs approved by the Department as able to receive and provide definitive care for critically ill and injured pediatric patients consider establishing dedicated pediatric telephone and/or telemedicine consultation services, accessible via a single point of contact, to facilitate timely treatment and transfer of such patients as appropriate.

405.20 Outpatient services.

(2) The governing body and the medical staff shall develop, maintain and periodically review a list of surgical procedures which may be performed in the service. The medical staff shall assure that procedures performed in the service conform with generally accepted standards of professional practice, in accordance with the competencies of the medical and professional staff that have privileges in the hospital-based ambulatory surgery service, and are appropriate in the facilities and consistent with the equipment necessary to meet the needs of all patients. The medical staff shall, based upon its review of individual medical staff qualifications, recommend to the governing body specific surgical procedures which each practitioner is qualified to perform in the hospital-based ambulatory surgery service.

EMSC Committee Recommendations: This requirement emphasizes the need for hospital-based ambulatory surgical services to have the appropriate staff, space, and size appropriate equipment for patients of all ages, including pediatric patients, and perform only those procedures that do not generally require the immediate availability and support of a pediatric inpatient unit or pediatric intensive care unit.

In particular, it is essential that where pediatric patients are cared for in hospital based ambulatory surgical settings, staff have ongoing training and competency in pediatric resuscitation such as can be received through PALS. In addition, to optimize the comfort and safety of pediatric patients undergoing surgical procedures, expertise in pediatric anesthesia and sedation should be utilized for these patients.

⁸Emergency Medical Services for Children National Resource Center. *Inter Facility Transfer Tool Kit for Pediatric Patients*. Accessible at http://www.emscnrc.org/files/PDF/EMSC_Resources/Inter_Facility_TransferTool_Kit.zip.

Part II

Pediatric Intensive Care Units

Part II of this Guidance Document reviews the new regulatory standards that relate to pediatric intensive care units. They describe the minimum patient care standards for pediatric intensive care units (PICUs) in New York State. While not intended to supplant advisory guidelines developed by professional societies comprised of pediatric medical, surgical, and nursing professionals engaged in intensive care (also known as critical care) – which hospitals caring for critically ill or injured children are advised to consult in establishing or maintaining, and equipping and staffing, their PICUs (such as those promulgated by the American Academy of Pediatrics and the Society of Critical Care Medicine⁹) – these regulations are meant to describe the minimum level of pediatric intensive care that must be offered to critically ill and injured children for a hospital to be approved to provide pediatric intensive care by the New York State Department of Health. The following guidance is provided by the New York State Department of Health Emergency Medical Services for Children (EMSC) Advisory Committee to assist hospitals in implementing these regulations:

405.22 Critical Care and Special Care Services

(b) Pediatric Intensive Care Unit (PICU) Services.

EMSC Committee Recommendations: Multidisciplinary care in the PICU differs from that provided in other types of intensive care units in that it is patient- and family-centered. The basic tenets of patient- and family-centered care include: respectful partnerships, open communication, shared decision-making, and strength-based approaches. The benefits of patient- and family-centered care are substantial, and include: improved health outcomes; lower health care costs; more effective allocation of resources; reduced medical errors and litigation; greater patient, family, and professional satisfaction; increased patient/family self-efficacy/advocacy; improved medical/health education; and improved understanding of social, ethnic, and cultural diversity. Several examples of this concept include encouraging patient and family participation in rounds, and changing the concept of families as visitors, such as having 24 hour/day, 7 day/week visiting by appropriate family members. One goal of caring for critically ill pediatric patients is to ensure that their care is coordinated and/or integrated across all elements of their medical home, i.e., all elements of the health care system (e.g., subspecialty care clinics, hospitals, home health agencies, nursing homes) and the patient’s community (e.g. family, schools, public and private community-based services) supporting the care of the child, in a culturally and linguistically appropriate way. PICUs must also show commitment to transparency, safety, and quality. One of the best ways to accomplish this is to encourage multidisciplinary team rounds. Such rounds will encourage day-to-day interactions and dialogue among patients, families, and their multiple health care providers.

⁹Rosenberg DI, Moss MM, Section on Critical Care, Committee on Hospital Care. Guidelines and levels of care for pediatric intensive care units. *Pediatrics* 2004;114(4):1114-1125. Accessible at <http://pediatrics.aappublications.org/content/114/4/1114>. (These guidelines are currently under revision.)

(1) Definitions.

(1) PICU. A PICU is a physically separate unit that provides intensive care to pediatric patients (infants, children and adolescents) who are critically ill or injured. A PICU must be staffed by qualified practitioners competent to care for critically ill or injured pediatric patients.

EMSC Committee Recommendations: Critical care is best provided in the environment of an intensive care unit. However, due to the unique anatomic, physiologic, behavioral, and developmental differences between children and adults, as well as between children and neonates, an intensive care unit that cares for adults or neonates is not ideally suited to the care of critically ill and injured children. As such, a PICU must be a physically separate intensive care unit, not a part or subdivision of a general intensive care unit or a neonatal intensive care unit, and must be approved by the Department to provide patient care services to critically ill and injured pediatric patients only, across the entire pediatric age range (infants, children, and adolescents). Hospitals may determine the upper age limit of critically ill pediatric patients to receive care in the PICU.

It is expected that *all* critically ill or injured patients will receive whatever intensive care they may require in a PICU. In accordance with the standards set forth in the American College of Surgeons' *Resources for Optimal Care of the Injured Patient*, which all pediatric trauma centers in New York State are obligated to follow, it is required that all critically injured pediatric patients will receive whatever intensive care they may require in a PICU.

(2) Qualified practitioner. Qualified practitioner as referred to in this section shall mean a practitioner functioning within his or her scope of practice according to State Education Law who meets the hospital's criteria for competence, credentialing and privileging practitioners in the management of critically ill or injured pediatric patients.

EMSC Committee Recommendations: Qualified practitioners are those medical, surgical, and nursing personnel deemed competent by the hospital to provide intensive care to critically ill and injured children, and who are credentialed by the hospital to provide such care. Senior staff practitioners should be board-certified in their respective fields. Junior staff practitioners should be board-admissible in their respective fields. Evidence of ongoing participation in maintenance of certification and other required training should be demonstrable. Examples of appropriate board certifications would include, but not necessarily be limited to:

- Pediatricians: pediatrics plus pediatric critical care medicine (American Board of Pediatrics)
- Surgeons: pediatric surgery plus surgical critical care (American Board of Surgery)
- Anesthesiologists: pediatric anesthesiology plus anesthesiology critical care (American Board of Anesthesiology)
- Nurses: critical care registered nursing with focus on pediatrics (American Association of Critical Care Nurses Certification Corporation)

It is suggested that qualified practitioners who are not board-certified or board-admissible in their respective fields should, at a minimum, have successfully completed a course in pediatric critical care, such as the *Pediatric Fundamental Critical Care Support (PFCCS)* Course of the Society of Critical Care Medicine, or an equivalent course.

Medical directors must achieve certification within 5 years of their initial acceptance into the certification process and must maintain active certification in critical care.

(2) General. (i) A PICU must be approved by the Department. The governing body of a hospital that provides PICU services must develop written policies and procedures for operation of the PICU in accordance with generally accepted standards of medical care for critically ill or injured pediatric patients. The PICU shall:

EMSC Committee Recommendations: A PICU must be approved by the Department to provide patient care to critically ill and injured children, through an attestation process to assure the availability of appropriate clinical services, and through a review process which may include an onsite inspection prior to approval. The governing body of the hospital is responsible to assure that written policies and procedures for the medical and environmental operation of the PICU are developed and implemented.

(a) Provide multidisciplinary definitive care for a wide range of complex, progressive, and rapidly changing medical, surgical, and traumatic disorders occurring in pediatric patients;

EMSC Committee Recommendations: Many pediatric patients who are admitted to the hospital require a higher level of care than routine inpatient general care. Such patients may require frequent monitoring of vital signs, which may include invasive monitoring, in addition to intensive medical, surgical, and nursing interventions. Under the new regulations for Pediatric Hospital Inpatient Services that precede these new regulations for Pediatric Intensive Care Units, “a hospital shall only admit pediatric patients consistent with its ability to provide qualified staff, space and size appropriate equipment.” As such, it is expected that all critically ill or injured pediatric patients will receive intensive care they may require in a PICU.

Admission to a PICU is guided by physiologic parameters appropriate to the respective organ system involved. Examples include patients requiring (1) respiratory assistance, including but not necessarily limited to endotracheal intubation, mechanical ventilation, continuous positive airway pressure (CPAP) or bi-level positive airway pressure (BiPAP), and frequent or continuous nebulized medications, (2) monitoring of dysrhythmias, (3) infusion of vasoactive drugs, (4) patients with altered mental status, (5) patients with acute inflammation or infections of the central nervous system, (6) patients with moderate to severe head injury, (7) severe sepsis or septic shock, (8) metabolic disorders, including but not necessarily limited to diabetic ketoacidosis (DKA) and inborn errors of metabolism), (9) patients who have undergone surgical procedures who require multidisciplinary interventions and frequent monitoring, such as patients who have undergone thoracic surgery, cardiovascular surgery, upper/lower airway surgery, craniofacial surgery, and (10) patients who have sustained multiple traumatic injuries, including but not necessarily limited to major thoracic or abdominal trauma.

In order to provide multidisciplinary definitive care for such critically ill and injured patients in the PICU, it is essential that (1) the multiple disciplines which are necessary to provide such care have specific pediatric expertise in their respective areas, and (2) there is clear evidence of ongoing integration of the disciplines as they provide care to the infant or child. Examples of staff representing these disciplines include physicians, registered nurses, respiratory therapists, pharmacists, nutritionists, and social workers. The multidisciplinary PICU team should be able to demonstrate that it employs a patient-family centered approach to the care of pediatric patients, since this allows patients (where possible) and their families to have an active role in the care process.

(b) Have a minimum average annual pediatric patient number of 200/year;

EMSC Committee Recommendations: Scientific research demonstrates that the outcomes of critically ill and injured children in the PICU correlate directly with the average annual volume of critically ill and injured children receiving care. A minimum average of 200 PICU admissions/year is the lower threshold deemed necessary for acceptable outcomes. These should include patients across the entire pediatric age range, including infants, children and adolescents.

(c) Have age and size appropriate equipment available in the unit;

EMSC Committee Recommendations: Equipment and drugs required to provide critical care to infants, children and adolescents (especially for all weights < 40 kg), must be immediately available in the PICU. Examples of such equipment include, but are not limited to, infant/child pulse oximeter sensors, blood pressure cuffs, and cardiopulmonary monitor leads, monitors with pediatric alarm ranges, infant/pediatric capable monitor/defibrillators, infant/pediatric oxygen delivery devices, mechanical ventilators that can provide infant/pediatric volumes/pressures, peripheral intravenous cannulas (e.g., 18, 20, 22, and 24 gauge catheters), intraosseous devices (e.g., 15 and 18 gauge needles), and central intravenous lines (e.g., 3 and 4 French catheters), as well as infusion pumps that can deliver intravascular medications at a rate less than 1 mL/hr, infant/pediatric inflation bags and endotracheal tubes, infant/pediatric chest tubes, infant warmers, cribs, etc. Bedside monitors in the PICU must have the capability for continuous monitoring of body temperature, heart rate and rhythm, respiratory rate, hemodynamic pressure(s), oxygen saturation (SpO₂), and partial pressure of end-tidal carbon dioxide (ETCO₂).

(d) Provide medical oversight for interhospital transfers of critically ill or injured patients during transfer to the receiving PICU.

EMSC Committee Recommendations: Many patients requiring admission to a PICU are transported from other hospitals. Accordingly, PICU services must be fully integrated with the regional EMS system. To promote optimal safe, efficient and effective care of the pediatric patient being transferred to a PICU from another facility, the PICU must have a clearly defined and consistent process for coordinating and/or providing medical oversight/control during the transfer process. While, in some EMS regions, direct medical control may be provided by pediatric capable non-PICU physicians approved and/or credentialed by the appropriate regional emergency medical advisory committee (REMAC), PICU physicians must participate in overall medical oversight of interhospital transfers to the PICU in their facility. Such oversight includes providing consultation and medical recommendations to the referring hospital as appropriate, assisting in the coordination of the transfer including the mode of transfer, the timing of the transfer, the make-up of the pediatric critical care transport team or emergency medical services (EMS) ambulance personnel transporting the patient, and supervising the care provided during the transfer either through direct communication with the team or indirectly through established protocols. Immediate access to PICU- or pediatric capable non-PICU-physician direct medical control by the team transporting the pediatric patient should be available at all times. The method of communication may vary, but a standard verbal and written approach to communication between the PICU and the involved transport team or EMS service should be developed and implemented. For additional guidance regarding specific pediatric conditions necessitating pediatric interhospital transfer, and the consultation and transfer process, see the Appendix

to this Guidance Document, *Pediatric Consultation and Interfacility Transfer Guidelines*, as well as the Federal EMSC Program Resource, *Inter Facility Transfer Tool Kit for Pediatric Patients*.¹⁰

(ii) Organization and Direction. The PICU shall be directed by a board certified pediatric medical, surgical, or anesthesiology critical care/intensivist physician who shall be responsible for the organization and delivery of PICU care and has specialized training and demonstrated competence in pediatric critical care. Such physician in conjunction with the nursing leadership responsible for the PICU shall participate in administrative aspects of the PICU. Such responsibilities shall include development and annual review of PICU policies and procedures, oversight of patient care, quality improvement activities, and staff training and development.

EMSC Committee Recommendations: The patient- and family-centered care of the critically ill or injured pediatric patient requires a collaborative approach. The fellowship training and board certification of the medical director of the PICU should emphasize the importance of patient- and family-centered care. Likewise, the nurse manager of the PICU should also be experienced in the care of critically ill and injured children and should be certified as a critical care registered nurse. Together the medical director and nurse manager are responsible for developing policies/procedures for the provision of care in the PICU with annual review to assure that they remain current and reflect state-of-the-art pediatric critical care. Examples include the development of admission and discharge guidelines, monitoring guidelines, procedures for the administration of critical drugs, etc. In addition, they are jointly responsible for the oversight of all quality assessment, performance improvement, patient safety, and patient experience activities, as well as the development and maintenance of pediatric critical care competencies for both physician and nursing staff.

(a) All hospitals with PICUs must have a physician, notwithstanding emergency department staffing, in-house 24 hours per day who is available to provide bedside care to patients in the PICU. Such physician shall be at least a post graduate year three in pediatrics or anesthesiology. This physician must be skilled in and be credentialed by the hospital to provide emergency care to critically ill or injured children.

EMSC Committee Recommendations: Advanced airway management, mechanical ventilator support, emergent vascular access, and vasoactive medication infusions are vital elements of the care of critically ill and injured children. A physician competent to recognize a pediatric critical care emergency and to perform such necessary interventions must be immediately available in-house 24 hours per day to provide such care to patients in the PICU at the bedside when a critical care emergency occurs and/or to provide additional support. Such physician must be at least a post graduate year three in pediatrics or anesthesiology, and must not be simultaneously assigned to the emergency department.

(b) The PICU shall have, at a minimum, a physician at the level of post graduate year two or above and/or physician assistant and/or nurse practitioner with specialized training in pediatric critical/intensive care assigned to the unit 24 hours/day, 7 days/week with an

¹⁰Emergency Medical Services for Children National Resource Center. *Inter Facility Transfer Tool Kit for Pediatric Patients*. Accessible at http://www.emscnrc.org/files/PDF/EMSC_Resources/Inter_Facility_TransferTool_Kit.zip.

attending pediatric, medical, surgical or anesthesiology critical care/intensivist available within 60 minutes.

EMSC Committee Recommendations: A physician at the level of post graduate year to or above and/or physician assistant and/or nurse practitioner with specialized training in pediatric critical/intensive care must be assigned, and immediately available, to the PICU 24 hours/day, 7 days/week, to provide ongoing care, and an immediate response to all critical care emergencies. An attending pediatric medical, surgical, or anesthesiology critical care/intensivist physician must be on-call to the PICU 24 hours/day, 7 days/week, and must be physically available at the bedside within 60 minutes of notification by the physician, physician assistant, or nurse practitioner assigned to the PICU.

(c) An attending pediatric medical, surgical, or anesthesiology critical care/intensivist physician shall be responsible for the oversight of patient care at all times.

EMSC Committee Recommendations: Primary responsibility for the oversight of patient care in the PICU belongs to the attending pediatric medical, surgical, or anesthesiology critical care/intensivist physician on-call to the PICU and cannot be delegated at any time to a physician who is not similarly qualified and credentialed by the hospital to provide PICU care.

(d) The PICU shall provide registered professional nursing staffing sufficient to meet critically ill or injured pediatric patient needs, ensure patient safety and provide quality care.

EMSC Committee Recommendations: Scientific research demonstrates that the outcomes of critically ill and injured children in the PICU correlate directly with the availability of pediatric critical care nursing staff at the bedside.

It is suggested that a minimum nurse to patient ratio of one (1) nurse for no more than two (2) patients be maintained at all times for patients deemed to be critically ill or injured.

(e) PICU physician and nursing staff shall have successfully completed a course and be current in pediatric advanced life support (PALS) or have current equivalent training and/or experience to PALS.

EMSC Committee Recommendations: All physician and nursing staff assigned, or on-call, to the PICU must be able to initiate and maintain the resuscitation of critically ill and injured children, for which current competence in pediatric advanced life support (PALS) is essential. Qualified practitioners who are board-certified in specialties appropriate to the intensive care of critically ill and injured children, as described above, must have successfully completed a course in PALS, and remain current in pediatric resuscitation science and practice, but may be exempted from the requirement to hold current certification in PALS, provided they remain current with respect to their maintenance of certification (MOC) programs in critical care.

(iii) Quality Performance. The hospital shall have an organized quality assessment performance improvement (QAPI) program for PICU services. Such program shall require participation by all clinical members of the PICU team and include: monitoring of volume and outcomes, morbidity and all case mortality review, regular multidisciplinary conferences including all health professionals involved in the care of PICU patients.

EMSC Committee Recommendations: Mature quality assessment and performance improvement programs are essential elements in the safe and optimal delivery of state-of-the art patient care

to critically ill and injured children. All members of the PICU patient care team, including physicians, nurses, pharmacists, respiratory therapists, social workers, and family members as appropriate, are expected to participate actively and regularly in the quality assessment and performance improvement programs of the PICU. Quality assessment and performance improvement programs should include processes for:

- (1) monitoring volumes and outcomes of patients;
- (2) establishing indicators to monitor, including adverse events and medication errors, identifying systemic problem areas, and implementing appropriate corrective measures;
- (3) developing and implementing clinical pathways/protocols/policies where appropriate, and measuring adherence to them;
- (4) reviewing all fatalities and significant adverse events;
- (5) assessing patient/family experiences in the PICU; and,
- (6) holding regular multidisciplinary conferences, ideally on a monthly basis but no less than quarterly, to discuss quality assessment and performance improvement initiatives and results.

The medical director and nurse manager of the PICU are jointly responsible for documenting all such quality assessment and performance improvement activities, consistent with applicable statutes, and to ensure that all variances identified by the PICU patient care team receive prompt attention and timely resolution.

(iv) Closure. Failure to meet one or more regulatory requirements or inactivity in a program for a period of 12 months or more may result in actions, including, but not limited to, the Department's withdrawal of approval for the hospital to serve as a PICU.

EMSC Committee Recommendations: This requirement is self-explanatory. However, hospitals are encouraged to seek guidance from the Department well in advance of any programmatic inactivity.

(v) Voluntary closure. The hospital must give written notification, including a closure plan acceptable to the department, at least 90 days prior to planned discontinuance of PICU services. No PICU shall discontinue operation without first obtaining written approval from the department.

EMSC Committee Recommendations: This requirement is self-explanatory. However, hospitals are encouraged to seek guidance from the Department well in advance of any planned closure.

(vi) Notification of significant changes. A hospital must notify the department in writing within 7 days of any significant changes in its PICU services, including, but not limited to: (a) any temporary or permanent suspension of services or (b) difficulty meeting staffing or workload requirements.

EMSC Committee Recommendations: This requirement is self-explanatory. However, hospitals are encouraged to seek guidance from the Department well in advance of any significant changes in PICU services.

Appendix A

Pediatric Consultation and Interfacility Transfer Guidelines

INTRODUCTION

The New York State Department of Health and the New York State Emergency Medical Services for Children (EMSC) Advisory Committee provide these *Pediatric Consultation and Interfacility Transfer Guidelines* as a resource to hospitals. The Department and the Committee recognize the varying resources of different services. Approaches that work for one service may not be suitable for others. The decision to apply these guidelines in any particular situation always depends on the medical judgment of the physician requesting interfacility consultation or transfer. However, since the need for pediatric consultation and interfacility transfer is frequently time-sensitive, preplanning for such events is vital, and should include the development of both regionalized systems for timely consultation, and memoranda of understanding to facilitate the timely transfer of critically ill or injured when indicated, ideally as formal transfer agreements.

A hospital that considers transferring a child to another hospital is referred to throughout these guidelines as the “transferring” hospital. A specialized pediatric hospital capable of providing a higher level of care to a seriously ill or injured child, and the appropriate resources to render the needed care required by that child – such as a hospital designated by the Department to operate a pediatric trauma center or approved by the Department to operate a pediatric intensive care unit (PICU) – is referred to throughout this proposal as the “accepting” pediatric hospital for the transfer.

Some hospitals accept no transfers of pediatric patients from other hospitals. These include hospitals that operate no pediatric inpatient service, and hospitals that serve only local children with common low-risk conditions. Pediatric hospitals generally serve as accepting hospitals for high-risk children from transferring community hospitals (as well as serving some local children with common low-risk conditions). While pediatric hospitals provide specialized services for most high-risk children, occasionally a pediatric hospital must transfer some high-risk children to still another pediatric hospital providing even higher levels of care for particular disorders. In these cases, the transferring hospital is a pediatric hospital, with all the roles and responsibilities outlined for transferring hospitals in these guidelines.

Hospital resources for psychiatric emergencies in pediatric patients are limited in many areas of New York State, and processes for their disposition vary considerably. In most regions, however, there is a recognized resource or provider that should be contacted for advice regarding consultation and/or transfer.

1. INITIATION OF CONSULTATION AND/OR TRANSFER

Age-specific needs of children depend on anatomic, physiologic, behavioral, and developmental maturation. No single age cut-off adequately identifies these needs. The age-specific pediatric needs are greatest for infants and pre-pubertal children. The pre-hospital medical care of peri-pubertal adolescents may be successfully accomplished using adult basic and advanced life

support protocols, recognizing that such patients have unique emotional needs that require special attention. Local policies and practices may specify age criteria.

Many ill and injured children can be successfully managed by physicians with pediatric training, such as pediatricians, emergency department physicians – ideally emergency medicine physicians – and family practice physicians. Other community physicians with experience in pediatrics who are credentialed and privileged by the hospital to provide such care may also successfully manage such children in local hospitals. However, certain categories of seriously ill or injured children may require specialized pediatric medical or trauma services that are not generally available in local hospitals. Pediatric hospitals with specialized pediatric critical care services or specialized trauma services for pediatric patients – such as hospitals approved by the Department to operate a pediatric intensive care unit (PICU) or pediatric trauma center, the latter based on external verification by the American College of Surgeons (ACS) Committee on Trauma (COT) – provide 24-hour telephone consultation to assist community-based physicians in the evaluation and management of seriously ill and injured children. Decisions on whether, or when, to seek consultation or to transfer pediatric patients need to be individualized, based on local needs and resources. However, children with certain categories of serious illness and injury are at high-risk of death and disability. Early consultation with appropriate pediatric critical care or trauma specialists and rapid transport to specialized pediatric hospitals, when indicated, can improve the outcomes for these children. In particular, consultation should be sought for pediatric medical, surgical, and trauma patients who require pediatric intensive care when it is not locally available.

A physician at a local hospital identifies children with high-risk illnesses who might benefit from consultation with pediatric critical care or pediatric trauma specialists, or transfer to a pediatric hospital. The physician at the transferring hospital should telephone the contact physician at a pediatric hospital as soon as possible after the evaluation of a high-risk patient. For pediatric trauma patients still meeting Field Trauma Triage Guidelines established by the Federal Centers for Disease Control and Prevention (CDC) at the time of arrival at an Adult Trauma Center or non-Trauma Center, the Department requires that such patients be transferred to a Level I or II Pediatric Trauma Center.

Transferring hospitals must have written policies and procedures regarding the timely initiation of a consultation or transfer, including: which physician makes the initial telephone call, medical information needed for the consultation or transfer decision, preparation of copies of medical records, other documents, and medical imaging studies, informing the family, and obtaining family consent.

The accepting pediatric hospital must have written policies and procedures regarding rapid 24/7 availability of the appropriate physician to assist with stabilization, management, and transfer decisions. This individual must have the authority to approve hospital admission at the accepting pediatric hospital.

The following criteria identify high-risk pediatric medical (non-trauma) and trauma patients who warrant early consultation and potential transfer. Note that the following criteria, though inclusive, are not intended to be exclusive. Conditions of similar acuity and severity may also warrant early consultation and potential transfer. The community-based physician at a local hospital may also wish to obtain consultation or to transfer other patients who do not meet these criteria, but who may exceed the resources of that hospital.

Guidelines for Interfacility Consultation and/or Transfer of Pediatric Medical (Non-Trauma) Patients, Including Psychiatric Patients

A. Physiologic Criteria

1. Depressed or deteriorating neurologic status, including altered mental status or sensorium.
2. Severe respiratory distress responding inadequately to treatment and accompanied by any one of the following:
 - a. Cyanosis.
 - b. Retractions (moderate to severe).
 - c. Apnea.
 - d. Stridor (moderate to severe).
 - e. Grunting or gasping respirations.
 - f. Status asthmaticus.
 - g. Respiratory failure.
3. Children requiring endotracheal intubation and/or ventilatory support.
4. Serious cardiac rhythm disturbances.
5. Status post cardiopulmonary arrest.
6. Heart failure.
7. Shock responding inadequately to treatment.
8. Children requiring any one of the following:
 - a. Arterial pressure monitoring.
 - b. Central venous pressure or pulmonary artery monitoring.
 - c. Intracranial pressure monitoring.
 - d. Vasoactive medications.
9. Severe hypothermia or hyperthermia.
10. Hepatic failure.
11. Renal failure, acute or chronic, requiring immediate dialysis.

B. Sepsis Criteria

1. Severe sepsis
 - a. Sepsis (systemic inflammatory response syndrome in association with known or suspected infection) plus ONE of the following:
 - i. Cardiovascular organ dysfunction,
- OR

ii. Acute respiratory distress syndrome (ARDS),

OR

iii. Two or more organ dysfunctions (respiratory, renal, neurologic, hematologic, or hepatic).

2. Septic shock

a. Severe sepsis with cardiovascular dysfunction despite administration of isotonic intravenous (IV) fluid bolus ≥ 40 mL/kg in 1 hr.

C. Other Criteria

1. Near drowning with any history of loss of consciousness, unstable vital signs, or respiratory problems.
2. Status epilepticus.
3. Potentially dangerous envenomation.
4. Potentially life threatening ingestion of, or exposure to, a toxic substance.
Consider additional consultation with Poison Control, if available.
5. Severe electrolyte, metabolic, and water (hydration) imbalances, including diabetic emergencies.
6. Potentially life-threatening infections not meeting sepsis criteria.
7. Known or suspected congenital heart disease, pre- or post-surgical repair, especially those with duct dependent lesions or single ventricle disease.
8. Children requiring non-trauma surgery who may benefit from consultation or care by a pediatric surgeon.
9. Children requiring intensive care.
10. Any child who may benefit from consultation with, or transfer to, a hospital approved by the Department to operate a Pediatric Intensive Care Unit (PICU).

D. Psychiatric Criteria

1. Emotionally disturbed pediatric patients may be suffering from conditions (encephalites, intoxications) that mimic behavioral emergencies, Consider early consultation with pediatric emergency medicine or pediatric critical care specialists if such conditions are possible, suspected, or likely.
2. Psychiatric facilities for pediatric patients are limited in many areas of New York State. Contact the best known regional resource or provider for psychiatric emergencies for advice regarding disposition once consultation with pediatric emergency medicine or pediatric critical care specialists has been obtained, if deemed necessary or appropriate by the patient's affect or condition.

Guidelines for Interfacility Consultation and/or Transfer of Pediatric Trauma Patients, Including Burn Patients

A. Physiologic Criteria

1. Depressed or deteriorating neurologic status.
2. Respiratory distress or failure.
3. Children requiring endotracheal intubation and/or ventilatory support.
4. Shock, compensated or uncompensated.
5. Injuries requiring any blood transfusion.
6. Children requiring any one of the following:
 - a. Arterial pressure monitoring.
 - b. Central venous pressure or pulmonary artery monitoring.
 - c. Intracranial pressure monitoring.
 - d. Vasoactive medications.

B. Anatomic Criteria

1. Fractures and deep penetrating wounds to an extremity complicated by neurovascular or compartment injury.
2. Fracture of two or more major long bones (i.e. femur, humerus).
3. Fracture of the axial skeleton.
4. Spinal cord or column injuries.
5. Traumatic amputation of an extremity with potential for replantation.
6. Head injury when accompanied by any of the following:
 - a. Cerebrospinal fluid leaks.
 - b. Open head injuries (excluding simple scalp injuries).
 - c. Depressed skull fractures.
 - d. Decreased level of consciousness.
 - e. Intracranial hemorrhage.
7. Significant penetrating wounds to the head, neck, thorax, abdomen or pelvis.
8. Major pelvic fractures.
9. Significant blunt injury to the chest or abdomen.
10. Abdominal wall bruising.

C. Other Criteria

1. Children requiring pediatric intensive care.

2. Any child who may benefit from consultation with, or transfer to, a hospital designated by the Department to operate a Pediatric Trauma Center or approved by the Department to operate a Pediatric Intensive Care Unit (PICU).

D. Burn Criteria

1. Second degree burns (partial thickness) of greater than 10% of the body surface area.
2. Third degree burns (full thickness) in any age group.
3. Burns involving:
 - a. Signs or symptoms of inhalation injury.
 - b. Respiratory distress.
 - c. The face.
 - d. The ears (serious full thickness burns or burns involving the ear canal or drums).
 - e. The mouth or throat.
 - f. Deep or excessive burns of the hands, feet, genitalia, major joints, or perineum.
4. Chemical burns or injury
5. Electrical burns or injury (including lightning)
6. Burns associated with trauma or complicating medical conditions
7. Burn injury in patients who will require special social, emotional, or rehabilitative intervention

2. SELECTING THE APPROPRIATE CARE FACILITY

Most ill and injured children can be successfully managed by physicians with pediatric training, such as pediatricians, emergency department physicians – ideally emergency medicine physicians – and family practice physicians. Other community physicians with experience in pediatrics who are credentialed and privileged by the hospital may also manage such children in local hospitals. Again, however, certain types of seriously ill or injured children may require specialized pediatric medical, surgical, or trauma services that are not generally available in local hospitals. Decisions regarding management and transfer of specific patients will be individualized between the physicians at the transferring hospital and the accepting pediatric hospital, based on considerations including patient needs, resources at each hospital, and transportation.

However, there are additional requirements that pertain to pediatric trauma patients (see Appendix B). The Department has instructed EMS to transport pediatric trauma patients that meet CDC field trauma triage guidelines **directly from the field** to a Level I or II Pediatric Trauma Center (ACS verified and designated by the Department) whenever such transport can be effected within 60 minutes of injury. The Department has also required that pediatric trauma patients who are transported to an Adult Trauma Center or a non-Trauma Center **must be transferred to a Level I or II Pediatric Trauma Center** if they still meet CDC Field Trauma Triage Guidelines at the time of arrival at the Adult Trauma Center or non-Trauma Center. Whenever this occurs:

- The **decision to transfer** a pediatric trauma patient should be made once the primary survey and resuscitation phases are initiated (*usually within 30 minutes of arrival*).

- **Initiation of transfer** should be made immediately upon recognition of meeting criteria for transfer (*usually within 15 minutes following initiation of the primary survey and resuscitation phases*).
- **Transfer of that patient** should occur as soon as possible thereafter (*ideally within 1 hour of arrival but definitely within 2 hours of arrival*).

A list of the Trauma Centers in New York State can be found on the Department of Health's website at: http://www.health.ny.gov/professionals/ems/state_trauma/trauma2.htm

3. SELECTING THE APPROPRIATE TRANSPORT SERVICE

Choice of the optimal transport service depends on many variables: patient needs and stability, geography, weather, delays involved in obtaining access to specific transport services, and many others. Many pediatric hospitals and some professional transport services operate pediatric interfacility transport teams, but for trauma patients and some others, the disadvantage of delay in awaiting the pediatric interfacility transport team may outweigh the advantage of a higher level of transport care. Decisions on selection of the appropriate transport service are individualized by physicians at the transferring hospital and at the accepting pediatric hospital. Interfacility transport of sick or injured children should always be provided by staff with the appropriate scope of practice, training and experience, in a medical transport vehicle, and not by private vehicles. Appropriate medical direction must be available. For transport of a child who is unstable, or with a substantial risk of deterioration, on-line medical direction is essential, ideally provided by a pediatric emergency medicine physician, pediatric trauma surgeon, or pediatric critical care physician. Appropriate infection control issues should be identified and addressed prior to transport.

Patient Risk and Transport Team Configuration

Stable with No Risk of Deterioration – Basic Life Support (BLS)

Oxygen, monitoring of vital signs, saline lock: transport requires basic emergency medical care such as basic life support services.

Stable with Low Risk of Deterioration – Advanced Life Support (ALS)

Intravenous line, some IV medications including analgesics, blood products, pulse oximetry.

Stable with Medium Risk of Deterioration – ALS

ALS transport with consideration of use of pediatric interfacility transport team.

Stable with High Risk of Deterioration – ALS

Includes patients who are intubated and/or on a ventilator for whom securing the endotracheal tube is crucial, as well as patients on infusions of vasoactive medications – ALS transport with consideration of use of pediatric interfacility transport team.

Unstable – ALS

ALS transport with consideration of use of pediatric interfacility transport team.

Method of Transport (Ground Versus Air)

Air transport may be advantageous when speed over long distances is critical. The following variables should be considered.

1. Availability of a pediatric transport team within a reasonable proximity.
2. The modes of transportation and personnel available as options in the particular geographical area. This includes difficulty that may occur if the area's only ALS unit is involved in a long interfacility transport, leaving the area without ALS services.
3. Weather and other specific circumstances.
4. Anticipated response time of the most appropriate team.
5. Established state, local, and individual transfer service standards and/or requirements.
6. Expertise, scope of practice, degree of supervision required by transport team.
7. Complexity, stability of patient's condition, patient cooperation (patient cooperation is especially important on air transport).
8. Technology and/or special equipment needed during transport.

Equipment for Transport

When the transporting service lacks a necessary item of equipment or a medication, the transferring hospital should provide that item. Throughout the duration of the transport an adequate supply of the following items must be available: oxygen, vasoactive medications for continuous infusion, charged batteries or a source of electrical power for equipment, as necessary for the patient's care.

4. PROCESS FOR TRANSFER

At the Transferring Hospital

1. Identify high-risk patient or patient whose needs exceed capabilities of the hospital.
2. A physician at the transferring hospital contacts the closest appropriate pediatric hospital for consultation or to request transfer.
3. If it is decided that the patient will be transferred, the physicians at the transferring hospital and at the accepting pediatric hospital will agree on a plan of medical management and transportation. Decisions regarding the performance and timing of pre-transport interventions must be individualized (for example, endotracheal intubation, surgical interventions).
4. Identify and address infection control issues that may affect transport staff and patient.
5. The physician at the transferring hospital will inform the family and obtain informed consent for transfer. The family is provided with information on travel directions and information to contact the accepting pediatric hospital. The family is given the patient's belongings.
6. Notification of the transport service may be initiated by a physician at the transferring or accepting hospital, depending on specific circumstances, as agreed upon by these physicians.
7. Copies of medical records, other documents, medical imaging studies (electronic or hard copies, with written reports if available), and family contact information are sent with the patient.
8. The physician and staff at the transferring hospital continue to stabilize, monitor, and manage the patient until the transport team takes over the patient's care.

9. Repeated subsequent discussions between transferring and accepting physicians may be warranted if the patient's condition is unstable, or if significant new information is identified.
10. Transportation for a family member by the transport team is individualized, and according to local policies and practices. The family is provided with assistance for transportation, as needed.

At the Accepting Hospital

1. A physician at the accepting hospital receives the telephone call from a physician at the transferring hospital to discuss consultations or transfers. The physician at the accepting hospital must be easily identifiable, be rapidly available, must have expertise to assist with decisions on management and transfer, and have authority to arrange for admission at the accepting hospital. A single dedicated telephone number known throughout the area for which the pediatric hospital is the recognized pediatric referral center is the best way to assure that such telephone calls are answered, and consultation and/or transfer initiated, in an expeditious manner.
2. If it is decided that the patient will be transferred, the physicians at the transferring hospital and at the accepting pediatric hospital will agree on a plan of medical management and transportation. Decisions regarding the performance and timing of pre-transport interventions must be individualized (for example, endotracheal intubation, surgical interventions).
3. Identify and address infection control issues that may affect transport staff and patient.
4. Notification of the transport service may be initiated by a physician at the transferring or accepting hospital, depending on specific circumstances, as agreed upon by these physicians.
5. At the accepting pediatric hospital, all services that will be urgently involved in the patient's care are notified of the impending admission. In some cases this involves a formally identified team, such as a pediatric trauma team.
6. Repeated subsequent discussions between transferring and accepting physicians may be warranted if the patient's condition is unstable, or if significant new information is identified.
7. For transport of a child who is unstable, or with a substantial risk of deterioration, on-line medical direction is essential, ideally provided by a pediatric emergency physician, pediatric critical care physician, or pediatric surgeon. Often the physician providing medical direction is located at the accepting hospital. In any case, a physician at the accepting hospital should be kept informed of significant changes in the status of a patient during transport.
8. After the transport, the accepting pediatric hospital should provide timely follow-up information and feedback to the transferring hospital. Opportunities for improved patient care identified in care of particular patients should be incorporated into the ongoing regional educational activities of the pediatric hospital.

5. TIMING OF CONSULTATION AND/OR TRANSFER

Telephone request for consultation and/or transfer should be made as soon as possible following recognition of the need for consultation and/or transfer, ordinarily within fifteen (15) minutes of initial resuscitation, consistent with the immediate needs of the patient. If transfer is deemed

necessary or appropriate, it should be effected as soon as possible, without delay to obtain or perform additional diagnostic tests or procedures, unless specifically requested by the accepting physician or accepting hospital transport team.

In the case of severe sepsis or septic shock, the hospital's Pediatric Sepsis Algorithm, approved by the Department as consistent with the objectives of the Surviving Sepsis Campaign of the Society of Critical Care Medicine and the European Society of Intensive Care Medicine, should be initiated prior to making the initial request for transfer, since the early administration of intravenous fluid and intravenous antibiotics should not be delayed for any reason.

In the case of major trauma, Advanced Trauma Life Support® protocols of the American College of Surgeons Committee on Trauma should be initiated prior to making the initial request for transfer. The primary survey and resuscitation phases should ordinarily be completed within thirty (30) minutes of initial resuscitation. Transfer, if deemed necessary or appropriate, should ordinarily be effected within two (2) hours of initial resuscitation.

In circumstances, either medical (non-traumatic) or surgical (traumatic), where a level of cardiorespiratory and/or hemodynamic stability necessary for safe transport cannot be achieved despite the application of the appropriate resuscitative measures, consultation with the accepting physician should be requested by the transferring physician as soon as possible to discuss the suitability and timing of patient transfer, recognizing that interfacility transfer of a child deemed unlikely by the transferring and accepting physicians to survive interfacility transport is in most cases inadvisable.

6. INFORMATION FOR CONSULTATION AND/OR TRANSFER

Medical Information Provided by the Transferring Hospital to the Accepting Pediatric Hospital

1. Patient name, demographics, family contact information
2. Pertinent aspects of history, exam, weight, assessment
3. Current medications, therapy, life support interventions
4. Copy of the medical record (ED and hospital), including medication administration, I & Os, vital signs records
5. Results of lab studies
6. Copies of medical imaging studies and written reports if available
7. Signed consent
8. Discharge, transfer summary

Information Provided by Transferring Hospital to the Patient's Family

1. Information about patient's condition, diagnosis, treatment.
2. Directions to and information to contact the accepting pediatric hospital.
3. Assistance with transportation.

4. Assistance in contacting family, friends, other family needs.
5. Patient's personal belongings are given to family.
6. The patient's family should not ordinarily follow the transport vehicle from the transferring hospital to the accepting hospital to minimize the possibility of vehicular crashes involving the family's vehicle or the transport vehicle.

Appendix B
Letter to Hospital Administrators Regarding
Pediatric Trauma Transfer Guidance



Department of Health

ANDREW M. CUOMO
Governor

HOWARD A. ZUCKER, M.D., J.D.
Commissioner

SALLY DRESLIN, M.S., R.N.
Executive Deputy Commissioner

September 2015

Dear Hospital Administrator:

As you are aware, in 2012, New York State's Commissioner of Health determined that all currently designated trauma centers would adopt the American College of Surgeon's Committee on Trauma (ACS-COT) standards and verification process. Adopting the ACS-COT standards and verification process will enable New York trauma centers to keep pace with the current standards in trauma care, and will ensure that our trauma centers meet national standards. As part of this transition, the Department, in conjunction with its State Trauma Advisory Committee (STAC), has recently focused their efforts on ensuring that the most critically injured pediatric patients are transported to and cared for at the most appropriate facility. Ultimately, only those hospitals designated as **Level I or II pediatric trauma centers** will receive and treat the most critically injured pediatric patients.

In November of 2014, members of the pediatric trauma community convened to set standards for the transport and care of critically injured pediatric patients. Their recommendations were subsequently adopted by the STAC. These include:

- Pediatric trauma patients must be transported *from the field* to a Level I or II Pediatric Trauma Center if they meet CDC field trauma triage guidelines and are able to arrive within 60 minutes of injury.
- Pediatric trauma patients *transported to an Adult Trauma Center or a non-Trauma Center* must be transferred to a Level I or II Pediatric Trauma Center if they still meet CDC field trauma triage guidelines at the time of arrival at the Adult Trauma Center or non-Trauma Center.
- The *decision to transfer* a pediatric trauma patient should be made once the primary survey and resuscitation phases are initiated (usually within 30 minutes of arrival).
- *Initiation of transfer* should be made immediately upon recognition of meeting criteria for transfer (usually within 15 minutes following initiation of the primary survey and resuscitation phases).
- *Transfer of that patient* should occur as soon as possible thereafter (ideally within one (1) hour of arrival but definitely within two (2) hours of arrival).

Adherence to these recommendations will ensure that critically injured children are transported expeditiously to the most appropriate facility and receive definitive care.

A current listing of those centers recognized as Pediatric Trauma Centers can be found at: http://www.health.ny.gov/professionals/ems/state_trauma/trauma2.htm.

Sincerely,

William H. Marx, DO, FACS
Chair, State Trauma Advisory Committee

