

Criteria Quick Reference Guide

Level I Specialty Hospitals: **Musculoskeletal**

This document summarizes the criteria to meet the requirements as stated in the *Optimal Resources for Children's Surgical Care v.1*. Always reference the *Optimal Resources for Children's Surgical Care v.1* for a more detailed explanation of the requirements.

These standards only apply to children's specialty hospitals that limit the scope of service to musculoskeletal patients. A children's specialty hospital is defined as a children's hospital that provides a limited range of services specific to various conditions or related to a specific disease process. These standards do not apply to general children's hospitals.

Chapter 1

Responsibilities of Regional Systems of Care

Standard

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| 1-1 | Children's surgical center must participate in state and/or regional system planning/development or operation (CD 1-1). |
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Chapter 2

Children's Surgical Center Levels and Their Roles in a System of Care

Standard

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| 2-1 | Surgeon commitment is essential for a properly functioning children's surgical center (CD 2-1). |
| 2-2 | Children's surgical center must accept referrals of all medically appropriate patients within their region from centers without the necessary children's surgical capacity, regardless of payor (CD 2-2). |
| 2-3 | Children's surgical center must be able to provide on their campuses the necessary human and physical resources to properly provide children's surgical care consistent with level of verification (CD 2-3). |
| 2-4 | Relevant medical and surgical specialists must be available at bedside 24/7 within 60 minutes of request or identified need. Required specialists are defined in CD 6-28 and CD 6-29 (CD 2-4). |
| 2-5 | Surgeons and anesthesiologists must be physically present for procedures for which they are the primary responsible provider (CD 2-5). |
| 2-6 | All call schedules for providers involved in children's surgical care must be readily available (CD 2-6). |



2-7	The Performance Improvement and Patient Safety (PIPS) process must define, in writing, conditions and circumstances requiring the physical presence of a provider (CD 2-7).	2-20	PICU requires pediatric intensivist availability within 60 minutes and collaborative care 24/7 by individuals certified in critical-care medicine by the American Board of Pediatrics, the American Board of Anesthesiology, or the American Board of Surgery or equivalent organization (CD 2-20).
2-8	Children's surgical center must perform surgical procedures for at least 1,000 patients younger than 18 years annually (CD 2-8).	2-21	Nursing, respiratory therapy, pharmacy, and other support staff must have demonstrable relevant pediatric training and expertise (CD 2-21).
2-9	Access to a pediatric surgeon 24/7 365 is required (CD 2-9).	2-22	Appropriate pediatric equipment must be available for the scope of service (CD 2-22).
2-10	Two or more pediatric anesthesiologists must be on the medical staff (CD 2-10).	2-23	Two or more pediatric radiologists must be on the medical staff (CD 2-23).
2-11	A pediatric anesthesiologist must serve as the primary anesthesiologist for all children two years or younger (CD 2-11).	2-24	One radiologist with relevant expertise must be available to provide appropriate service within 60 minutes, 24/7 (CD 2-24).
2-12	All surgical specialists require institutional credentials for privileges for operative procedures to be performed specifically in children (delineation of privileges) (CD 2-12).	2-25	Interventional radiology physicians and support personnel must be available when required and this can be provided by the primary institution or by transfer agreements to another institution. (CD 2-25).
2-13	Children's surgical center must maintain appropriate pediatric critical care services with demonstrable surgical leadership participating in their operational management (CD 2-13).	2-26	Specialty hospitals are not required to have emergency physicians with pediatric experience or pediatric emergency physicians but must have a demonstrable follow-up plan for discharged patients, including for emergency care. (CD 2-26).
2-14	Individual children's surgeons must participate in the perioperative care of surgical patients specific to their surgical fields, including planning and implementation of major therapeutic decisions (CD 2-14).	2-27	Children's surgical center must have designated pediatric emergency department facilities (CD 2-27).
2-15	Individual children's surgeons must demonstrate participation in the care of their surgical patients in the setting of protracted physiologic instability or major postoperative complications (CD 2-15).	2-28	Children's surgical center must have pediatric-appropriate equipment (ED) (CD 2-28).
2-16	Children's surgical center must be a leader in surgical education and outreach activities (CD 2-16).	2-29	Children's surgical center must have nonphysician emergency department personnel with specific and demonstrable pediatric training and experience (CD 2-29).
2-19	A specialty children's surgical center must have a pediatric critical care service with physicians, respiratory therapists, nurses, and others with demonstrable pediatric training and experience, as well as appropriate pediatric equipment available 24/7. (CD 2-19).	2-30	The Medical Director of Children's Surgery (MDCS) and institutional surgical and medical subspecialty leaders must prospectively define the scope of practice of specialists who provide pediatric consultation, but lack pediatric certification (CD 2-30).

2-31	There must be a written plan and relevant published call schedules for the provision of pediatric subspecialty care outside limited scope of practice above if needed during periods when call coverage is provided by physicians or surgeons without pediatric certification or without specific pediatric credentials (CD 2-31).
2-32	The MDSC and institutional subspecialty leaders must monitor compliance with above plan (CD 2-32).
2-33	Relevant children's medical and surgical specialists will be available to support the entire scope of institutional surgical practice in infants and children. Required specialties are defined in CD 6-28 and CD 6-29 (CD 2-33).
2-34	Where providers with pediatric-specific training and experience are designated as available, the requirement is that patient care will be demonstrably provided by these specialized children's medical and surgical providers for children five years and younger (CD 2-34).
2-35	A pediatric rapid response and/or resuscitation team is required (CD 2-35).
2-36	There must be the 24/7 physical presence of a pediatric physician or surgeon who has current pediatric advanced life support (PALS) certification (CD 2-36).
2-37	Children's surgical center must have written transfer agreements for specific services not locally available (CD 2-37).
2-65	The children's surgical center must demonstrate the ability to stabilize and transfer critically ill children (CD 2-65).

Chapter 3

Triage and Transfer for Seriously Ill Infants and Children

Standard

3-1	Effective communication between the referring center and receiving center is essential (CD 3-1).
3-2	Interhospital transfers, as well as overtriage and undertriage, must be reviewed by the children's surgical center for PIPS (CD 3-2).
3-4	The complement of personnel, mode of transport, and medical control policies will vary by location, but performance must be monitored by PIPS (CD 3-4).
3-5	A mechanism for feedback to referring institutions must be in place (CD 3-5).
3-6	Children's surgical center must have a relationship with and deploy pediatric-specific transport teams when transferring appropriate infants and children to or from their centers (CD 3-6).

Chapter 4

Hospital Organization and the Children's Surgical Program

Standard

4-1	A decision by a hospital to become a children's surgical center requires the commitment of the institutional governing body, and this support must be reaffirmed continually (every three years) and must be current at the time of verification (CD 4-1).
4-2	A decision by a hospital to become a children's surgical center requires the commitment of the medical staff, and this support must be reaffirmed continually (every three years) and must be current at the time of verification (CD 4-2).
4-3	The administrative structure of the hospital must include, at a minimum, an administrator, Medical Director of Children's Surgery (MDCS), Medical Director of Children's Anesthesiology (MDCA), and Children's Surgery Program Manager (CSPM) who are each committed to the surgical center and programmatic support must be demonstrable (CD 4-3).
4-4	The MDCS must be a surgeon with current board certification (or equivalent) with special interest and qualifications in children's surgical care in specialty appropriate to the specialty institution (CD 4-4).
4-5	The MDCS must be demonstrably active in clinical surgery (CD 4-5).
4-6	The MDCS must have 12 hours annually or 36 hours in three years of documented and verifiable external children's surgery-related <i>AMA PRA Category 1 CME Credit</i> (CD 4-6).
4-7	Membership and active participation in appropriate regional or national children's organizations relevant to the specialty are essential for the MDCS (CD 4-7).
4-8	The MDCS must have the authority to correct deficiencies in surgical care (CD 4-8).
4-9	The MDCA must be a pediatric anesthesiologist with current board certification (or equivalent) (CD 4-9).
4-10	The MDCA must be demonstrably active in the delivery of clinical anesthesiology services to infants and children (CD 4-10).
4-11	The MDCA must have 12 hours annually or 36 hours in three years of documented and verifiable external children's surgery-related <i>AMA PRA Category 1 CME Credit</i> (CD 4-11).
4-12	Membership and active participation in appropriate regional or national children's organizations are essential for the MDCA (CD 4-12).
4-13	The MDCA must have the authority to correct deficiencies in anesthesia care (CD 4-13).
4-14	Infants and children with primary surgical problems must be admitted to, or evaluated by, an identifiable surgical service staffed by credentialed children's surgical providers (CD 4-14).
4-15	Sufficient infrastructure and support to ensure adequate care must be provided by the children's surgical service (CD 4-15).
4-16	A process must be in place to address children's surgical program operational issues (CD 4-16).
4-17	The OR or other surgical department committee must be dedicated to the children's surgical services (CD 4-17).
4-18	Documentation (minutes) must reflect the review of operational issues and, when appropriate, the analysis and proposed corrective actions (CD 4-18).
4-19	The CSPM must show evidence of educational preparation and relevant clinical experience in the care of patients with surgical needs (CD 4-19).
4-20	The CSPM must play an active role in the administration and review of children's surgical care from admission through discharge (CD 4-20).

Chapter 5

Clinical Functions: Surgeons

Standard

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| 5-1 | The credentialing body of the hospital will ensure that qualifications of the practicing providers are current and specific to the care of children (CD 5-1). |
| 5-2 | Qualified children's surgeons must have specific children's delineation of privileges and provide the bedside care for all such children (CD 5-2). |
| 5-3 | To maintain operative skills, credentialed surgeons must remain actively involved in clinical surgery (CD 5-3). |
| 5-4 | The pediatric musculoskeletal surgeons and pediatric anesthesiologists on call must be dedicated to the center while on call (CD 5-4). |

Chapter 6

Collaborative Clinical Services and Resources

Standard

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| 6-1 | The children's surgical center must have a designated Pediatric Anesthesiologist Medical Director for the children's surgical program (CD 6-1). |
| 6-3 | A pediatric anesthesiologist must be available 24 hours a day to respond within 60 minutes to the bedside (CD 6-3). |
| 6-4 | Children's surgical center must have the on-site presence of a physician or allied health professional with demonstrable pediatric airway management skills 24 hours a day (CD 6-4). |
| 6-8 | An Anesthesiology Medical Director must be identified and serve as liaison or identify a designee to the children's surgical PIPS program (CD 6-8). |
| 6-9 | A dedicated children's OR must be adequately staffed and immediately available 24/7 (CD 6-9). |
| 6-10 | There must be nursing and other appropriate technical personnel with pediatric expertise immediately available and deployed for all patients five years or younger (CD 6-10). |
| 6-11 | If the first OR becomes occupied, a mechanism for providing additional appropriate pediatric staff members must be in place to staff a second room (CD 6-11). |
| 6-12 | Prompt and appropriate OR response times—both provider and institutional—must be demonstrable for relevant emergent specialty procedures (CD 6-12). |
| 6-13 | Children's surgical centers must have age- and size-appropriate OR equipment and support for the patient populations they serve (CD 6-13). |
| 6-14 | A designated PACU or other unit with specific pediatric personnel and functional capacity, including qualified pediatric nurses, must be available 24 hours per day to provide care for the pediatric patient during the recovery phase (CD 6-14). |
| 6-15 | The PACU or other unit used must have the necessary equipment to monitor and resuscitate pediatric patients within the scope of services offered (CD 6-15). |

6-16	Preoperative facilities, personnel, and processes meeting the specific needs of the pediatric population served must be demonstrable at all levels of verification (CD 6-16).	6-29	Pediatric medical specialists on staff must be available from the following disciplines: cardiology, infectious disease, gastroenterology, pulmonary medicine, neurology, nephrology (consultant basis), intensivists, and physical medicine and rehabilitation (CD 6-29).
6-17	Diagnostic information from imaging studies must be communicated in a written form and in a timely manner (CD 6-17).	6-31	A general pediatrician or pediatric hospitalist must be readily available (within 60 minutes, 24/7) if perioperative acute hospital care beyond the PICU is within the scope of service at the Level I center (CD 6-31).
6-18	Critical information that is deemed to immediately affect patient care must be verbally communicated to the surgical team (CD 6-18).	6-32	If the surgical center does not have pediatric dialysis capability, it must have a transfer agreement in place (CD 6-32).
6-19	The final diagnostic-imaging report must accurately reflect the chronology and content of communications with the surgical team, including changes between the preliminary and final interpretation (CD 6-19).	6-33	Pediatric nutrition support must be available (CD 6-33).
6-20	A pediatric radiologist must be involved in the development of protocols and analysis of trends that relate to diagnostic imaging (CD 6-20).	6-34	A child life services program is required at Level I children's surgical centers (CD 6-34).
6-21	Children's surgical centers must have policies designed to ensure that infants and children who may require resuscitation and monitoring are accompanied by appropriately trained providers and relevant children-specific support equipment during transportation to and from the department and while in the radiology department (CD 6-21).	6-35	A program or policies to identify nonaccidental trauma (NAT) patients and provide support for patients and providers is essential (CD 6-35).
6-22	Conventional radiography and computed tomography with radiation dosing suitable for infants and children within the scope of services must be immediately available (within 60 minutes, 24/7) (CD 6-22).	6-36	Children's surgical center must have a NAT team available 24/7 (CD 6-36).
6-23	Interventional radiology, magnetic resonance imaging, and ultrasonography must be available within 60 minutes, 24/7 at the Level I center (CD 6-23).	6-37	Pediatric laboratory services to support the scope of service offered must be available 24/7 for standard analysis of blood, urine, and other body fluids (CD 6-37).
6-26	Ongoing attending surgeon involvement must be documented in the medical record for all perioperative and other surgical patients regardless of physical location (CD 6-26).	6-38	The blood bank must be capable of blood typing and cross-matching and must have an adequate supply of red blood cells, fresh frozen plasma, platelets, cryoprecipitate, and appropriate coagulation factors to meet the needs of infants and children within the scope of services (CD 6-38).
6-28	Children's specialty surgeons in pediatric orthopaedic surgery, pediatric surgery, pediatric neurosurgery, and pediatric urology are required in Level I Musculoskeletal children's surgical centers (CD 6-28).	6-39	Children's surgical center must have a massive transfusion protocol (CD 6-39).
		6-40	The ability to stabilize and transfer critically ill infants and children must be demonstrated (CD 6-40).

Chapter 7

Data Collection and Reporting

Standard

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| 7-1 | Participation in the American College of Surgeons National Quality Improvement Program Pediatric (ACS NSQIP Pediatric) is required (CD 7-1). |
| 7-2 | Children's surgical center must collect and report specific safety events detailed in the accompanying Children's Surgery Safety Report (Appendix 2) (CD 7-2). |
| 7-3 | Program must demonstrate that both institution-specific and national aggregate data are reviewed on a regular basis (CD 7-3). |
| 7-4 | Program must demonstrate that both institution-specific and national aggregate data are used to guide specific quality-improvement initiatives within the institution (CD 7-4). |
| 7-5 | Children's surgical center must demonstrate the presence of ongoing quality-improvement projects that derive directly from the analysis of collected data (CD 7-5). |
| 7-6 | Children's surgical center must be actively engaged in using the electronic resources within the institution to optimize the accuracy of data and efficiency of collection; institutions must be able to demonstrate engagement in this effort (CD 7-6). |
| 7-7 | Children's surgical center will be able to demonstrate the effectiveness of its data-collection process in capturing all relevant events (CD 7-7). |
| 7-8 | For children's surgical safety reports (Appendix 2), a process must be developed and implemented that ensures that the data-collection staff members are appropriately trained and monitored to ensure high-quality data (CD 7-8). |
| 7-9 | The MDCS and the CSPM will be responsible for ensuring that the data-collection staff members are appropriately trained and monitored to ensure high-quality data (CD 7-9). |
| 7-10 | Appropriate data-collection staffing must be demonstrated (CD 7-10). |

Chapter 8

Performance Improvement and Patient Safety

Standard

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| 8-1 | A structured effort that is integrated into the hospital's quality-improvement and safety programs with the board of trustees' quality committee (or equivalent) and that demonstrates a continuous process for improving care for children with surgical needs is required (CD 8-1). |
| 8-2 | The program, including PIPS, should be approved by the hospital's governing body, and this commitment must include adequate administrative support and defined lines of authority that ensure comprehensive evaluation of all aspects of surgical care for infants and children beginning at transport from referring hospitals through discharge (CD 8-2). |
| 8-3 | Patient care may be evaluated initially by individual specialties within their usual departmental morbidity and mortality or PIPS review structures; however, identified problem trends must undergo multidisciplinary peer review by a dedicated children's surgical peer review committee at Level I and II centers (CD 8-3). |
| 8-4 | The center must be able to demonstrate that specific patient population processes or systems issues can be identified for separate review regardless of the institutional PIPS processes (CD 8-4). |
| 8-5 | A multidisciplinary children's PIPS committee must be chaired or co-chaired by the MDCS or designee (CD 8-5). |
| 8-6 | PIPS committee participation must include representatives from pediatric anesthesiology, radiology, and other relevant children's surgical specialties and medical procedural specialties, as well as hospital administration, nursing, critical-care medicine, and emergency medicine, if within the scope of service (CD 8-6). |
| 8-7 | The PIPS Committee will improve surgical care by reviewing all deaths occurring in surgical patients, selected complications, and sentinel events with the objective of identifying issues and developing appropriate responses (CD 8-7). |

8-8	The MDSCS must ensure the dissemination and documentation of information derived from the PIPS process to participants in the children’s surgical care program and to the hospital leadership (CD 8-8).
8-9	Discussions and meeting minutes during peer review activities shall be a confidential quality-improvement activity that is protected by all pertinent state and federal statutes (CD 8-9).
8-10	Members or designees must attend at least 50 percent of the PIPS meetings (CD 8-10).
8-11	The meetings must be frequent enough to ensure timely review of children’s surgical care, but they must be at least quarterly (CD 8-11).
8-12	All deaths of infants and children occurring within 30 days of an operative procedure must be systematically reviewed and categorized through a peer review process as unanticipated mortality with opportunity for improvement, mortality without opportunity for improvement, or anticipated mortality with opportunity for improvement (CD 8-12).
8-13	When a consistent problem or inappropriate variation is identified, corrective actions must be taken and documented (CD 8-13).
8-14	The PIPS Committee must review transfers out and to a higher level of care for appropriateness, timeliness, and outcome (CD 8-14).
8-15	The PIPS Committee must evaluate and monitor the availability of children’s specialty OR personnel and the timeliness of starting operations and measures implemented as required to ensure response times that yield optimal care (CD 8-15).

Chapter 9

Research and Scholarship Requirements

Select one of the two alternatives to fulfill research and scholarship criteria for Level 1

Specialty Verification: (CD 9-1, CD 9-2, CD 9-3) or (CD 9-4, CD 9-5).

Either alternative must meet CD 9-6.

Standard

9-1	At minimum, the children’s surgical center must have 20 peer-reviewed articles published in journals in PubMed in the most recent three-year period (CD 9-1).
9-2	The 20 publications must result from work related to the surgical services of the applicant center (CD 9-2).
9-3	Of the 20 publications, at least one must be authored or co-authored by members of the pediatric musculoskeletal surgery team of the institution (CD 9-3).
OR	
9-4	The center must have 10 peer-reviewed articles in journals included in PubMed in the most recent three-year period (CD 9-4).
9-5	Of the seven following related scholarly activities, four must be demonstrated: (1) Leadership or active participation in major organizations relevant to children’s surgical care. Evidence includes membership on committees of any of the regional and national organizations or demonstrable similar work. (2) Peer-reviewed funding for related research. There should be demonstrated evidence of funding of the center from a recognized government or extramural private agency or organization. (3) Evidence of dissemination of knowledge to include review articles, book chapters, technical documents, Web-based publications, editorial comments, training manuals, or related course material or other educational materials that contribute to the practice of children’s surgery. (4) Display of scholarly application of knowledge as evidenced by case reports or reports of clinical series in journals included in PubMed.

9-5	(5) Participation as a visiting professor or invited lecturer at relevant national, regional, or local conferences. (6) Support of resident participation in institution-focused scholarly activity, including laboratory experiences, clinical trials, or resident paper competitions at the state, regional, or national level. (7) Mentorship of residents and fellows, as evidenced by the development of a children's surgical fellowship program or successful matriculation of graduating residents into such fellowship programs (CD 9-5).
9-6	Administration must demonstrate support for the research program (CD 9-6).

Chapter 10

Outreach and Education

Standard

10-1	Children's surgical center must engage in public and professional education (CD 10-1).
10-2	Children's surgical center must provide some means to facilitate referral and access to children's surgical center resources (CD 10-2).
10-3	Children's surgical center must provide a mechanism to offer relevant children's surgical education to nurses and other allied health professionals who are part of the children's surgical team (CD 10-3).
10-4	The MDCS, the liaison representatives from each of the surgical subspecialties performing children's surgery, and the liaison or medical director of pediatric anesthesiology, emergency medicine, and radiology must accrue an average of 12 hours annually or 36 hours in three years of related external <i>AMA PRA Category 1 CME Credit</i> (CD 10-4).
10-5	All members of children's surgical specialties who take call also must be knowledgeable and current in the care of children with surgical needs (CD 10-5).

Please note: This reference guide should be used in conjunction with *Optimal Resources for Children's Surgical Care v.1*.