EMERGENCY DEPARTMENTS: PEDIATRIC PREPARED
Ohio EMS for Children Program

- Background
- History
- Performance Measures

Joseph Stack
EMS for Children Coordinator
Ohio Safe Kids Coordinator
Ohio EMS for Children Program

- Started as Emergency Care Committee under Ohio Chapter of the American Academy of Pediatrics in 1979
- Joined with Maternal and Child Health Division of the Ohio Department of Health in 1986
- Strategic plan completed in 1989
  - Ongoing training programs
  - Linkages between rural hospitals and pediatric centers
  - Community support for pediatric programs
Ohio EMS for Children Program

- Demonstration grant from ODH for rural development in 1989
- SB98 moved most state EMS functions to Ohio Department of Public Safety in 1992
- EMSC moved to ODPS in 1992 with other EMS functions to create Division of Emergency Medical Services
Ohio EMSC Achievements

- Dedicated EMSC personnel and funding from the Division of EMS
- Establishment of a formalized state EMSC Advisory Committee which reports to the state EMS Board
- Pediatric Representation on the State EMS Board, State Trauma Committee and Regional Physician Advisory Boards
- Pediatric continuing education at all pre-hospital levels
EMSC Performance Measures

- EMSC is funded through Federal Health Resources & Services Administration
- Performance Measures Implemented by HRSA in 2005
  - Method of measuring progress of grantees
  - Method of reporting to Congress on progress of grantees
  - Measures include pre-hospital, hospital, education, and systemic initiatives
EMSC Performance Measures

- Medical Direction
  - On-line pediatric direction
  - Off-line pediatric direction
- Pre-hospital Equipment
  - List updated in 2009
  - 32% of BLS units, 24% of ALS units carry all items
- Hospital Transfers
  - Written inter-facility guidelines/protocols
  - Written inter-facility agreements
- Pediatric Pre-hospital Education for Recertification
EMSC Performance Measures

- Establishing Permanence of EMSC Program
  - EMSC Committee
    - Required members on EMSC Committee
    - EMSC Committee meets at least 4 times per year
  - EMS Board mandates pediatric representation
  - Full-time EMSC Program Manager
  - Incorporate EMSC priorities (i.e., all the previous Performance Measures) into EMS or hospital statutes or regulations
EMSC Performance Measures

- **Performance Measure #74:**
  - The percent of hospitals recognized through a statewide, territorial or regional standardized system that are able to stabilize and/or manage pediatric **medical** emergencies.

- **Performance Measure #75:**
  - The percent of hospitals recognized through a statewide, territorial or regional standardized system that are able to stabilize and/or manage pediatric **traumatic** emergencies.
Consensus of Studies

- Access to pediatric emergency care needs improvement
- Quality of pediatric emergency care needs improvement
- Integration of pediatric emergency care into the overall EMS system needs improvement
- This is where we come in
Recall studies of Pediatric Care in Emergency Departments

Guidelines for Pediatric ED Preparedness

EMS-C initiatives to Bridge the Gap
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“I think I should have got them a bigger trampoline.”
89% of pediatric ED visits occur in general ED
- 50% of these see less than 10 children/day

Essential resuscitation equipment is unavailable in EDs
- peds IO 16%;
- infant blood pressure cuff 15%
- peds defibrillator pads 10.5%

50% of EDs had >85% of essential supplies but only 6% had all supplies
FACTS

- Only 50% of EDs have pediatric QI/PI plan
- Of 1st year EM attendings
  - 84% felt adequate with peds cardiopulmonary arrest
  - 96% with adult cardiopulmonary arrest
- Pediatric preparedness of community EDs was strongly linked to
  - Pediatric volume
  - Teaching hospital status
  - Geographic region
  - Per capita income

Community hospitals vary drastically in capabilities to care for pediatric emergencies
IOM Report 2006

One word to describe pediatric emergency care is **UNEVEN**.

- **Safety**
  - Pediatric patients treated at peds hospitals have lower mortality, length of stay, and charges
  - Children are at higher threat to safety issues by physical and developmental vulnerabilities
  - Written transfer agreements only exist at 50% of hospitals that lack ability to care for pediatric trauma patients
IOM Report 2006

- Timeliness
  Only 50% of children in moderate to severe pain were offered analgesics

- Training
  Only 38% of ED physicians are trained and board certified in EM
  Pediatric skills deteriorate rapidly without practice
IOM Report 2006

- Guidelines
  - Use of guidelines has been shown to improve quality of care
- Coordinator
  - Training and guidelines are useless without someone to ensure and coordinate continuing medical education needs within an institute
These shortcomings are often exacerbated in rural areas, where dedicated, well-intentioned prehospital and ED providers often make do without the specialized pediatric training and resources that most of us would expect to be in place.
Joint Policy Statement

- AAP/ACEP
- Guidelines for the care of pediatric patients in the Emergency Department.
  - Care Coordinator
  - Staff training and competency in pediatrics
  - QI/PI guidelines
  - Patient safety
  - Policies, procedures and protocols
  - Supportive services (ie. Radiology)
  - Equipment and medications
Guidelines for Care of Children in the Emergency Department

This checklist is based on the American Academy of Pediatrics, the American College of Emergency Physicians, and the Emergency Nurses Association 2008 policy statement “Guidelines for Care of Children in the Emergency Department,” which can be found online at http://www.aap.org/policy/348338850519313920513782726899162479228149314427064905751613704739263114878212061981548692525555519051832107979738738172104021514967669369240006485625823357404733840228173410532919374682508145876598846403471221145899265408844114530326889504298967230547556425536014016560850617736592621568x322628354674176821983066576752967075724928786445904587114409496393665656476323083116885165171743498850183613888119582666094250865819799568119364150212481127989420472955974739877422627834068935322769843892688385489765449196363602782156704279702078487364040281371549391049246557071940004085760

Appointed Pediatric Physician and Nurse Coordinator

- Pediatric physical examination is performed by the ED medical director, who is familiar with the patient's medical history, physical examination, and treatment plan.
- Pediatric nurses coordinate care, including the administration of medications, the management of pain, and the monitoring of vital signs.
- Pediatric nurses are responsible for the documentation of the patient's care, including the administration of medications, the management of pain, and the monitoring of vital signs.
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Guidelines for 6/1 in the ED

- The medical evaluation and management of children should be based on the patient's age and current health status.
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Clinical and Professional Competency

- Electronic medical records are maintained for all children seen in the ED.
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Guidelines for Improving Pediatric Patient Safety

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Equipment/Supplies: Monitoring Equipment

- Blood pressure monitor
- ECG monitor
- Oxygen saturation monitor
- Temperature monitor
- Pulse oximeter

Equipment/Supplies: Respiratory Equipment

- Non-invasive ventilation
- Invasive ventilation
- Nebulizer
- Nebulizer supplies
- Oxygen therapy
- Breathing circuits

Equipment/Supplies: Specialized Pediatric Toys or Kits

- Pediatric toys
- Pediatric games
- Pediatric activities

Equipment/Supplies: Miscellaneous

- Bandages
- Gauze
- Salves
- Steroids
- Antibiotics

Equipment/Supplies: Medication Management

- Medication administration
- Medication reconciliation
- Medication history
- Medication education

Equipment/Supplies: Parent/Genetic Resources

- Parental information
- Genetic counseling
- Parental support
- Genetic testing

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EMS-C Ohio

- **Goal**
  - Facilitate the implementation of the recommendations of the Joint Policy Statement by the AAP and ACEP

- **Support**
  - American Academy of Pediatrics
  - American College of Emergency Physicians
  - Emergency Nurses Association
  - Ohio Hospital Association
Starting Small

- Beginning with one hospital system in NE Ohio - UH
- Hospital network to support this endeavor
- Affiliation and resources available from Rainbow Pediatric ED
  - Pediatric Expertise
  - Pediatric Protocols, policies, procedure
  - Transfer agreements
  - Pediatric EMR order sets
  - CME
Conclusion

- There is a vast difference in the care of pediatric emergencies by EDs
- IOM has concerns of the quality of care of seriously ill and injured children
- ACEP/AAP have recommendation for all EDs to improve quality of pediatric care
- EMSC goal to facilitate implementation of these recommendations to Ohio Emergency Department
Implementation

- Hospitals complete a pre-visit survey to identify current ED status
- Ohio EMSC provides a consultation visit to clarify survey information and offer assistance where needed
- Ohio EMSC provides a consultation report summarizing the visit and outlining areas for improvement and sources of support
Thank you
Questions?