Pediatric Body of Knowledge

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Goals

- Discuss history and current state of pediatric perfusion education
- Introduce and describe the Body of Knowledge (BoK)
- Tell you Why we feel its important
  - Justify the timing
- Highlight progress / Describe model
  - Comparisons to current standards

Conflicts - None
Status of Pediatric Perfusion Education: 2000 Survey

- Three Groups:
  - (PD) Program Directors (21/22)
  - (RG) Recent graduates (last three years – 61)
  - (CA) Cardiac Anesthesia (16/50)
- Program Directors – 65% believed that programs provided a solid introductory didactic knowledge base for infant perfusion
- Both RG and PD felt grads less prepared to perform infant CPB at graduation vs. adults
- Subspecialization? – PD said no (97%), RG split, CA said yes (100%)
- Post-graduate course – ALL felt it would be beneficial

2018 Pediatric Perfusion Education – What’s Changed?

- NOTHING (significant) has changed with regard to education
  - AC-PE curriculum outline – SAME
    - Minor modifications
  - Clinical Case Requirement – SAME
  - Distribution of certification questions on ABCP exam - SAME

ARS

Pediatric and Congenital Perfusion Committee (PCPC)

Mission Statement
The mission of the Pediatric and Congenital Perfusion Committee is to define a body of knowledge consistent with evidence-based best practices, facilitate opportunities for collaboration among providers, and to improve quality of care as it relates to extracorporeal technology while contributing to the advancement of the subspecialty.

Scope and Responsibilities
AmSCT Pediatric and Congenital Perfusion Committee (PCPC) Job responsibilities

IV. Other potential areas of interest should include:
   a. Participation in establishment of pediatric body of knowledge
BoK - What is it?

- Document that explains the additional knowledge base required of the Pediatric and Congenital Perfusionist above what is currently delineated in the AC-PE approved Cardiovascular Perfusion Curriculum
- Based on (formatted like) the current AC-PE document (to maintain consistency)
  - Break down each of the 12 units of AC-PE into sections pediatric specific
- Define the subspecialty

WHY?
(and why now?)

Timeline

- First perfusion schools 1960s
- First Perfusion exam 1972
- Angona publication 2000
- Congenital surgical boards 2009
- Master's Programs
  - First FPP awarded (2007)
- Peds anesthesia boards 2013
- CM fellowship Program July 2014
- Start of BoK Project 2014

Perfusion 2018

- Growth in ALL areas of Scope of Practice
  - VADS
  - ECMO
  - Blood Management
  - Pediatrics!

- Subspecialization in other health fields
What else?? Changes in Pediatric Clinical Practice

- Patients more complex
- Lower (Zero?) M+M
- Babies surviving who previously wouldn’t have – more complex redos
- Look at individual cases –
  - Examples
    - Lower flows on norwoods
    - Warmer temps
    - No DHCA on TOF – getting cannulas out of field
    - Different approaches to TAPVR – used to be an almost assured ECMO
  - And on

Why do we teach perfusion the way we do?

- NOT a knock against perfusion schools!
- Limitations!
  - Resource allocation
  - Case availability
  - Protective Environment
- No Demand From employers!?
  - Schools anecdotally observe that perfusion teams tend to pick a solid perfusionist who has strong intangibles and are a good fit over those who may have greater peds experience and training

Current AC-PE Curriculum

- First constructed in 1998 by Program Directors
- Revised every 5 years
- Most recent revision: 2017
  - Still 12 core areas of knowledge (peds isn’t one of them)
  - Peds under basic science
  - ~10 out of 104 pages are pediatric perfusion topics
Body of Knowledge - Changes

- Significant to some sections
  - Complete revision of outline in some cases
- Minor to others
- None to some – no significant differences between adult and pediatric

Examples:

UNIT I: BASIC SCIENCE

1. STANDARDS FOR PERIOPERATIVE AUTOLOGOUS BLOOD COLLECTION AND ADMINISTRATION... PREPAREDNESS

UNIT II: PERIOPERATIVE TECHNIQUES

UNIT III: CARDIOPULMONARY RESUSCITATION...
Members of pediatric community

Variety of programs

Often FPPs (or those working on an FPP application)

Issues/Limitations
  - Different levels of detail
  - Different references
  - Individual practice experiences / limitations of experience and exposure
  - Formatting!

Volunteers!

- Jordan Voss
- Sean Clingan
- Kerry Fair
- Justin Silesman
- James Neal
- Molly Oldeen
- Kevin Niimi
- Caitlin Blau
- Ed Harmon

Team!

- Molly Oldeen MS CCP FPP – Editor
- Carrie Striker, DHEd MPS CCP FPP – Editor Emeritus
- Volunteers!  
  - PCPC Members
  - Other Peds Perfusionists
- Ron Angona MS CCP FPP
  - Round up help
Next Steps?

- More volunteers
- Validation
  - Downside of having "too many people involved?"
- Presentation to Pediatric Perfusion Community
  - Involvement of Program Directors

Goals / Future

What does it become?

- Publication / Book
- Certification
  - i.e. IBBM - PBMT
- Basis for certification exam for pediatric perfusion subspecialization

Who do we get involved?

- Perfusion programs
- AC-PE
- ABCP

Certification: Role of a professional body of knowledge

- Panel offers national certification exam form based on exam plan to candidates who qualify to sit for the exam based on the JD
  - An independent panel (board) designs an exam plan based on JD required knowledge and taxonomy levels for skills and abilities
  - Board selects test items that measure competencies based on JD
  - Board develops a complete exam form of questions and procedures for the certification exam

Body of Knowledge

- National Job Analysis: Write a national Job Description (JD)
  - Interview employers; Study current JDs
  - Identify knowledge, skills, and abilities (KSAs)
  - Quantify “frequency” and “importance” of KSAs
  - Gather volunteer stakeholders from professional organizations
    - AmSECT Congenital and Pediatric Committee (SMEs)
    - Perfusion education program directors