


2018 AmSECT **pediatric**
October 4-6, 2018 | Miami, FL

AmSECT **experience**

Pediatric Body of Knowledge

Ron Angona, MS, CCP, FPP



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Conflicts - None

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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


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2000 - Angona study – peds education


Angona R, Searles B, Nasrallah F, Darling E.
Status of Pediatric Perfusion Education: 2000 Survey *JECT* 2001;33:233-38

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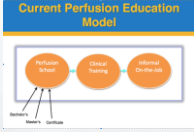
Status of Pediatric Perfusion Education: 2000 Survey

- 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 (87%), RG split, CA said yes (100%)
- Post-graduate course – ALL felt it would be beneficial

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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



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ARS

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Pediatric and Congenital Perfusion Committee (PCPC)

Mission Statement
 The Mission of AmSECT's Pediatric and Congenital 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 sub-specialty.

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

IV. Other potential areas of interest should include:

- Participation in establishment of pediatric Body of Knowledge

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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

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WHY?

(and why now?)

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Timeline

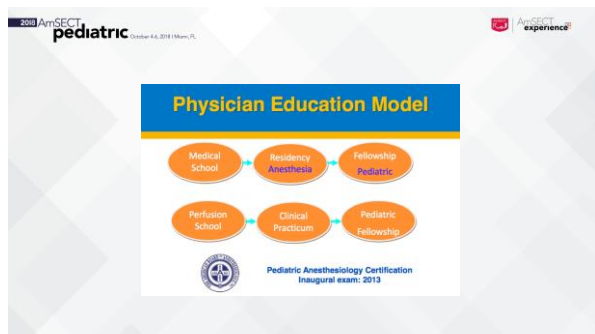
- First perfusion schools 1960s
- First Perfusion exam 1972
- Angona publication 2000
- Master's Programs
- First FPP awarded (2007)
- Peds anesthesia boards 2013
- Congenital surgical boards 2009
- CM fellowship Program July 2014
- Start of BoK Project 2014

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Perfusion 2018

- Growth in ALL areas of Scope of Practice
 - VADS
 - ECMO
 - Blood Management
 - Pediatrics!
- Subspecialization in other health fields



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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
 - On and on

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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 peds 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

Why the emphasis on adult perfusion education?

- Job Placement: graduates assume adult positions
- Brief training – 2 years, time constraints
- Limited Pediatric Perfusion Resources
- CAAHEP Standards & Guidelines requirement:
 - pump 75 adult cases
 - observe 10 pediatric cases
- ABCP Certifying Exam: adult focused

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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

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UNIT 2: RESUSCITATION TECHNIQUES
21053AC-0103148584

UNIT OBJECTIVES
The objectives for this unit are to be able to:

LEARNING OBJECTIVES
1. Describe the physiology of cardiac resuscitation and
2. Describe the function of cardiac resuscitation in cardiac resuscitation.

OUTCOME

1. The percentage of hypoxemia
2. CO2 capnometry
3. Duration of pulseless cardiac arrest
4. Duration of pulseless cardiac arrest
5. Return of spontaneous circulation
6. Return of spontaneous circulation
7. Return of spontaneous circulation
8. Return of spontaneous circulation
9. Return of spontaneous circulation
10. Return of spontaneous circulation
11. Return of spontaneous circulation
12. Return of spontaneous circulation
13. Return of spontaneous circulation
14. Return of spontaneous circulation
15. Return of spontaneous circulation
16. Return of spontaneous circulation

UNIT 3: CARDIOPULMONARY BYPASS
21053AC-0103148584

UNIT OBJECTIVES
The objectives for this unit are to be able to:

LEARNING OBJECTIVES
1. Describe the physiology of cardiac resuscitation and
2. Describe the function of cardiac resuscitation in cardiac resuscitation.

OUTCOME

1. The percentage of hypoxemia
2. CO2 capnometry
3. Duration of pulseless cardiac arrest
4. Duration of pulseless cardiac arrest
5. Return of spontaneous circulation
6. Return of spontaneous circulation
7. Return of spontaneous circulation
8. Return of spontaneous circulation
9. Return of spontaneous circulation
10. Return of spontaneous circulation
11. Return of spontaneous circulation
12. Return of spontaneous circulation
13. Return of spontaneous circulation
14. Return of spontaneous circulation
15. Return of spontaneous circulation
16. Return of spontaneous circulation

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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

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Volunteers

- 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!

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Volunteers!

- Carrie Striker
- Joey Timpa
- Ron Angona
- Ashley Hodge
- Talya Frey
- Chelsea Capone
- Sonya Burrell
- Molly Bryant
- Desiree Bonadonna
- Dafne Chianella
- Jordan Voss
- Sean Clingan
- Kerry Fair
- Justin Sleasman
- James Neal
- Molly Oldeen
- Kevin Niimi
- Caitlin Blau
- Ed Harmon

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Next Steps?

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

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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
 - SMEs write evidence-based test items (questions) based on KSAs from JD
 - SMEs validate exam items and set cut-scores for exam form (group of questions)
 - 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
 - Contact employers, employees, and subject matter experts (SMEs)
 - Gather volunteer stakeholders from professional organizations
 - AmSECT Congenital and Pediatric Committee (SMEs)
 - Perfusion education program directors

Body of Knowledge →

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Goals / Future

What does it become?	Who do we get involved?
<ul style="list-style-type: none"> ■ Publication / Book ■ Certification <ul style="list-style-type: none"> ▪ i.e. IBBM - PBMT ■ Basis for certification exam for pediatric perfusion subspecialization 	<ul style="list-style-type: none"> ■ Perfusion programs ■ AC-PE ■ ABCP

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Thank You

