Staffing and Productivity Metric for Perfusion

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Conflicts of Interest

- I have no conflicts of interest on this topic

Perfusion Evolution

Then:
- Operate HLM in the OR
- IABP

New Age

Now:
- Operate HLM
- Hybrid Procedures
- ECMO/ECLS
- VAD
- VV Liver Tx Support
- IOAT
- POC
- Pit/BM sequestration
- Thrombotic evacuation
- TAVR
- LLE
- HPEIC/ILP
- Intra/Extra Hospital Transport
- Other
Location

• OR
• ICU
• Cath Lab
• ER
• Radiology
• Hybrid Suites
• Multi-Institutional
• Ground/Air Transportation

How is Perfusion Workload Measured?

• Clinically Based
• ABCP – 40 cases/yr
• Salary & Equipment Surveys
• Avg # Cases Pumped/Perfusionist

66.5% Perfusionists pumped between 61-140 cases/yr
No numbers collected for other duties

66.5% respondents stated there was no staffing protocol
Discussed CPB caseload for adult/peds combined programs

How Do We Measure…

- Autotransfusion
- Standby
- Ancillary
- Competency Training/Simulation
- On Call
- Administrative

Not All Duties Created Equal

Relative Value (Case Equivalent)

- You Can Only Measure Things That Have a Value Attached to It
- Establish a Standard by Which All Procedures are Measured Against
- For UW the Standard is an Adult CPB procedure

Standard Procedure (CPB) Considerations

- Personnel
- Time
- Equipment
- Expertise
- Logistics

- CPB Procedure = 1 CE
How Do Other Procedures Measure Against CPB Procedure

- CPB Standby = 1
- Pediatric CPB = 2
- ECMO initiation = 1, Daily = 0.5, Shift 0.125/hr
- Autotransfusion = 0.5
- VAD Insertion = 0.5
- HIPEC = 0.5
- Misc = 0.25 – 0.5
- On Call, Inservice, Admin = 0 (built into CE)
- Actual Value vs. Standard Value

UW Health Data Collection

- Every Case Entered Into MSAccess DB
- Auto-generated Monthly Report
- Graphical Representations of:
  - CE per Month/Year
  - Average CE per Perfusionist
  - Event List
- Data collected prospectively since 7/2013 & retrospectively since 1/2007

Monthly CE Report

UW, AFCH, VA 2007-17 Data
**Events Over Time**

**Now What?**

- Historical Data Provides Justification for Staffing Levels
- For UW “Sweet Spot” 11-13 CE/Perf/Mo
- Equivalent to 132-156 CE/yr
- 2007 – 6 FTE
- 2017 – 10.6 FTE
- 2019 – 12.6 FTE

**Conclusion**

- Data Driven Staffing Model
- Useful for Monitoring Multiple Duties
- Plan for Future Growth
- Subcategory examination (Adult/Peds)
- Easily Adjustable as Surgeons, Procedures, Program Expansion (Contraction) Occur
- Gives Value to Perfusion Productivity beyond “Pumping Cases”

**Thank you**