



ACC.18™

67th Annual Scientific Session & Expo

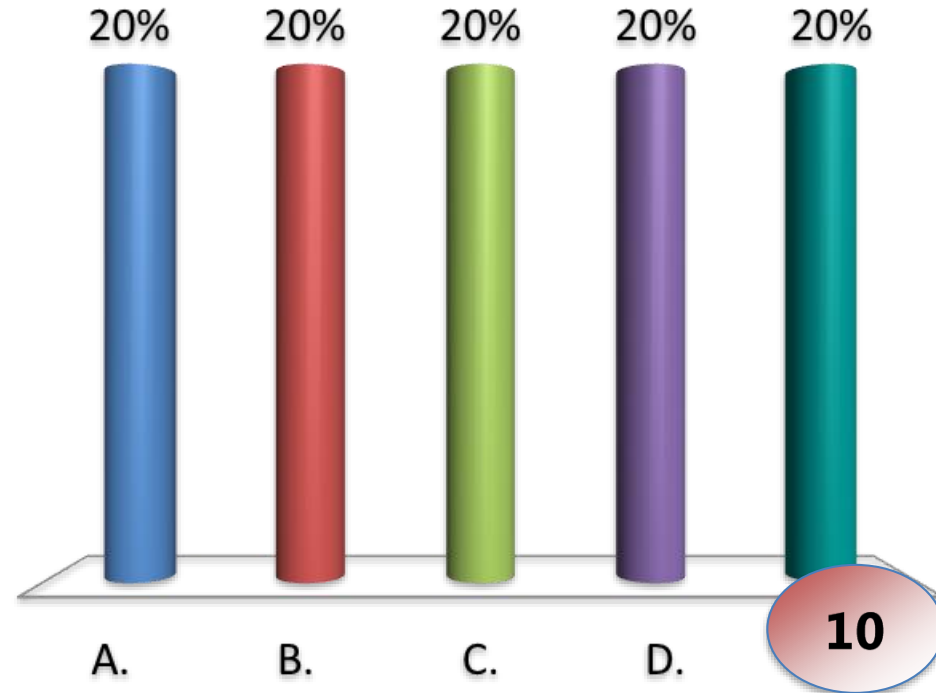
ORLANDO
MARCH 10 - 12
2018

Training Program Directors' Symposium Session: Critical Care Cardiology Training

David A. Morrow, MD, MPH, FACC
Director, Levine Cardiac Intensive Care Unit
Brigham and Women's Hospital, Boston, MA

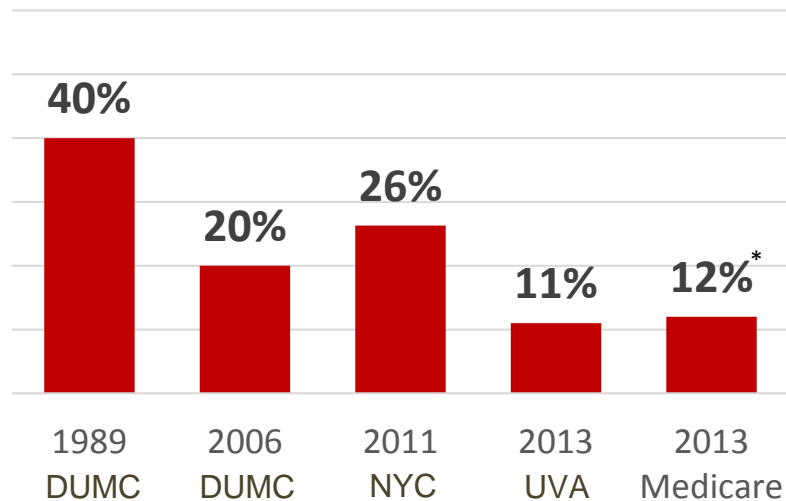
Our program is actively exploring options to offer advanced training in CCC

- A. Strongly agree
- B. Somewhat agree
- C. Neutral
- D. Somewhat disagree
- E. Strongly disagree



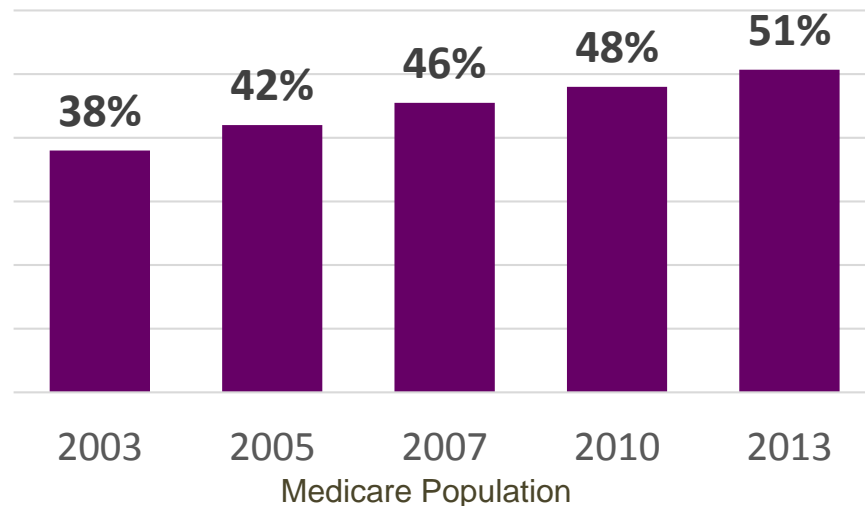
Trends in Cardiac Critical Care: Distribution of CICU Diagnoses

STEMI (%)



*Includes STEMI and NSTEMI

Non-Cardiac Primary Dx (%)



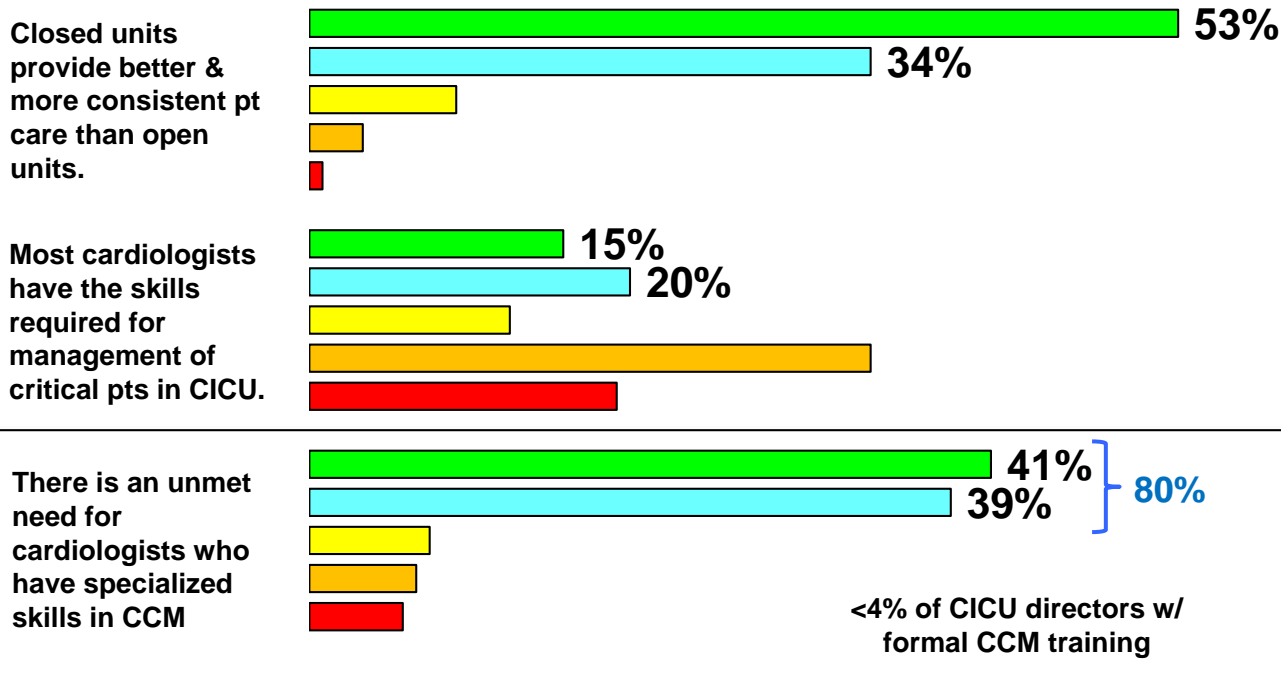
2003-2013 data; 3.4 M admissions w/ CICU stay



Survey of US CICUs on behalf of AHA Writing Group on Evolution of Critical Care Cardiology

Attitudes of CICU directors (N=123, 78% academic)

- Strongly Agree
- Somewhat Agree
- Neutral
- Somewhat Disagree
- Strongly Disagree



Acute Cardiovascular Care Association Position Paper on Intensive Cardiovascular Care Units: An update on their definition, structure, organisation and function

Eric Bonnefoy-Cudraz,¹ Hector Bueno,² Gianni Casella,³ Elia De

European Heart Journal: Acute Cardiovascular Care
1–16

© The European Society of Cardiology 2017

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/2048872617724269

journals.sagepub.com/home/acc



“CV care in this setting has a high level of intensity, and **primary responsibility for patient care should be from CV intensivists.** ...

All senior physicians working in the unit including during the on-call/on-duty period must have specialized skills in critical care.”

“... acquisition of competence in acute CV care cardiology requires **a minimum of 12 months of full-time training after completion of the core cardiology training**”



Challenges for Training Programs in CV Medicine

- **Need to keep pace with evolution of the contemporary CV care in many domains (CICU, imaging, structural)**
- **Struggle to fit more training into less time**
- **All programs expose the trainees to critically ill pts, but the structure & duration of time spent in the ICU setting**
 - **Depends on the structure of the hospital, & training programs**
 - **Somewhat variable from intense to modest**
 - **Some may have more limited experience w/ mechanical support, ventilator management, renal replacement tx, and other advanced therapies in ICU**

Current Training in Critical Care Cardiology

COCATS 4 Task Force 13: Training in Critical Care Cardiology

“The competencies important for the fellow to achieve during critical care cardiology training have not been included in previous COCATS and are provided [now] in recognition of the need to define them within the context of this evolving and complex field.”



Training in Critical Care Cardiology (2)

COCATS 4 Task Force 13: Training in Critical Care Cardiology

Level	Time	Goals
Level 1	*	<ul style="list-style-type: none">• Basic training to become a competent consultant.• CV fellows should be well equipped to manage the majority of pts in a CCC environment.
Level 2	**	<ul style="list-style-type: none">• Addtl training that enables some CV specialists to render more specialized care.• Would signify a strong career interest in CCC• Challenges to measurement and verification
Level 3	+1y	<ul style="list-style-type: none">• Requires advanced training and experience to acquire specialized knowledge and competencies.• Completion of an additional 1-year clinical fellowship w/in a Department of Medicine

* Able to be accomplished during a 3y general fellowship in CV medicine; ** 2 to 6 mo of dedicated CCC experiences



ABIM Training Requirements for Specialists in CV Medicine Seeking Critical Care Certification

- **Eligibility Criteria**

- Training conducted in Critical Care Fellowship program within dept of medicine
- Completion of 3 yrs of accredited CV Diseases Fellowship

- **Training Requirements**

- Completion of 1 yr accredited clinical fellowship in Critical Care Medicine
- Up to 6 mo of critical care experience in cardiology & critical care can apply to both exam requirements
- Minimal total full time clinical training of 30 months
- Minimum time in training 48 months

Increasing Skill Requirements for MDs in the CICU

- **Advanced MCS**
- **Prevention and Management of Ventilator Acquired Complications**
- **Treatment of acute lung injury**
- **Prolonged ventilation and weaning**
- **Renal replacement therapy**
- **Nutritional and metabolic mgmt**
- **ICU delirium and polyneuropathy**
- **Prevention of hosp-acquired infections**
- **Tailored curriculum:**
- **MICU, Cardiac SICU, neurocritical care**
- **Pulm HTN, RHF**
- **MCS/VAD**
- **Palliative care**
- **Clinical, translational, or basic research**

Basic Curriculum for CCC

Physicians who provide care for acute CV conditions requiring critical care:

- Use and interpretation of noninvasive and invasive hemodynamic monitoring tools
- Appropriate use of mechanical circulatory support
- Basic management of mechanical ventilation
- Indications for renal replacement therapy
- Exposure should include:
cardiac arrest, cardiogenic shock, acute HF, unstable arrhythmias, HTN crisis, infective endocarditis, aortic dissection, pericardial tamponade, decompensated valvular heart disease, and pulmonary embolism

Advanced Curriculum for CCC

MDs in the advanced (Level 1) CICU should be experienced in managing use and complications of advanced medical technologies:

- **Complex modes of mechanical ventilation; management of ALI/ARDS**
- **Prevention of ventilator-related complications**
- **Percutaneous temporary mechanical circulatory support**
- **Inhaled pulmonary vasodilators**
- **Management of targeted temperature management**
- **Advanced structural heart disease (interventions and complications)**
- **Nutritional and metabolic mgmt; Management & prevention of ICU delirium**



Training in cardiology must take into account the role that the CV specialist is likely to play in the *health care delivery system of the future.*

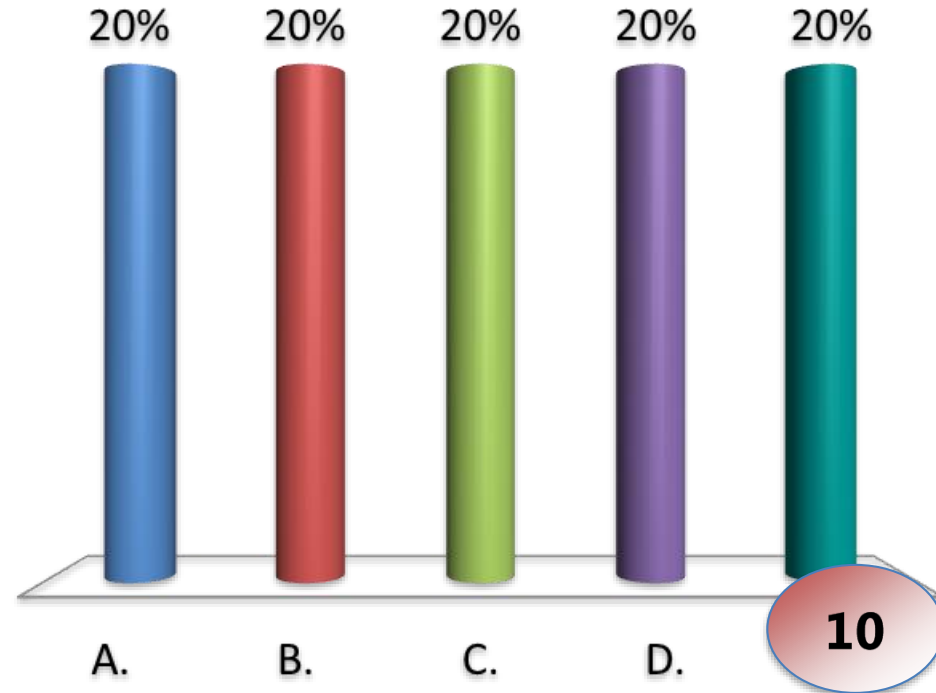
ACCF COCATS 3: Task Force 1



| ACC.18™

There is an unmet need for additional formalized options for advanced training in CCC

- A. Strongly agree
- B. Somewhat agree
- C. Neutral
- D. Somewhat disagree
- E. Strongly disagree



If we develop advanced training in CCC, it should be within CV medicine rather than CCM

- A. Strongly agree
- B. Somewhat agree
- C. Neutral
- D. Somewhat disagree
- E. Strongly disagree

