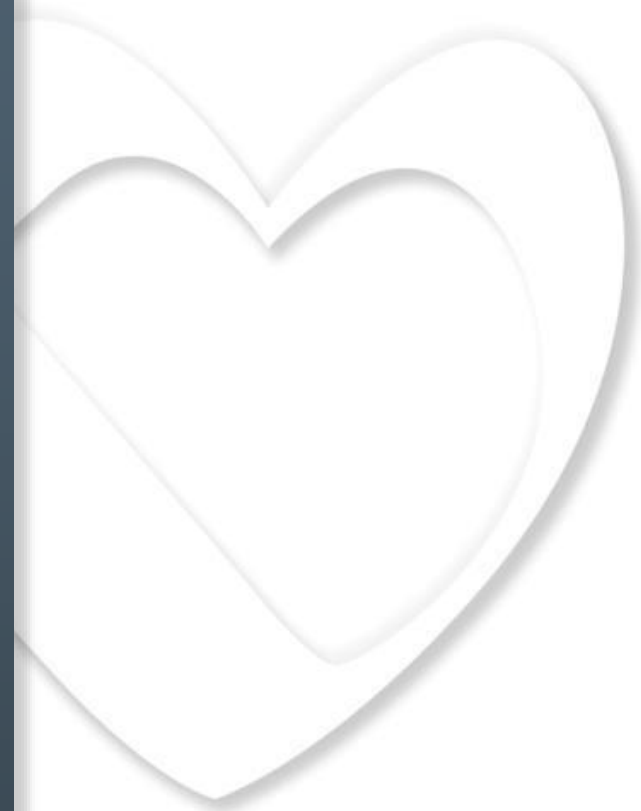


Συνεχιζόμενη Εκπαίδευση Καρδιολόγων

Γεράσιμος Φιλιππάτος



Disclosures

- **Chair or Committee Member of trials sponsored by Vifor, Bayer, Medtronic**
- **Research Grants: European Union**
- **Associate Editor: European Heart Journal**
- **Senior Consulting Editor: JACC HF**
- **Dean, Medical School, University of Cyprus**

Η ιατρική (καρδιολογική) εκπαίδευση

- Προπτυχιακή, για την απόκτηση του ιατρικού διπλώματος
- Μεταπτυχιακή, για την απόκτηση του τίτλου ειδικότητας
- Μεταπτυχιακή για την απόκτηση τίτλου εξειδίκευσης
- Μεταπτυχιακή για την απόκτηση μεταπτυχιακού διπλώματος ή διδακτορικής διατριβής
- Διά βίου εκπαίδευση, που αποσκοπεί στη συνεχή ενημέρωση στα σύγχρονα δρώμενα της επιστήμης.

Προπτυχιακή Εκπαίδευση

- Αριθμός φοιτητών
- Πρόγραμμα σπουδών
- Διοικητική δυσλειτουργία
- Κλινική εκπαίδευση
- Υλικοτεχνική υποδομή
- Νέες μέθοδοι διδασκαλίας

Μεταπτυχιακή εκπαίδευση: Ειδικότητα Καρδιολογίας

- Τα υπάρχοντα προβλήματα αφορούν
 - α) στην επιλογή και αριθμό των ειδικευομένων
 - β) την υλικοτεχνική υποδομή, στελέχωση και λειτουργία των κλινικών
 - γ) την οργάνωση της εκπαίδευσης των ιατρών, και
 - δ) την αξιολόγηση των υπό ειδίκευση, των ειδικευμένων καρδιολόγων και
 - ε) των εκπαιδευτικών κέντρων
 - στ) τη διοικητική δυσλειτουργία των νοσοκομείων
 - ζ) την έλλειψη ηλεκτρονικού φακέλου

Assessing Quality of Care Knowledge Matters

Eric S. Holmboe, MD
Rebecca Lipner, PhD
Ann Greiner, MCP

SIGNIFICANT QUALITY-OF-CARE GAPS ARE WELL DOCUMENTED in the United States.^{1,2} These reports have focused mostly on underuse of performance measures of important processes of care, and some outcomes of care.¹ Others have argued that the cause of underuse of these evidence-based processes of care is usually not deficient physician knowledge about whether to perform the examination or order the test, but rather poorly designed, dysfunctional microsystems of care unable to deliver effective, efficient, and reliable care.^{3,4}

Consequently, much of the recent work in quality improvement has focused on changing microsystems of care

rect diagnostic tests, critical to the efficiency and effectiveness aspects of quality.

Our objectives in this Commentary are to discuss the relationship between medical knowledge and quality and how the secure examination component of specialty board certification—with its primary focus on assessing physician knowledge, diagnostic acumen, and clinical judgment—is an important complement to current performance measures. Recognizing this importance, in 2006 the American Board of Internal Medicine instituted a new requirement for all physicians with time-limited certificates to evaluate their performance in practice to address physician competence in practice-based learning and improvement and systems-based practice. We hope this discussion will stimulate dialogue about the need for more comprehensive physician performance measurement in the era of public reporting.

Medical Knowledge and Quality

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Financial Disclosure: None reported.

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There is evidence to support the link between board certification examinations and quality.¹⁶⁻²³ For instance, Nor-

Lawrence Erlbaum Associates; 2006.

16. Sharp LK, Bashook PG, Lipsky MS, Horowitz SD, Miller SH. Specialty board certification and clinical outcomes: the missing link. *Acad Med*. 2002;77(6):534-542.

17. Hanson KL, Butts GC, Friedman S, Fairbrother G. Physician credentials and practices associated with childhood immunization rates: adults practice pediatric

Μεταπτυχιακή εκπαίδευση:

Μεταπτυχιακά διπλώματα & Διδακτορικές διατριβές

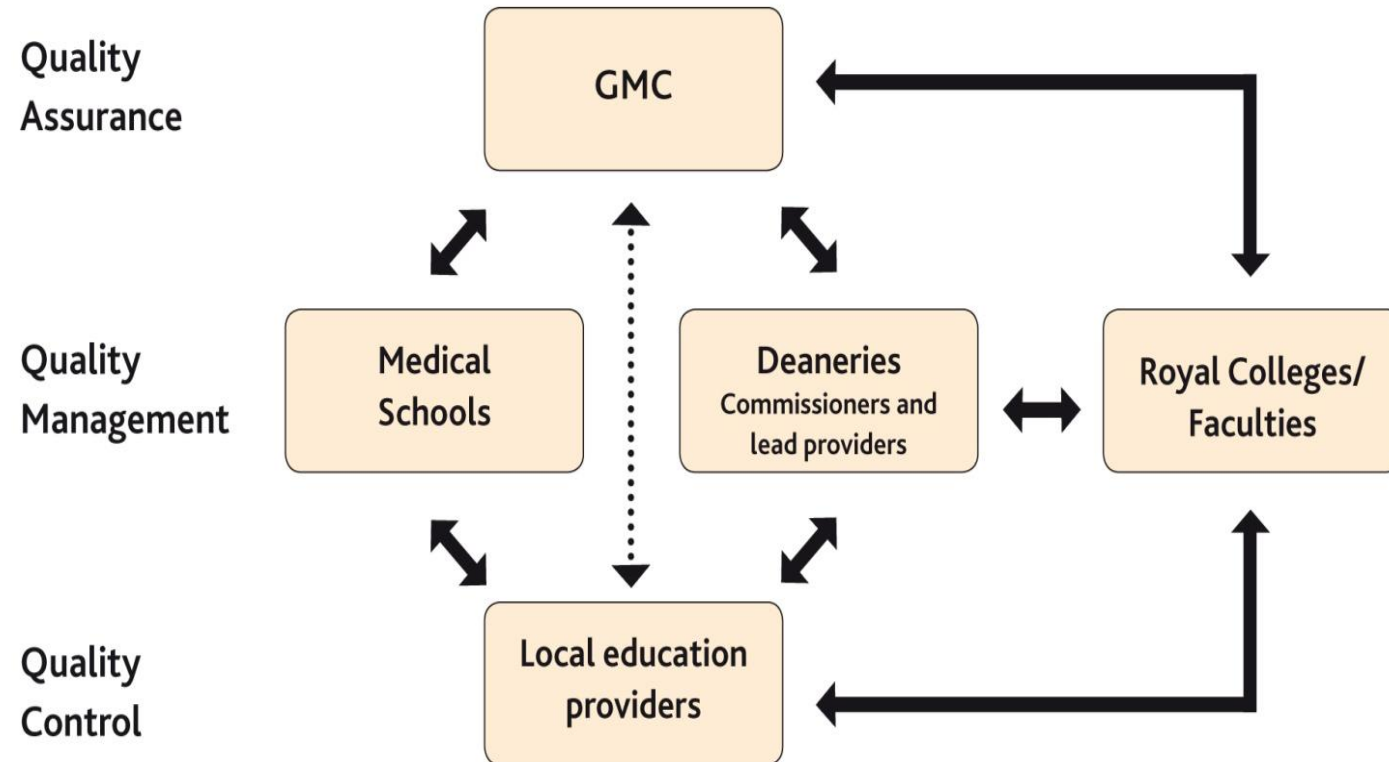
- Έλλειψη κατεύθυνσης / συμβουλής / στόχων στην επιλογή διπλώματος
- Η διδακτορική διατριβή δεν θεωρείται η αρχική εκπαίδευση για να αφιερωθεί ο καρδιολόγος στην έρευνα αλλά η ευκαιρία για απόκτηση προσόντων
- Υπάρχουν μεγάλες διαφορές με άλλες χώρες (δομή προγράμματος, Σχολή Μεταπτυχιακών Σπουδών, κόστος, διάρκεια για την ολοκλήρωση, αριθμός υποψηφίων ανά καθηγητή...)



Οι εκπαιδευτικές μονάδες

- Οι εκπαιδευτικές μονάδες
- θα ακολουθούν ενιαίο εκπαιδευτικό πρόγραμμα σε όλη τη χώρα
- το πρόγραμμα θα πρέπει να προβλέπει διαφορετικούς μαθησιακούς στόχους, ανάλογα με τον χρόνο εκπαίδευσης του (εξ)ειδικευομένου.
- Οι δραστηριότητες και η απόδοση των εκπαιδευτικών μονάδων θα υπόκεινται σε τακτικό έλεγχο από ανεξάρτητο φορέα

GMC Quality Improvement Framework



Education strategy 2011-2013

Setting and assuring standards, and valuing education and training:

*Ensure that the standards we set
provide a framework for excellence and
that we are proactive in maintaining
compliance*

Defining outcomes for education and training:

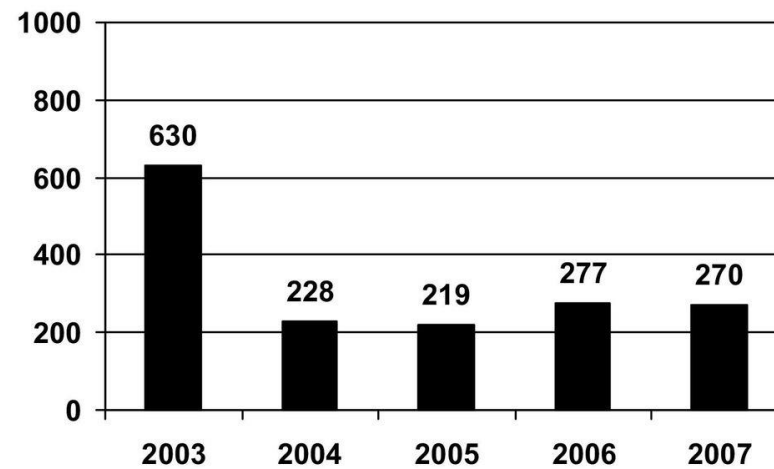
*Define clear outcomes which must be
met by students and trainees on
completion of different stages of training*



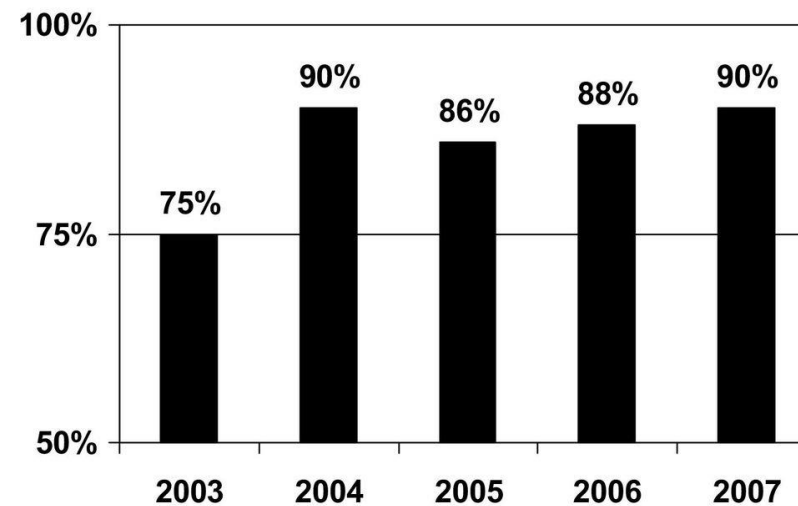
Μεταπτυχιακή εκπαίδευση: Εξειδίκευση (Certification)

- **Απεικόνιση:** Υπερηχοκαρδιογράφημα, διαθωρακικό, διοισοφάγειο, νέες τεχνικές, stress echo, μαγνητική καρδιάς, αξονική στεφανιογραφία, CT, πυρηνική καρδιολογία
- **Επεμβατική**
- **Ηλεκτροφυσιολογία / βηματοδότηση**
- **Εντατική καρδιολογία** (υπερδιήθηση, μη επεμβατικός αερισμός, δεξιός καθετηριασμός...)
- **Καρδιακή ανεπάρκεια**, συσκευές, μεταμόσχευση

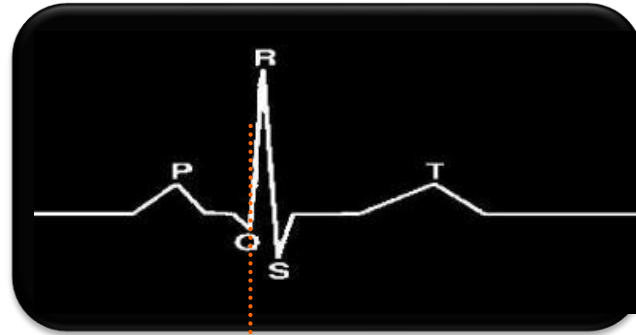
**Interventional
Cardiology
Initial
Certification
Exam Takes**



**Passing
Rate**



Cardiac Contractility Modulation (CCM™) Signals

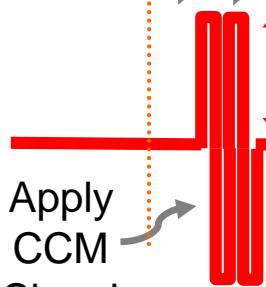


Detect
local
activation

Delay → Duration 22ms

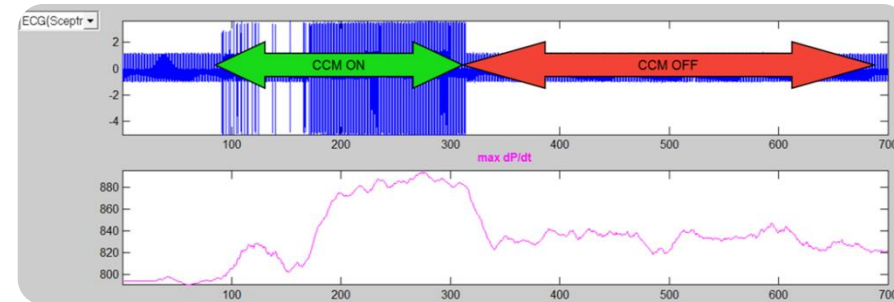
Amplitude
 $\pm 7.5V$

Apply
CCM
Signal

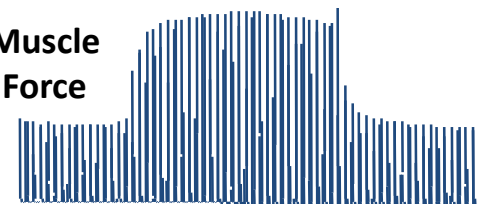


CCM™ signals are
non-excitatory

CCM™ signals
are applied during the
absolute refractory period

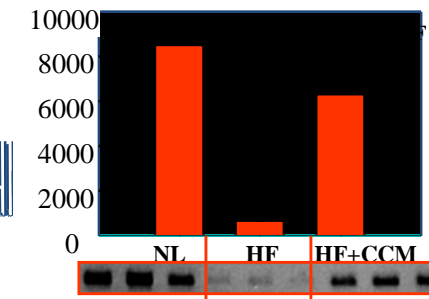


Muscle
Force



CCM

SERCA2a

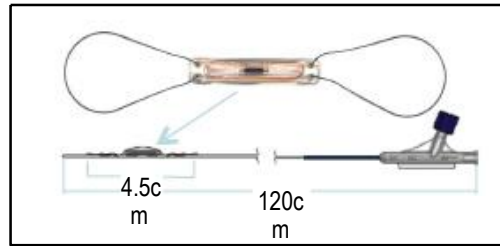


Newer Electrical Therapies for the Treatment of HFrEF

- Neuromodulation
 - Baroreceptor Activation Therapy
 - Vagal Nerve Stimulation
 - Spinal Cord Stimulation
 - Renal Denervation
 - Transvenous Phrenic Nerve Stimulation

Less Invasive Ventricular Enhancement & Reshaping

The Corvia IASD® II System



CardioMems



The V-Wave Device

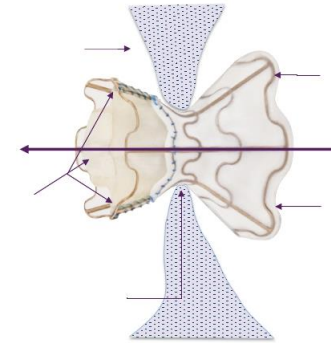
Self-expanding
nitinol frame

Right Atrium

- Porcine pericardial leaflets
- Minimizes R to L shunting and risk of paradoxical embolization

Hourglass shape

- secure and atraumatic septal retention
- minimal ID 5.0 mm



Left Atrium

ePTFE encapsulation

- Channels flow
- Impedes luminal obstruction due to tissue ingrowth



Algisyl®

PARACHUTE IMPLANT

References | Raise the standards

Heart Failure Curriculum

Heart Failure Specialists Curriculum

Heart Failure Nursing Curriculum

Global Standards

EMA: HFA is the unique scientific advisory body of EMA

ICHOM: International Consortium for Health Outcomes Measurement

Maintenance of certification (USA)

- **Once Board Certified, physicians maintain their medical specialty expertise by participating in a robust continuous professional development program.**
- **Provides physicians a structured approach for enhancing patient care and improving patient outcomes through focused assessment and improvement activities.**
- **Ongoing measurement of six core competencies:**
 - Practice-based Learning and Improvement
 - Patient Care and Procedural Skills
 - Systems-based Practice
 - Medical Knowledge
 - Interpersonal and Communication Skills
 - Professionalism

Requirements for Maintenance of Certification

American Board of Medical Specialties- American Board of Internal Medicine

- The Maintenance of Certification (MOC) program requires that you earn some **MOC points every two years** to be reported as **participating in MOC**.
- To be reported as **certified**, you must earn **100 points every five years** (the points you earn every two years count toward your 100 points) and **meet the MOC assessment requirement** through either the traditional 10-year exam or the Knowledge Check-In option.

Recertification

- Maintenance of Certification (MOC)
- **Home Study Modules**
- **Simulation**
- **Practice Improvement Modules (PIMs)**
- **Interventional Case Volume**

Requirements for Maintenance of Certification



HFA
Heart Failure
Association

Earn points every 2 years

To be reported as participating in MOC:

Earn points every 2 years by completing an activity (of any point value).

Points earned will count toward your 100 MOC points requirement.

[FIND AN ACTIVITY >](#)

Earn 100 Points

To stay certified:

Every 5 years earn 100 MOC points

[FIND AN ACTIVITY >](#)

Pass an Assessment

To stay certified:

Pass the MOC Exam

within 10 years of when you last passed.

OR

Take the Knowledge Check-In

every 2 years and remain on a successful path.

[MOC ASSESSMENT INFORMATION >](#)



ESC

Revalidation of doctors in the UK general medical council

- Every licensed doctor who practises medicine must revalidate. Revalidation supports doctors to develop their practice, drives improvements in clinical governance and gives patients confidence that doctors are up to date.

Supporting information

During the course of practice a doctor must collect and reflect on the following supporting information and discuss it at his/her annual appraisal:

- Continuing professional development
- Quality improvement activity
- Significant events
- Feedback from patients or those to whom you provide medical services
- Feedback from colleagues
- Complaints and compliments.



- Η αξιολόγηση των ειδικευμένων που προσφέρουν τις υπηρεσίες τους στον ιδιωτικό χώρο είναι ένα δυσεπίλυτο διεθνές πρόβλημα. Η αυτεκπαίδευση και αυτεκτίμηση έχει αποδειχθεί ατελής και ατελέσφορη μέθοδος. Η περιοδική επανεξέταση ανά πενταετία για διατήρηση του τίτλου ειδικότητας δεν έχει επιτύχει, διότι, όπως έχουν δείξει σχετικές μελέτες, ο τρόπος αυτός αξιολόγησης δεν καλύπτει τα ατομικά επιστημονικά κενά του κάθε ιατρού, είναι ακριβός και εκλαμβάνεται από τους εξεταζομένους ως απειλή.



NATIONAL BOARD OF PHYSICIANS AND SURGEONS

NBPAS.ORG

- **NBPAS is a new alternative for continuous physician certification.**
- **NBPAS relies on ACCME accredited CME for life-long learning instead of computer modules and repeat testing.**
- **Interest in the NBPAS.org alternative is spreading rapidly.**
- **This grass roots movement is now in discussions with hospitals, physician groups and payers to accept NBPAS continuous certification**

Clinical Trialists Summer School


An event for intellectual interaction between key opinion leaders in heart failure, principal investigators in major **clinical trials in heart failure** and young clinicians already or about to become heart failure specialists



June 2018

HFA Winter Meeting

An event to give a broad overview of **current concepts in heart failure research**, present excellent science and produce discussions on heart failure pathophysiology and treatment as well as providing opportunities for all participants to present their own work and have fruitful discussions with their peers



January 24th to 27th
2018

Events |



Exercise Rehabilitation & Long Term Management in HF Patients

*Educational Training Programme
Open to all
IV Edition of the HFA Educational-Training Course.*

*To be held on 21-22 March 2018 at the CNR National Research Council Area,
in Pisa (Italy).*

Patient Care Workshop

*Upon invitation only
10 Countries invited – each represented by 1 Cardiologist, 1 Nurse, 1 GP*

*Concept:
Update on Best Practice - Multi-professional Care-Best Practice - Cases presented
by Delegates - Local Implementation*

Exercise Rehabilitation & LT
Managagement

March 21 & 22
2018

Patient Care WS

November 3rd
2017



Webinars | Live interactive courses



Topics for 2017 & 2018

- What is new in...
 - the management of comorbidities*
 - the diagnosis of heart failure*
- Focus on...
 - arrhythmias and devices in heart failure*
 - devices in heart failure*
- Atrial fibrillation in heart failure
- Potassium in heart failure
- Sleep apnea in heart failure

And many more... !

29 available modules

Last modules published:

- Co-morbidities in heart failure: atrial fibrillation
- Co-morbidities in heart failure: heart failure and Ischaemic heart disease
- Indications for and use of CRT
- Travelling with heart failure



Certification |

Heart Failure Certification Exam

Aims to assess the Knowledge Base for heart failure
which is set out by the Specialist Heart Failure Curriculum

May 29, 2018 / open to 100 candidates / 3 hours
100 MCQs with 5 options

Certified by the Heart Failure Association of the ESC



Postgraduate course

Certificate of Advanced Studies (CAS) in Heart Failure
delivered by:
the University of Zurich
&
endorsed by:
the European Heart Academy of the ESC.



**Understanding defeat
is preparing for victory**

Mao Ce-tung

Main Theme

Heart Failure from alpha to omega



Heart Failure & World Congress on Acute Heart Failure 2019



25-28 MAY
ATHENS
GREECE

Organised
by the Heart Failure
Association
of the ESC

HEART FAILURE •
FROM ALPHA 
TO OMEGA 

www.escardio.org/heartfailure





**In God we
trust; all
others
bring data.**



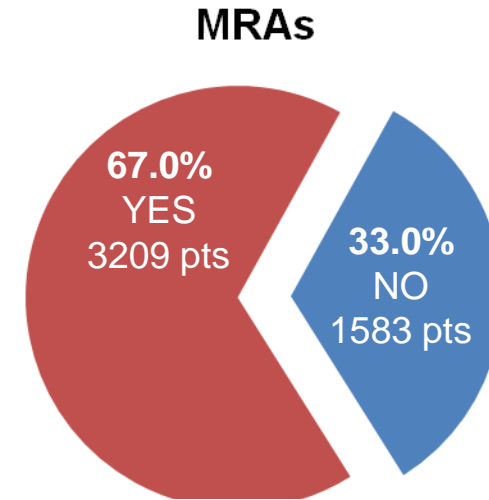
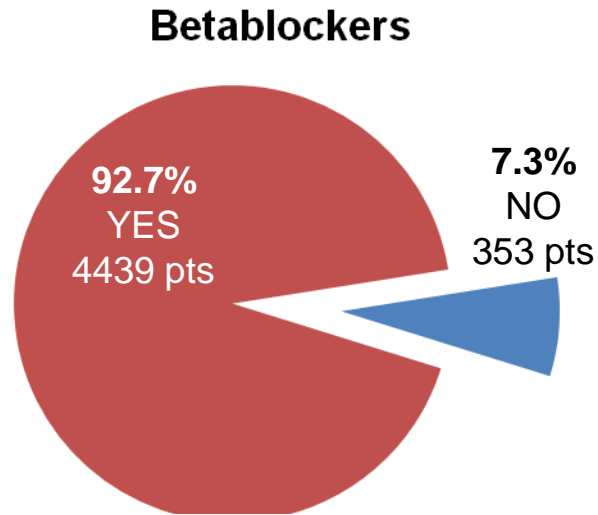
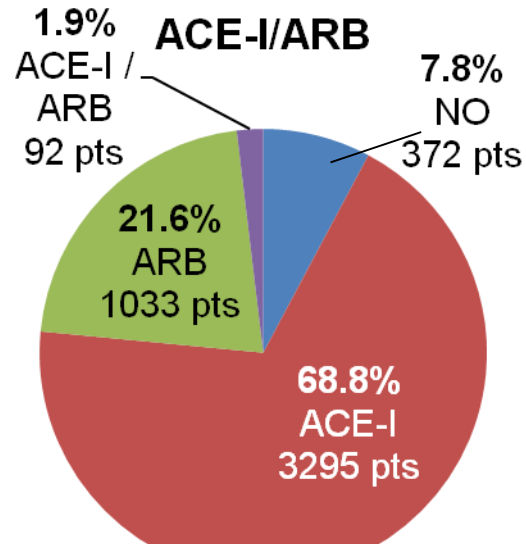
Edwards Deming

www.escardio.org/HFA



Are ambulatory patients with heart failure treated in accordance with ESC guidelines ?

Rate of use



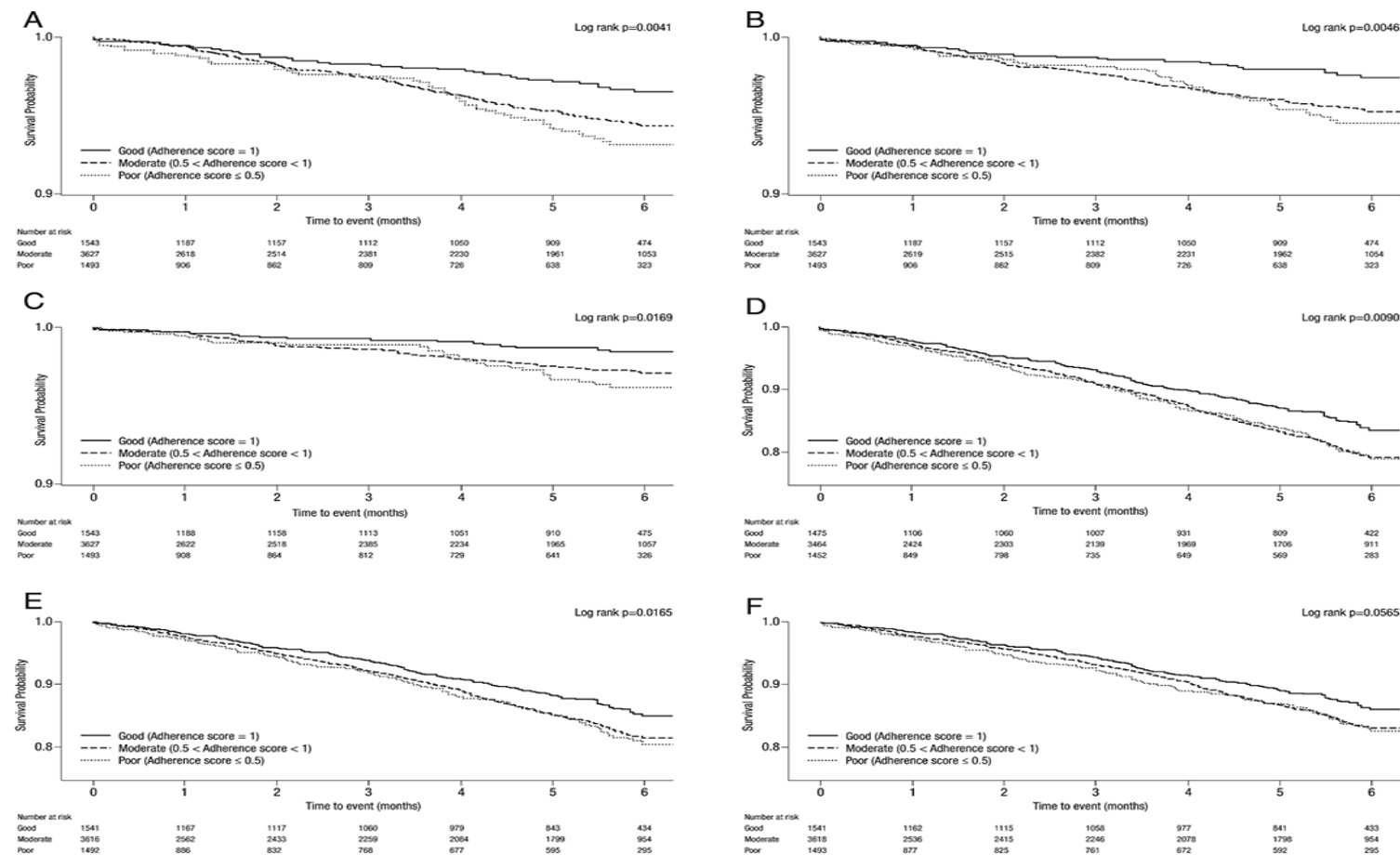
Rate of patients at target dosage of recommended pharmacological treatments

ACE-I (4710 pts)	1380 (29.3)
ARBs (1500 pts)	362 (24.1)

B-blockers (6468 pts)	1130 (17.5)
---------------------------------	--------------------

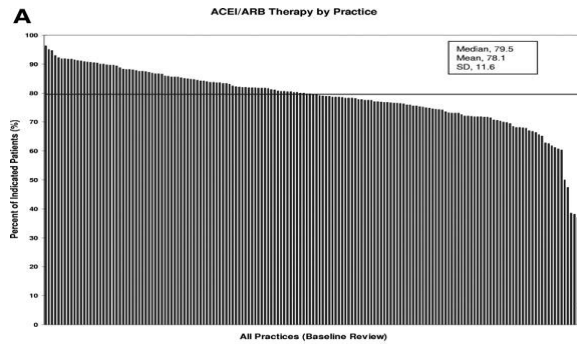
MRAs (4226 pts)	1290 (30.5)
---------------------------	--------------------

Physicians' guideline adherence is associated with better prognosis in outpatients with heart failure with reduced ejection fraction: the QUALIFY international registry

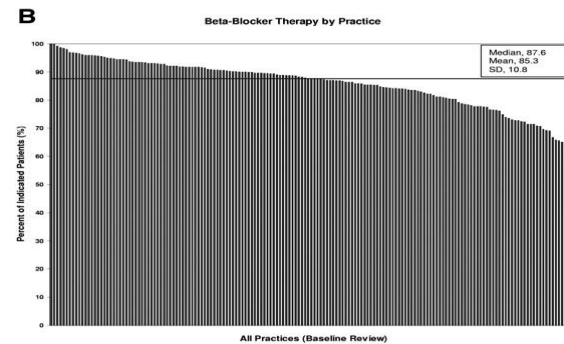


Frequency distribution of care metric rates by practice for evidence based therapies and HF education

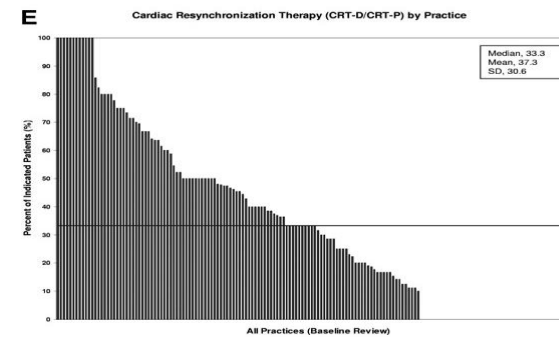
ACE inhibitors



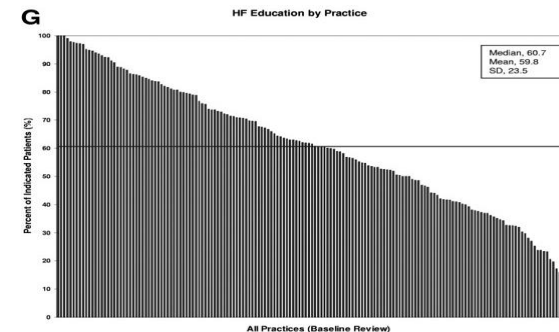
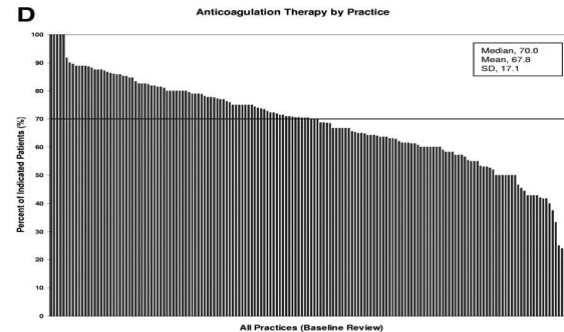
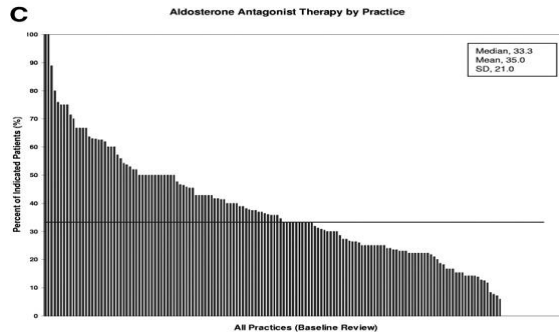
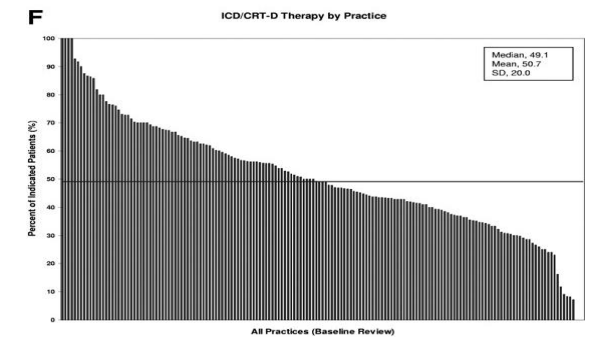
Beta-blockers



CRT/ CRT-D



ICDs, CRT-D

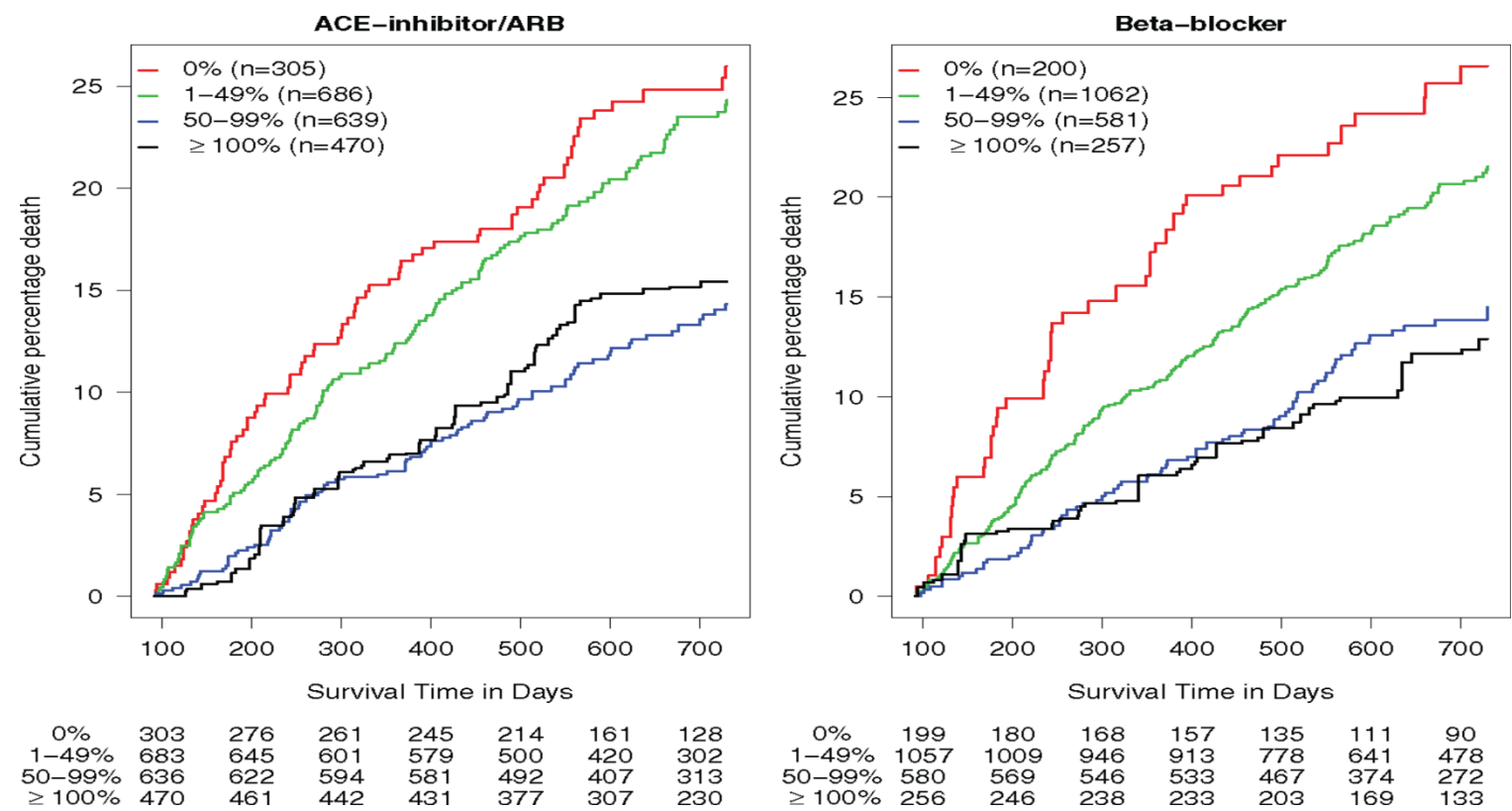


Aldo. antagonists

Anticoagulation

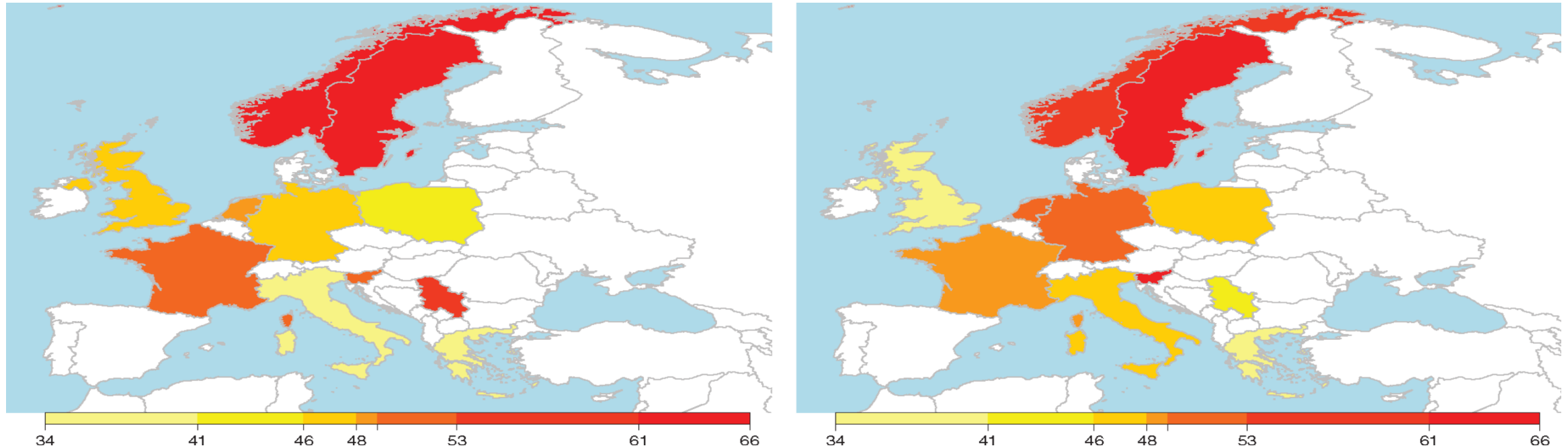
Education

Determinants and clinical outcome of uptitration of ACE-inhibitors and beta-blockers in patients with heart failure: a prospective European study



Adjusted mortality rate for patients receiving 0, 1–49, 50–99% or ≥ 100% of the recommended ACE-inhibitor/ARBs or beta-blocker dose, together with the risk set sizes at each time point.

Determinants and clinical outcome of uptitration of ACE-inhibitors and beta-blockers in patients with heart failure: a prospective European study



Average percentage achieved of the recommended dose of ACE-inhibitor/ARB (left), and beta-blocker (right) per country.