

An MDCB Overview

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Introduction

- Thank you from the MDCB Board of Directors
- Purpose:
 - Test/ Exam
 - Governance and how it relates as a board to its communities of interest
 - How policy is designed, developed, and implemented
 - Recent changes and the process
 - Future of the Board

MDCB Exam

- The first exam was given in 1988
- The idea of the exam came out of the AAMD Educational Committee
- The 25th exam will be given in 2012
- The exam has a great history

MDCB Exam

- The exam has been pencil and paper since 1988
- The exam is 155 questions broken into 9 areas
- This September, the first computer based MDCB exam will be given
- The computer based exam is the culmination of a five year strategic plan

MDCB Exam

- Exam originally developed by medical dosimetrists
- There is only one exam given; for example, the ARRT has 14 exams.
- Why not AAPM or ARRT?
- Who gets paid?

MDCB Exam

- There are nine content areas within the exam.
- How are these content areas chosen?
- How are the percentages of the content areas calculated?
- Who writes the questions for the exams?

MDCB Exam

- Job Task Analysis
- Must be completed every five years
- Most recent JTA was completed in January 2010
- Quite intensive to do the JTA
- Volunteer driven

MDCB Exam

- Job Task Analysis correlates job tasks with the exam
- Once this is complete, we go to the next step: The Cut Score Analysis
- The most recent JTA primarily had changes in percentages.
- For example, the number of physics questions decreased from 31 to 26, while the number of computer questions increased from 5 to 8.

MDCB Exam

- What is the 'cut score'.
- The Cut Score Analysis was done in June, 2010
- 12 CMDs' were flown to Chicago to 'take the exam'
- From taking the exam, the cut score was determined based on the analysis on the 'test takers'

MDCB Exam

- The cut score was determined as a number of correct questions in order to pass the examination
- For example, there are 155 questions on the exam.
- Most recently if you got around 91 questions correct, you pass (55% pass rate average over the past 5 yers).
- The recent cut score was set at 105 questions by your peers.

MDCB Exam

- For the 2010 exam, if the Board had used 105 questions for the cut score, only 27% of examinees would have passed
- The Board did what is called the Beuchler Method and changed the Cut Score to 96 Questions. The Overall pass rate was 49%.

MDCB Exam

- This was a decision the board made while keeping the exam psychometrically correct.
- The question arose: do you have an exam where only 27% pass with a cut score, determined by peers, at 105 questions.
- Or do you slightly modify the cut score, still staying psychometrically sound, and take the pass rate from 27% to 49%?

MDCB Exam

- In consideration, balancing both the integrity of the exam, the integrity of the cut score group, and the dosimetry community, the board decided to lower the cut score to 96 questions based on all recommendations.

MDCB Exam

- What the board did is what you probably do not hear about.
- Because of the board's action in keeping the exam integrity while also keeping the big picture in mind, my guess is that there are people here today who are deserved CMD's who might not have passed the exam without the assertive thinking and action of the board by slightly lowering the exam cut score.

MDCB Exam

- And now to the third part of the board's work on the exam in 2010: The Computer Based Exam
- For the first 24 years, the test is pencil and paper
- This has limited the scope of the exam
 - Time and place
 - Limitation to multiple choice questions
 - Modeled from an industrial society perspective

MDCB Exam

- What does a computer based exam give us?
- 1) Logistics: 300 exam sites
- Prometric has sites not only in the United States but in other countries as well

MDCB Exam

- What does the CBT Exam give us?
- 2) The potential to have more exams
- There are several objectives associated with this
- 1) Go to bi-annual exam schedules
- 2) Eventually, can take the exam at any time

MDCB Exam

- What does the CBT Exam Give us?
- 3) Grading and questions
 - The goal is that eventually the grading will be instant
 - Two people sitting beside each other will take different exams
 - By random selection, the computer will select arbitrary questions, while keeping each exam psychometrically sound

MDCB Exam

- 3) Grading and Questions
 - Future exams may have you do a treatment plan in addition to questions
 - More imaging and anatomy
 - Questions can be in real time; videos can be shown;
 - Five years from now, the exam delivery and questions have the potential to be very different

MDCB Exam

- What does the CBT Exam Give Us?
 - Logistics
 - Biannual and Eventually Anytime Exams
 - Instant Grading and Different Questions

This takes us to the fourth area: Increased Security

MDCB Exam

- Increased Security may be the most important reason for a CBT exam
- No more paper copies: Atlanta
- No more proctors: Ebay
- Increased FBI cooperation
- Increased legal action mandated by law
- The exam will increasingly stay internal to 'the system'

MDCB Exam

- Did you know:
 - A person can take a special pen to a paper exam and scan the entire exam
 - If you are doing the real thing by studying and spending hundreds of hours of preparation, would you want someone to have this advantage?
 - Exam integrity is critical, and have a CBT will increase exam security

MDCB Exam

- What does the CBT give us?
- 5) It is the right pathway
- All of our work is computer based; why is our exam pencil and paper?

The CBT will take us to the next level.

MDCB Exam

- The CBT will lead us in change
- As the exam changes, so will the goals of our organization.
- All health care professions have gone through transition:
 - 1) Until 1911 physicians took no exams
 - 2) Until 2010 medical physicists allowed OJT to take the exam (takes effect by 2015)

MDCB Exam

- RTT: first exam 1964, until the 1980's most departments had OJT trained therapists
- Every profession has a life cycle, and within the life cycle, professions become more academic
- The MDCB is trying to be part of this positive change for our profession

MDCB Exam

- We are a young profession: just 24 years old
- As we go into our next 25 years, we will change.
- The majority of people sitting in this room are on the job trained, just like what happened with physicians, physicists, radiation therapists, radiographers, nursing...they all started like this

MDCB Exam

- But like other professions, medical dosimetry is evolving and trying to become better.
- It does not mean that OJT people are any less, it is just that in the future our pathways will change
- The Computer Based Test is part of this change. It is the right thing to do for the next generation of medical dosimetrists. I am very proud to be a small part of this positive change and the positive impact on our profession

MDCB Volunteers

- Multiple functions
- No compensation
- Average time spent is between 200 and 400 hours per year

MDCB Board Members Are:

- Have at least 5 year experience post CMD certification
- Encouraged to speak at meetings
 - AAMD
 - SROA
- Accessible and available
- Part of a federally recognized non-profit agency
- MDCB Board is NCCA accredited
 - National Commission for Certifying Agencies

Partner organizations

- AAMD
 - ▣ Works closely
 - ▣ Looks to for advancement of profession
 - ▣ Foster good working relationship
- Annual reports to the AAMD, ACMP, AAPM, ACR, ASTRO, and ASRT.

Board Structure

- 7 CMD's, 2 Physicists, 2 Radiation Oncologists, 1 public member
 - ▣ Additional CMD position starting September 1
- 6 positions appointed: AAMD, ASTRO, ACR, ACMP, AAPM, ASRT
- Public Member
- Officers: Past-President, President, President-Elect, Secretary/Treasurer
- Objective: balance through diversity

What do we do?

- Meets 3-4 times yearly
 - ▣ Business is conducted
 - ▣ Strategic planning
 - ▣ Question review
 - ▣ Exam construction/review
- Weekly conference calls - Executive Committee
- Monthly conference calls - Committees

Committees

- Test Development
- Eligibility
- Ethics
- Marketing
- Finance
- Maintenance of Certification
- Executive Committee

Other Partners

- Association Headquarters
- Prometric
 - ▣ Psychometrician
- Heuristics
 - ▣ New software/database/improved functionality
 - ▣ Increased responsiveness to our members
- Legal counsel
- External auditor
- External financial advisor

New Educational Standards

- In 2013, Bachelor's Degree or registration with a recognized radiological technology credentialing organization for Route 2 candidates
- In 2015, Bachelor's degree for Route 1 and Route 2 candidates
- In 2017 there will be one standard for all applicants. Candidates will be required to have a Bachelor of Science degree and have graduated from a formal dosimetry program accredited by the Joint Review Committee on education in Radiologic Technology (JRCERT) or foreign equivalent.

Why the Decisions

- Mission Statement
 - ▣ To steer the advancement of the Medical Dosimetry profession by establishing certification and continuing education standards to enhance quality patient care.
- Future emphasis
 - ▣ Professional recognition
 - ▣ Potential impacts CARE bill
- Positive effect for field of medical dosimetry

Why get involved?

- ▣ Improve industry
- ▣ Increase quality of medical dosimetry
- ▣ Contributing to profession

How can I get involved?

- ▣ Job Task Analysis
- ▣ Cut Score Study
- ▣ Item Writing
- ▣ MDCB Board Member

Thank You