International Symposium Panel Discussion
Connecting the Dots

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Connecting the Dots

IAEA

Medical Physics for World Benefit

Kenyan Physics Forum

Radiating Hope

Academia

AAPM/IOMP Equipment Donation Program

Industry

Private Practice

Stephanie Parker and Derek Brown / AAPM COMP 2020 / #2
Themes of the Discussion

Emerging themes

• Many different types of education
  • Graduate / Practical / Continuing Education
• Large variations around the world with respect to education
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• Medical physics graduate program in Africa
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- Medical physics graduate program in Africa
- Brain drain – lack of recognition
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• Large variations around the world with respect to education
• Medical physics graduate program in Africa
• Brain drain – lack of recognition
• Establishing a relationship between trainees and educators is important
• Be patient - you can’t teach everything in a single lecture
• AAPM could support local training based on needs assessments
• AAPM could nurturing positive relationships with industry to improve global access to radiation oncology
Themes of the Discussion

Emerging themes

• Substantial benefits to donating new equipment over used equipment
  • Only downside is cost
Useful References

• Roles and Responsibilities and Education in Med Phys - https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1610_web.pdf
• Database of radiation oncology centers worldwide - dirac.iaea.org
• Supporting the global cancer care community - www.uicc.org
How can we build independence and critical thinking skills?

Independence and critical thinking skills can be developed in several ways:

• Provide opportunities for experiential learning
• Use problem-based learning strategies
• Incentivize initiative
• Foster and encourage a critical thinking culture
• ...
International rotations

• International rotations are ideal opportunities for experiential learning
• Have been shown to benefit host sites, residents, and residency programs
• Benefits include:
  • Improving resident’s problem-solving skills (Kollars et al.)
  • Fostering independence in clinical practice (Henry et al.)
  • Engendering an interest in caring for underserved populations (Castillo et al.)
International rotations

7 international rotations between 2015 and 2020
What our residents thought

Mean Rating

This experience was valuable to you personally
This experience was valuable to you professionally
You felt that the location was dangerous or unsafe
You had positive interactions with local physicists and other staff
You would recommend other residents visit this institution in the future

Rating Category
The impact of international rotations

Some quotes from responses to written questions

• “… there were so many impactful moments throughout the entire month that cause you to look at the world differently.”

• “Working on overcoming … barriers was challenging at times, but a very engaging and rewarding experience.”

• “It will definitely cause me to approach any potential international work with more care than I previously would have considered.”
The impact of international rotations

Some quotes from responses to written questions

• “I believe I have a more informed awareness of radiation oncology on the largest scale. It will certainly continue to influence my perspective and insight regarding projects and work in the field.”

• “The fact that I was able to show up and implement a tool that they are now using regularly to design [treatment planning] models that are in turn used in clinical trials is just unbelievably rewarding to me.”

Derek Brown / AAPM COMP 2020 / #14
The impact of international rotations

Common themes from responses

• Increased awareness
• Ability to overcome barriers
• Engaging in rewarding experiences
• Taking ownership of actions and initiatives

These are all directly relatable to building independence and critical thinking skills.
Independence and critical thinking

International rotations are one way to ensure that we continue to build independence and critical thinking skills in our residents.

There are many other ways as well:

- Have residents organize and lead projects with professional colleagues in other departments
- Encourage residents to participate actively in professional organizations and relevant non-profit organizations
- …
Collaborators
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