

# International Symposium Panel Discussion

## Connecting the Dots

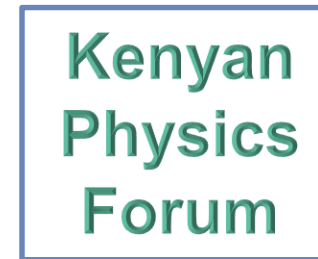
**Stephanie Parker**

Wake Forest Baptist Health

**Derek Brown**

UC San Diego

# Connecting the Dots



Academia

Industry



AAPM/IOMP Equipment Donation Program

Private Practice

# Themes of the Discussion

## Emerging themes

- Many different types of education
  - Graduate / Practical / Continuing Education
- Large variations around the world with respect to education

# Themes of the Discussion

## Emerging themes

- Many different types of education
  - Graduate / Practical / Continuing Education
- Large variations around the world with respect to education
- Medical physics graduate program in Africa

# Themes of the Discussion

## Emerging themes

- Many different types of education
  - Graduate / Practical / Continuing Education
- Large variations around the world with respect to education
- Medical physics graduate program in Africa
- Brain drain – lack of recognition

# Themes of the Discussion

## Emerging themes

- Many different types of education
  - Graduate / Practical / Continuing Education
- 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](https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1610_web.pdf)
- Expanding Global Access to Rad Onc - [www.thelancet.com/oncolgy](http://www.thelancet.com/oncolgy) vol 16, Sept 2015
- Medical Physics graduate programs in Africa - <http://afrimedphysics.org/w4949/2019/07/26/medical-physics-graduate-programs-in-africa/>
- Database of radiation oncology centers worldwide - [dirac.iaea.org](http://dirac.iaea.org)
- Supporting the global cancer care community - [www.uicc.org](http://www.uicc.org)



# How can we build independence and critical thinking skills?

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

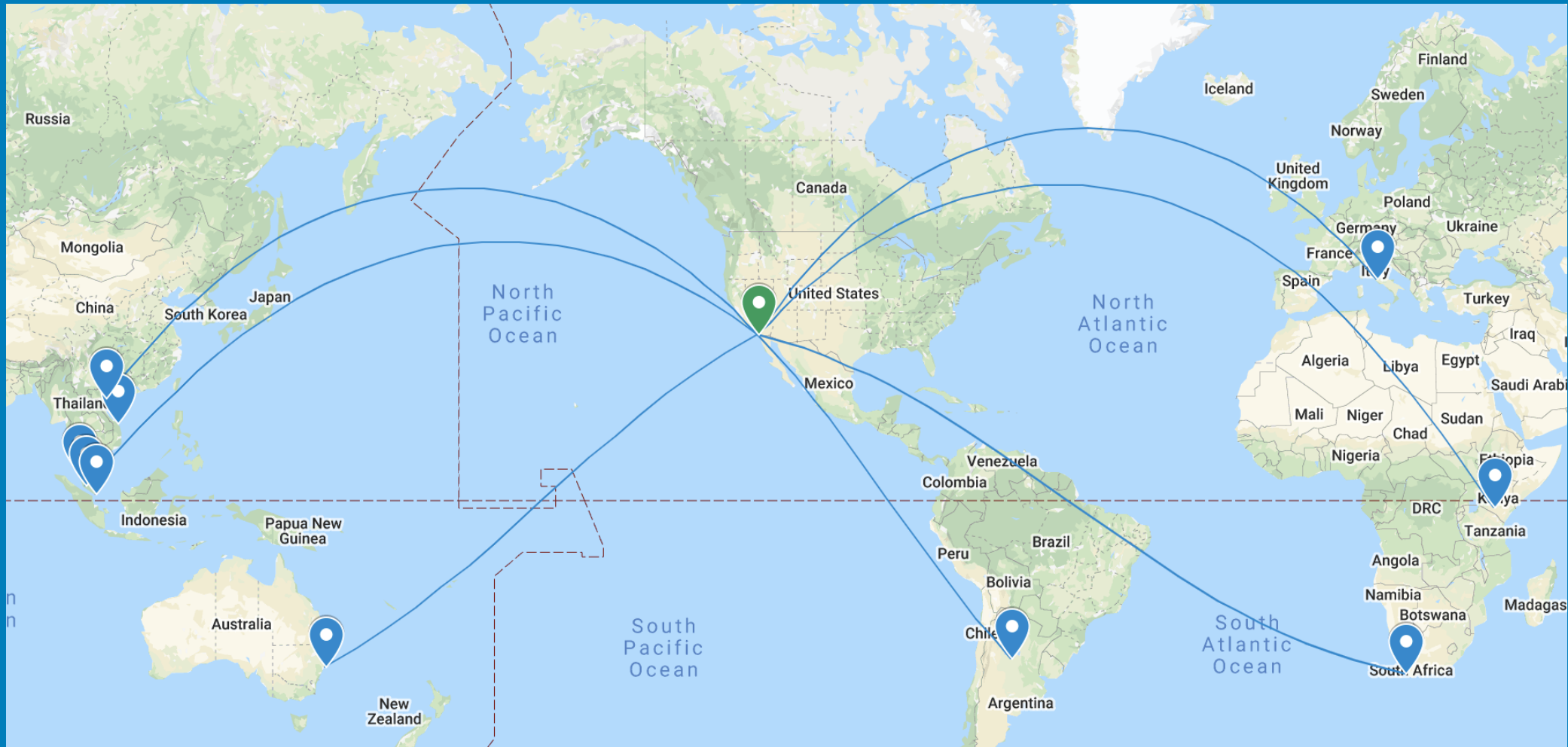
- **Provide opportunities for experiential learning**
- **Use problem-based learning strategies**
- **Incentivize initiative**
- **Foster and encourage a critical thinking culture**
- ...

# International rotations

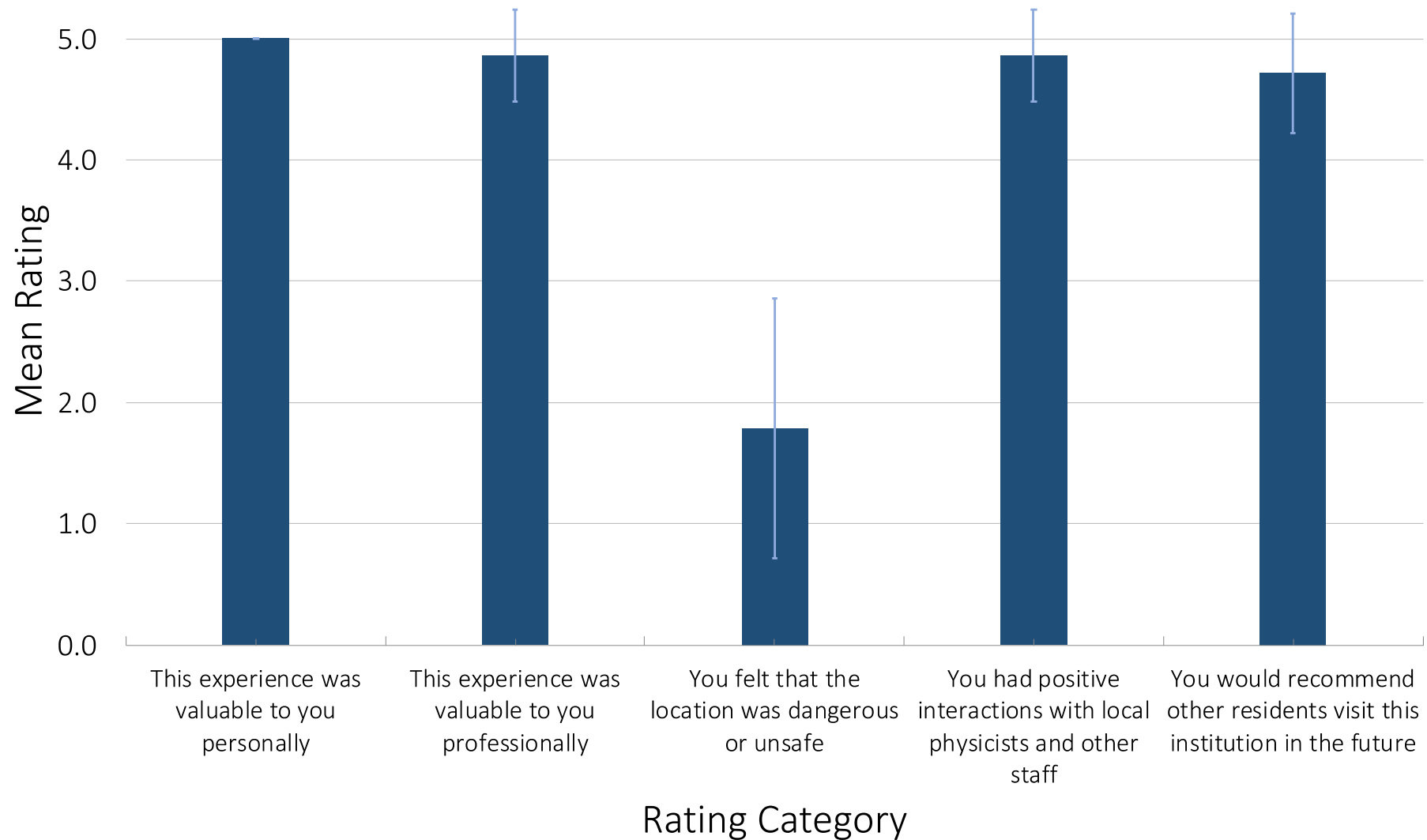
- International rotations are ideal opportunities for **experiential learning**
- Have been shown to benefit host sites, residents, and residency programs
- Benefits include:
  - **Improving resident's problem-solving skills** (Kollars et al.)
  - **Fostering independence in clinical practice** (Henry 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



# 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.”**

# 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
- ...



# UC San Diego Health

RETHINKING MEDICAL PHYSICS

## Collaborators

Titania Juang, PhD

Anna Rodrigues, PhD

Hania-Al Hallaq, PhD

Irina Vergalaso, PhD

Laura Padilla, PhD