Empowering Radiology Global Health & International Outreach: RAD-AID Experience

Daniel J. Mollura, MD
President & CEO
RAD-AID International
We were asked by RLI to give stories of our experience in global health...
RAD-AID in 40 Countries & 91 Hospitals
Many Stories...

Ghana

Morocco

Jordan: Zaatari Refugee Camp

India

USA

Malawi

And others...
What characteristics make a global health volunteer most effective?
Characteristics + Stories

• Procedure
• Patience
• Principle
• Perseverance
Procedure
Over Half the World Lacks Radiology

Source: Dominican Republic, Diana Dowdy, RAD-AID

Source: RAD-AID Ghana, 2012
Source: RAD-AID India
Radiology-Readiness

What does a site **HAVE**

What are the site’s **GOALS**

RAD-AID Fills Key **Gaps**

- What is a site **ready** for?
- **Highest Yield** Resources
- Solution Adapted to **Local Context**
Radiology-Readiness

Sections

- Infrastructure
- Roads/Topography
- Human Resources
- Personnel Training
- Quality Control
- Equipment
- Finance/Insurance
- Radiation Safety
- Pharmaceuticals

- Infection Control
- Epidemiology
- Population Features
- IT networks
- PACS/EMR/RIS
- Clinical Tests
- Referral Networks
- Community Engagement
- Patient/MD Communications

- Interventional Radiology
- Nursing
- Breast Imaging
- Artificial Intelligence
- Radiation Oncology
- Medical Physics, QA/QC
- Consumables/Supply Chains
- Equipment Maintenance
- Procurement
HOW RAD-AID WORKS

Analysis & Innovation

Radiology-Readiness Assessment

Planning

Training

Implementation
RAD-AID LAOS

RAD-AID Invited by Friends Without A Border Foundation

RAD-AID’s Radiology-Readiness Assessment, 2015
RAD-AID LAOS: Radiology-Readiness

What does a site HAVE
• New pediatric hospital
• Comprehensive children’s health in LFHC

What are the site’s GOALS
• Provide radiology (none in 2015)
• Radiation safety for staff/patients
• Personnel training

GAPS
• Radiology Dept was an empty room
• No Equipment
• No Personnel
• No imaging-staff educational pathways
RAD-AID LAOS: Radiology-Readiness

What does a site **HAVE**
- New pediatric hospital
- Comprehensive children’s health

What are the site’s **GOALS**
- Provide radiology (none in 2015)
- Radiation safety for staff/patients
- Personnel training

RAD-AID fills **GAPS**
- Build radiology dept in LFHC
- Donate radiology equipment
- Train Staff Remote + Online
- Digital Imaging/Computers

**GAPS**
- Radiology Dept was empty
- No Equipment
- No Personnel
- No educational pathways

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RAD-AID LAOS: Radiology-Readiness
RAD-AID LAOS: Radiology-Readiness

- No Digital images at LFHC
- No Picture Archiving & Communications System (PACS)

LFHC, 2017
RAD-AID Volunteers in IT and Clinical teams worked on installation of PACS at LFHC
Tripartite agreement: LPPH, LFHC and RAD-AID to support CT, provide inter-institutional PACS, & enable access of LHFC’s patients to CT services at LPPH
Patience
RAD-AID Kenya

Dr. Dixon and Dr. Baigorri with University of Nairobi Residents, 2018

Dr. Frances Colgan, Jessica Salerno, Meena Amlani, Dr. Chacha Magabe & Dr. Gladys Mwango
RAD-AID Kenya

UoN Residents preparing for nephrostomy placement.

Bob Dixon in interventional suite with IR team at Kenyatta National Hospital, 2019

Daniel J. Mollura, CEO
Patience: a 2-year Journey

• Planning
• IR Curriculum Design + Approval
• MOU
  • Tripartite effort first
  • Bilateral second
Launched 2020

Dr. Bob Dixon (left) and Dr. Elijah Kwasa (right) leading 2020 KAR RAD-AID IR Symposium

RAD-AID launched first-ever IR Fellowship in Kenya with University of Nairobi, 2020
Tele-IR Simulation-Training

Real Time IR Simulation-Sessions: Example: NY → Kenya

IR teacher in NY

IR learners in Nairobi
2022

• April and September Team Trips
• PACS Donation, University of Nairobi
• IR Nursing
• Oral Exams, first graduating IR Fellows Fall 2022
Principle
AI, radiology and the future of work

Clever machines will make workers more productive more often than they will replace them.

Economist, June 7, 2018

• Overcome hype, noise and expectations by adhering to your principles.
RAD-AID NIGERIA: 2018

2018: University College Hospital, Ibadan
RAD-AID PACS PROGRAM

- Nigeria
- University College Hospital, Ibadan
RAD-AID INFORMATICS PROGRAM

2021: University College Hospital, Ibadan
IMPACT of PACS/AI Nigeria

2018
All film, no computers

2019
Computers + PACS

2021
Digital Imaging + AI

University College Hospital in Ibadan, Nigeria
AI for Breast Cancer Screening

*With support from Koios Medical and Ambra Health

**Google Foundation Grant for Addressing Racial Bias in Radiology AI

Peru

Kenya

Daniel J. Mollura, CEO
AI for Breast Cancer Screening

Interpretation Teaching  Mammo Suite Tech Training  AI Implementation
Mission Statement

RAD-AID Mission Statement

To improve and optimize access to medical imaging and radiology in low resource regions of the world for increasing radiology's contribution to global public health initiatives and patient care.

RAD-AID Principles

- To conduct our business practices with the highest standard of integrity and honesty, believing that our most precious resources are our reputation and the trust of our members, partners, associates, supporters, and our community.
- To attract and nurture the most talented, ethical, diverse, and dynamic associates in creating an environment for each individual to attain the highest professional potential in tandem with the growth and success of our organization.
- To build an organizational culture that inspires creativity, drives innovation, and rewards perseverance. Always persevere.
- To pursue continuous self-improvement by seizing opportunities to strengthen our organization, engaging in self-assessment, and revitalizing our mission statement.
RAD-AID Guyana: 2013
RAD-AID Guyana: 2016

RAD-AID Guyana & Guyana Ministry of Public Health, 2016
RAD-AID Guyana: 2017
RAD-AID GUYANA

2 CT Donations
RAD-AID GUYANA

Georgetown Public Hospital

Bartica Regional Hospital

RAD-AID training of CT Radiology Professionals

Daniel J. Mollura, MD
RAD-AID GUYANA

BEFORE

Donated PACS

AFTER
RAD-AID Flywheel

• Procedure
• Patience
• Principle
• Perseverance
THANK YOU