TRI-SERVICE OVERVIEW: MEDICAL PHYSICS

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Medical Physics Consultant
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Disclosure Statement

The views expressed in this presentation are those of the respective Services’ Medical Physics Consultants and do not reflect official policy or position of the following:

- Department of the Air Force
- Department of the Army
- Department of the Navy
- Uniformed Services University of the Health Sciences
- Department of Defense
- U.S. Government

Outline

- Medical Physics in the U.S. Military
- Snapshot: Services’ Specifics / Medical Physics
- Scope of Duties / Medical Physics
- Accession and Benefits
- Training and Retention Tools
- Challenges to Military Medical Physics

Medical Physics in the U.S. Military

- Airman, Sailor, or Soldier First – Commissioned Officer
- Expertise – medical physics and/or medical health physics
- Mission – ensure the protection of personnel, patients, and general public from potentially harmful effects of radiation stemming from military operations, in garrison, during deployments and war
**Snapshot: Services’ Specifics**

**Medical Physics**

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>Air Force</th>
<th>Army</th>
<th>Navy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants</td>
<td>Lt Col Rodgers</td>
<td>COL Bower</td>
<td>LCDR SELWYN</td>
</tr>
<tr>
<td>Specialties</td>
<td>Bioenvironmental Engineering Officers (includes HP &amp; MP)</td>
<td>Nuclear Medical Science Officers (HP)</td>
<td>Radiation Health Officers (HP &amp; MP)</td>
</tr>
<tr>
<td>MTFs</td>
<td>5 (80)</td>
<td>12 (52)</td>
<td>8 (150)</td>
</tr>
<tr>
<td>AD MPs /Authorizations</td>
<td>25 (14)</td>
<td>0 (23)</td>
<td>31 (N/A)</td>
</tr>
<tr>
<td>ABR Cert’d</td>
<td>4 (9)</td>
<td>N/A</td>
<td>6 (N/A)</td>
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<tr>
<td>AD Diagnostic</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>AD Therapy</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Civilian MPs</td>
<td>7</td>
<td>10</td>
<td>N/A</td>
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</tbody>
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**Scope of Duties**

**Medical Physics**

- Responsible for maintaining a safe, high quality imaging program – balancing quality and dose
- Manage Nuclear Regulatory Commission Licenses and Permits (AF and Navy hold Master Materials Licenses)
- Develops and implements quality control programs
- Assists in radiology room design / construction and performs room shielding calculations
- Radiology department SME for capital equipment procurement and strategic planning for optimizing and advancing radiology and radiation therapy (AF only) capabilities
- Provides regional and deployed MTF medical physics support

**Accession and Benefits**

- 3-7 accessions per year per Service
- Loan repayment & scholarship programs
- Serve your country
- Challenges & increased responsibility
- Good pay, benefits, and retirement
- Full medical & dental healthcare coverage
- Housing allowance (tax break example)
- Travel around the Country & the Globe
- Fully funded graduate school opportunities

**Scope of Duties**

**Medical Physics**

- Consultant on patient dose-related issues as it relates to medical imaging (AF & Navy) and radiation therapy (AF)
- Teach radiology residents radiologic physics and the fundamentals of medical imaging (AF & Navy); supports technologists training programs (AF)
- Trains and develops diagnostic (AF & Navy) and therapy medical physicists (AF only); research billets (Army & Navy)
- Supports readiness and homeland defense missions

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Training & Retention Tools

- Army and Navy Courses
  - 1-2 week familiarization courses
  - Didactic and hands-on modules
  - Introduction to service specific instructions and survey templates
  - Initial qualification for general radiography
- On the job training (OJT) / residencies
- Out service education – MS and PhD, competitive boards
- CAMPEP based Medical Physics Fellowships (AF only)
  - Diagnostic Medical Physics, competitive board
  - Therapy Medical Physics, competitive board

Future Challenges

- Expanding requirements
- Demand for imaging, advancements in technology, training & maintenance
- ABR Maintenance of Certification
- Deployments and military career broadening requirements
- Changing eligibility for ABR certification
  - 2012: CAMPEP-accredited education program
  - 2014: CAMPEP-accredited education + residency program
  - MS w/o certification = $105k (2 yrs)
  - MS DABR certification = $175k (12 yrs)
- Military pay = $95k (O-3, 10 yrs svs, ABR cert) plus benefits!

Tri-Service Consultants

Medical Physics

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