A Multidisciplinary Competency Certification program for Specialized Procedures in Radiation Therapy

Derek Brown and Peter Dunscombe
Disclosures

• Derek - Founding partner of TreatSafely, LLC.
• Peter - Founding partner of TreatSafely, LLC.
Learning Objectives

- To discuss why we’re interested in competency certification?
- To define competency
- To discuss the design and implementation of a competency certification program
- To briefly discuss competency assessment
- To outline the benefits of competency certification
Is there a need for competency certification?

What does the literature say?

- Summary of recommendations from retrospective analysis by four highly respected organizations

<table>
<thead>
<tr>
<th>WHO</th>
<th>UK Document</th>
<th>ICRP 112</th>
<th>AAPM TG 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate staffing</td>
<td>Workforce</td>
<td>Adequate staff resources</td>
<td>Resources</td>
</tr>
<tr>
<td>Staff competency assessment</td>
<td>Training and recording of training</td>
<td>Staff training</td>
<td>Training</td>
</tr>
<tr>
<td>Audit of equipment commissioning and processes</td>
<td>Commissioning of radiotherapy equipment</td>
<td>Systematic approach to implementation</td>
<td></td>
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<tr>
<td>Process governance</td>
<td>Documentation</td>
<td></td>
<td>Standard procedures Communication</td>
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Is there a need for competency certification?

- A quick look at our clinic.
- What's wrong with this model?
- Jack doesn't know what Jack doesn't know.
- Jack knows slightly less than Jill.
- Only Jill knows what Jack knows.
- Jack doesn't know what Jack doesn't know.
- What happens when something goes wrong?
- What happens when Jill retires?

Hill of Competency

Competent

Not Competent

Jack

Jill

Competent

Not Competent
Objective, Methodology and Constraints

• Objective

• Enhance patient care through improved quality and efficiency of the treatment process by implementing competency certification for specialized procedures.
Objective, Methodology and Constraints

Competency Certification

• Definition of competency...

• “To be able to adequately perform a professional act in a specific environment by integrating knowledge, skills and attitude.” – ESTRO
High-Level Objectives

1. **Transfer sufficient knowledge**
   - The program must be designed to transfer specific and sufficient knowledge to enable competency.

2. **Provide sufficient skills training**
   - The program must incorporate sufficient hands on skill development to enable competency.

3. **Foster a functional attitude**
   - The program must provide sufficient mentoring for the trainee to develop a positive, functional attitude.
Low-Level Objectives

1. The program should incorporate a multidisciplinary perspective and should foster an understanding of the procedure from various clinical perspectives.

2. The expectations of knowledge and skill development should be clearly defined and thoroughly tested at each level of training and certification.
Low-Level Objectives

3. The program should provide standardized training, such that each individual moving through the training program receives the same information and develops the same skill set.

4. The program should be traceable and searchable. Records of which individuals have completed which levels of training and certification must be maintained and must be easily accessible.
Constraints

- **Meaningful assessment of competency**
  - The program must adequately assess competency.

- **Usability**
  - If the system is difficult or frustrating to use, people will not use it.

- **Resources**
  - The development of such a program is resource intensive.
  - Resource amortization...
Traditional Learning

Blah, Blah, Blah, Blah, Blah... Blah

Death... want death

Note to self... never invite this guy to speak

Yeah right-- NOT!

Nobody will notice if I just sneak out...

Revive when over!
The Four Stages of Learning

1. Unconscious of my lack of competence
2. Conscious of my lack of competence
3. Conscious of competence
4. Unconscious of competence

Thomas Gordon, Gordon International Training

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Structure – Design

Specialized Procedure

Common to all disciplines

Level 1

Level 2
Physics  RO  Therapy

Level 3
Physics  RO  Therapy

Level 4
Physics  RO  Therapy

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**Structure - Content**

- **Level 1 is common to all disciplines**
- **Everyone is exposed to, and becomes aware of, the main issues in each discipline**

<table>
<thead>
<tr>
<th>Levels</th>
<th>Content</th>
<th>Participants</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
<td>Voice over online presentations</td>
<td>Everyone</td>
<td>Knowledge</td>
</tr>
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</table>
### Structure - Content

- Building discipline specific knowledge
- Introduction to performance of the procedure
- ‘Day in the life’ brings detailed insight into the functioning of other groups

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<tr>
<td>2. Discipline Specific Knowledge</td>
<td>Literature review, supervised observation, day in the life</td>
<td>Grad students/Speciaized staff</td>
<td>Knowledge/Attitude</td>
</tr>
</tbody>
</table>
Structure - Content

- Focused primarily on building skills through supervised performance of the procedure.
- Fostering a functional attitude is important here as well.

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<tr>
<td>3. Essential Competencies</td>
<td>Supervised performance of the procedure</td>
<td>Residents/Speciaized staff</td>
<td>Skills/Attitude</td>
</tr>
</tbody>
</table>
Structure - Content

- Commitment to stay abreast of current developments in the field
- Maintain ‘unconscious of competence’ state

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<tr>
<td>4. Maintenance of Certification</td>
<td>Performance of minimum # of procedure per term</td>
<td>Those certified at Level 3</td>
<td>Skills/Knowledge</td>
</tr>
</tbody>
</table>
Implementation
What’s next?

• Evaluation and improvement based on user feedback
• Expand to other areas
• Collaboration with external partners

• But first…is it worth it?
What are the Benefits?

- Consistency and constancy in education and training
- Standardized knowledge transfer and skill development based on best practices
- Consistent knowledge transfer
- Now you know what your peers know, and everyone knows what you know
- ACCOUNTABILITY
What are the Benefits?

Increased Efficiencies

- Reduction in the time for each practitioner to be competent
- Reduction in time per procedure
- Employees understand the training and performance expectations

ENGAGEMENT and SUSTAINABILITY
What about the patient?

- Increased patient safety?
  - Reduce potential and actual errors
  - Common understanding of the procedure
  - Better critical thinking skills
Operational Benefits

- Automated documentation / record keeping
- Electronic database is updated automatically
- Database is easily searchable
- Operational scheduling or self scheduling for maintenance of certification
Challenge - Measure Competency?

- How do you measure competency in already competent practitioners?

- Who will measure it?

- How will we know?
What does ‘specialized procedure’ mean?

• What makes a procedure special?
  – What is the difference between standard practice and specialized skill sets?

• Do we need to limit competency certification to specialized procedures?
National / International Programs

• Is there any reason not to do this on a national / international level?
  • Create AAPM/COMP/IAEA/CARO/CAMRT sanctioned certification programs for specialized procedures

• What about the IAEA?
  • Tremendous potential

• Standardization!!!!!!
National / International Programs

- 500 unique visitors from 23 countries

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Summary

• **A quick look at our new clinic**
  - Jack knows what he needs to know
  - Everyone knows what Jack knows
  - Jack is accountable
  - What happens when Jill retires?
  - Very little!

Hill of Competency

- Competent
- Not Competent

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Take a look for yourself

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