Teaching About Research Integrity

Beth A. Fischer, PhD, & Michael J. Zlgmond, PhD
University of Pittsburgh

I want YOU to teach RCR
Acknowledgments

- Beth Fischer
- Muriel Bebeau
- James Rest
- Many teachers and researchers
Outline

• Why teach RCR
• But...isn’t it too late to have an impact?
• Rest’s 4-component model of morality
• Specifics of new federal requirements
• What & how to teach?
• A model for teaching RCR
Why should you teach RCR?

• Good science must be responsible science
• Misconduct is toxic
• RCR training is an obligation
  – Funding agencies
  – Most academic institutes
• No one else will probably do it (well)
But...isn’t it too late to have an impact?

- We are teaching the norms
- Many grew up outside USA
- Data support ongoing moral development
4-Component Model of Morality (Rest, et al, 1983)

- Component 1: Ethical Sensitivity
- Component 2: Ethical Reasoning
- Component 3: Motivation
- Component 4: Follow-through
### 4-Component Model of Morality (Rest, et al, 1983)

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4-Component Model of Morality *(Rest, et al, 1983)*
Ethical reasoning

• Knowing the rules ≠ adequate
• Dilemmas = competing values, needs
• New technology → new issues
Teaching ethical reasoning

• Focus on process, not solution
• No right answer
• Probing vs correcting a position
• Assign devil’s advocates
• Promote discussion.
Heinz and the Drug*

A classical dilemma

Heinz's wife was near death, and her only hope was a drug that had been discovered by a pharmacist who was selling it for an exorbitant price. The drug cost $20,000 to make, and the pharmacist was selling it for $200,000. Heinz could only raise $50,000 and insurance wouldn't make up the difference.

Heinz and the Drug*

A classical dilemma

He offered what he had to the pharmacist, and when his offer was rejected, Heinz said he would pay the rest later. Still the pharmacist refused. In desperation, Heinz considered stealing the drug. Would it be wrong for him to do that?

http://en.wikipedia.org/wiki/Heinz_dilemma
Components of well-reasoned position

1. ID affected parties
2. Protagonist’s responsibilities
3. Root of dilemma: conflicting needs, obligations
4. Possible actions & likely outcomes
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<td>4. Follow-through</td>
<td>Problem solving; interpersonal skills</td>
<td>Role-playing</td>
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Mandates for RCR training

- NIH:
  - NOT-OD-1019 (November 24, 2009)
  - institutional training grants
  - individual fellowships, career awards

- NSF:
  - All grants w/ research (incl. subcontracts)

- Encourage – make available to all
- Curriculum not specified
NIH Recommends

1. COI – personal, professional, financial
2. Policies – human & animal subjects, safe lab
3. Mentor/mentee responsibilities & relationships
4. Collaborative research (including industry)
5. Peer review
6. Data - acquisition/ lab tools; management; sharing & ownership
7. Research misconduct & policies for handling
8. Responsible authorship & publication
9. Social responsibility; contemporary issues; environmental & societal impacts
Instruction in RCR  
(NIH & NSF requirements)

• NIH
  – Application – training plan
  – Competing apps – progress
  – Specify “instructional components” in app.
  – Evaluated by reviewers

• NSF
  – Institution – ensure available, track attendance
  – No required reporting of plans or progress – just on request
Meeting new NIH mandate

Five instructional Components:

1. Format
2. Subjects covered
3. Faculty participation
4. Duration of instruction
5. Frequency
Instructional Components

1. Format
   • Didactic & face-to-face discussions
   • On-line instruction (only) ± adequate

2. Subject matter
   • courses on use of subjects, or clinical or professional ethics (alone) not adequate
Instructional Components

3. **Faculty participation** (in teaching)
   - Highly encouraged
   - Specify formal & informal instruction
   - Formal: can rotate through roles
Instructional Components

4. Duration
- ≥ 8 contact hr
- Encourage spaced (vs massed)

5. Frequency
- ≥ 4 yr
- At least once/rank
- Personalized plan
One Model for Teaching RCR
Key elements of a program

1. Begin right away
Key elements of a program

• Make part of research/instructional program
• Announce in orientation materials
• Discuss at first sessions
• Provide instruction to *all* participants
  – Students
  – Staff
  – Co-investigators
Best if in context

- Didactic courses
- Professional skills training
- Lab meetings
- Informal discussions
Key elements of a program

1. Begin right away
2. Taught by practitioners
Key elements of a program

- instructors
  - working researchers
  - philosophers
  - teams?

- understand ethical issues
- know norms of field
- model interest in ethics
- faculty learn by teaching
Key elements of a program

1. Begin right away
2. Taught by practitioners
3. Integral to *all* aspects of training
   - Doing research
   - Writing research articles
   - Oral presentations
   - Teaching and mentoring
1. Begin right away
2. Taught by practitioners
3. Integral to all aspects of training
4. Gradually increase demand
   • Attend case discussion
   • Lead discussion
   • Write case and notes
Key elements of a program content

- philosophical principles
- “high crimes”
- “misdemeanors”
Key elements of a program

1. Begin right away
2. Taught by practitioners
3. Integral to *all* aspects of training
4. Gradually increase demand
5. Cover all critical issues
Key elements of a program

1. Begin right away
2. Taught by practitioners
3. Integral to *all* aspects of training
4. Gradually increase demand
5. Cover all critical issues
6. Ensure competence
Training Trainers on about Professional Development and Research Ethics
June 3-6, 2013
Annapolis, MD

Michael J. Zigmond
Beth A. Fischer
zigmond@pitt.edu
www.skillassist.org