Are Physician-Scientists Becoming an Endangered Species?

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Introductions  *(5 minutes)*

- Presenters
- Table introductions
Step 1: Objectives

- to increase knowledge about physician scientist burn-out via an overview of the literature and results from a recent survey
- to identify faculty stressors via active engagement with colleagues
- to identify creative tools, resources, or approaches for intervention
Step 2: Why might someone quit research? (10 minutes)

- Sizeable body of literature around faculty vitality (i.e., faculty satisfaction, retention, burn-out)

  - Consensus = many faculty have high levels of stress and low career satisfaction (Dankoski et al., 2011)

  - 25-40% of faculty considering and ultimately do leave academic medicine (Alexander & Lang, 2008; Lowenstein et al., 2007; Schindler et al., 2006; Speck et al., 2012)
Step 2: Why might someone quit research? (10 minutes)

- Table graffiti exercise:
  1. Think of all the reasons why a physician scientist might consider quitting research
  2. Talk about these reasons at your table
  3. Write one reason per sticky note
  4. Put sticky notes randomly on poster paper
What did your table identify as the reasons why a physician scientist might consider quitting research?
Step 3 cont.: Literature review

(5 minutes)

• Legacy of the “triple threat” (clinician, investigator, educator)
  – Relentless pressure to generate revenues from patient care (RVUs) and grants (Lowenstein et al., 2007)
    • Extremely competitive funding climate across the board - federal, state, industry, foundations, etc. (e.g. NIH sequestration cuts)

• Junior faculty particularly susceptible to discontent – unclear expectations, isolation, difficulty finding balance (Austin, Sorcinelli, & McDaniels, 2007; Smith et al., 2001) and report substantially higher levels of depression, anxiety, and job dissatisfaction more than senior counterparts (Schindler et al., 2006)
Step 3 cont.: Literature review

Reasons for leaving academic medicine generally fall into 4 categories:

1) **Internal factors** – lower sense of relatedness/inclusion and engagement, issues around self-efficacy, values alignment, high ethical/moral distress, difficulty balancing, lack of role models

2) **External factors** – low salary, lack of career/professional advancement and leadership opps, frustrations with research

Cropsey et al., 2008; Demmy et al., 2002; Levine et al., 2011; Lowenstein et al., 2007; Pololi et al., 2012
Step 3 cont.: Literature review

Reasons for leaving academic medicine...

3) **Environment** – absence of academic community, unsupportive environment, low sense of relatedness/inclusion/engagement, absence of faculty development programs/institutional commitment to support faculty

4) **Leadership** – chair/department/institutional leadership issues, failure of chairs to evaluate academic progress regularly, lack of recognition of both clinical work and teaching in promotion evals

Cropsey et al., 2008; Demmy et al., 2002; Levine et al., 2011; Lowenstein et al., 2007; Pololi et al., 2012
Step 4: Categorization (10 minutes)

1. Rotate graffiti boards to a neighboring table
2. Review your neighbor’s graffiti board
3. Group the sticky notes into themes:
   - internal
   - external
   - environment
   - leadership
   - other?
Step 5: Report-outs  (5 minutes)

• Each table reports the themes they identified and a sampling of indicators under each
Annual evaluation of the Rush Research Mentoring Program:

Mentees = 62 (44 survey respondents [71% response rate])
Females = 61%
Married = 68%
Mean age = 38 (SD = 6.5)
Mean % research effort = 57.4% (SD = 32.2)
Mean % clinical effort = 40.3% (SD = 26.8)

In the past year, have you considered quitting research?
Yes = 17 (44% of 39 respondents)
### Table 1. Mentee Assessment Inventory

<table>
<thead>
<tr>
<th>Theme</th>
<th>Considered quitting research in the past year</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (n=17 [44%])</td>
<td>No (n=22 [56%])</td>
</tr>
<tr>
<td><strong>Burnout</strong> , # (valid %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No symptoms</td>
<td>7 (17.1%)</td>
<td>0</td>
</tr>
<tr>
<td>Occasionally under stress</td>
<td>24 (58.5%)</td>
<td>7 (41.2)</td>
</tr>
<tr>
<td>Definitely burning out</td>
<td>9 (22.0%)</td>
<td>9 (52.9)</td>
</tr>
<tr>
<td>Symptoms won’t go away</td>
<td>1 (2.4%)</td>
<td>1 (5.9)</td>
</tr>
<tr>
<td>Completely burned out – can’t go on</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Clinical Research Appraisal Inventory</strong>, mean (SD)</td>
<td>7.6 (1.3)</td>
<td>7.0 (1.4)</td>
</tr>
<tr>
<td>Range = 0-10 (No confidence – Total confidence)</td>
<td>8.1 (1.0)</td>
<td></td>
</tr>
<tr>
<td><strong>Job Satisfaction</strong>, mean (SD)</td>
<td>5.2 (0.9)</td>
<td>4.7 (0.8)</td>
</tr>
<tr>
<td>Range = 1-7 (Strongly disagree – Strongly agree)</td>
<td>5.6 (0.8)</td>
<td></td>
</tr>
<tr>
<td><strong>Career Satisfaction</strong>, mean (SD)</td>
<td>3.7 (0.8)</td>
<td>3.1 (0.9)</td>
</tr>
</tbody>
</table>
Step 5 cont.: Survey results

There were **no differences** between the groups on:
- gender
- marital status
- number of dependents
- number of life events
- work preferences
- passion & interest
- professionalism
- networking
- social support
- life satisfaction
- creativity
- reports of mentor effectiveness
- reports of experiences with mentor

**Which themes?**
- Internal
- External
- Environment
- Leadership
- Other?
Step 6: Brainstorming solutions
(10 minutes)

1. Each table is assigned one theme: internal, external, environment, leadership, other?

2. For the theme that your table has been assigned, try to think of creative approaches (e.g., tools, resources, strategies) to intervene or mitigate physician investigator frustration.
Step 7: Report-out
(15 minutes)

• What did your table identify as possible solutions?

• Note: We will provide a summary of this break-out session to all participants. Please make sure you have provided your email address on the sign-in sheet!
References

• Hand-outs available:
  – References
  – Rubio’s assessment inventory
Thank you for your participation!

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