Mentoring: A Key to Success in Science and Medicine for Women… and Men
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July 27, 2009
What is Mentoring?

A form of voluntary aid favoring development and learning based on an *interpersonal relationship of support, exchange and learning*, in which an experienced person invests his/her acquired wisdom and expertise to promote the development of another person, who has skills to acquire and scholarly or professional goals to attain.

**Less formally:**

An interpersonal relationship in which a senior or more experienced person helps a junior or inexperienced person to succeed.
25 years ago Daniel Tosteson, Dean of the Harvard Medical School, said:

“We must acknowledge that most important, indeed the only thing we have to offer our students is ourselves. Everything else they can read in a book.”
Elements for Success in Academic Medicine

• Superior competency
• Determination to succeed
• Maintaining good working relationships with peers and superiors
• **Having an advisor/mentor**

Source: AAMC Faculty Vitae, Fall 2006, the University of Arkansas Medical School Advisor Mentoring Program Brochure
Who is a Mentor?

A typical definition of a mentor (*from Greek, Mentor*) is a “wise and trusted teacher.”

In Greek mythology, king Odysseus asked his trusted friend, *Mentor*, to educate and guide his son Telemachus.

Source: Omary MB. Mentoring the Mentor: Another Tool to Enhance Mentorship. Gastroenterology 2008; 135:13-16
Why Should **YOU** be a Mentor?

Mentorship is an important influence on
- personal development
- career guidance
- career choice
- productivity

Mentoring has an important effect on
- research productivity
- publications
- grant success

Why Do We Need Mentoring?

In a study of mentoring in Academic Medicine, “lack of mentoring” ranked as the first (42%) or the second (56%) most important factor hindering their career progress in academic medicine.

“If you don’t have a mentor, you don’t have a go-to person. You don’t have a go-to person who you can say, ‘Hey, I need to learn this because I don’t know where the roadblocks are, I just kind of deal with them when I get there.’”

Mentoring has two categories... (at least)

<table>
<thead>
<tr>
<th></th>
<th>Research Mentor</th>
<th>Career Mentor</th>
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<tbody>
<tr>
<td><strong>Goals</strong></td>
<td>To develop the research career of the mentee</td>
<td>To focus on more global aspects of an academic career</td>
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<tr>
<td><strong>Scope</strong></td>
<td>• acquisition of research skills</td>
<td>• balancing family demands and work</td>
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<td></td>
<td>• selecting and conducting research projects</td>
<td>• career promotion</td>
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<td></td>
<td>• presenting research findings</td>
<td>• juggling the different aspects of academic life (teaching, administration,</td>
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<td>• ensuring the completion of research manuscripts</td>
<td>clinical care and research)</td>
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<td></td>
<td>• assisting in networking</td>
<td>• major career decisions such as changing institutions or research direction</td>
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<td>• teaching the mentee how to obtain extramural funding</td>
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<td></td>
<td>• securing funding</td>
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<tr>
<td><strong>Skills</strong></td>
<td>Well versed in their field and research methods, but may lack comparable</td>
<td>Accumulated years of experience and wisdom in academia</td>
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<tr>
<td></td>
<td>years of experience in academic medicine</td>
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Source: Bauchner H. Mentoring Clinical Researchers. Archives of Disease in Childhood 2002; 87: 82-84
# Mentoring Approaches

<table>
<thead>
<tr>
<th>Informal Mentoring</th>
<th>Formal Mentoring</th>
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<tr>
<td>Time-tested career decision support,</td>
<td>Facilitates linkage of mentors &amp; mentees</td>
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<tr>
<td>Assistance with academic advancement</td>
<td>Provides instruction in gender, socioeconomic, cultural &amp; ethnic sensitivity</td>
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<tr>
<td>Transition into faculty mentor</td>
<td>Established objectives, process and evaluation</td>
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<tr>
<td>Requires substantial mentee initiation &amp; persistence</td>
<td>Trains mentees to seek mentors &amp; develop self-awareness of professional needs</td>
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<tr>
<td>Better meet mentees’ needs through self-selection of mentor &amp; learner-initiated</td>
<td>Requires administrative support &amp; funding</td>
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<tr>
<td>agenda</td>
<td>Provides a mandate for mentoring, although not usually a financial incentive</td>
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<tr>
<td>Requires self-initiated &amp; uncompensated commitment from the mentor</td>
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<tr>
<td>Not meet the needs of a diverse group of learners different from their mentors</td>
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Traditional vs. Functional Mentoring

→ chemistry between mentor & mentee

→ based on specific skills to match mentor & mentee

Evaluation of mentoring programs must include multilevel assessment of outcomes to demonstrate impact and return on investment.

Do We Need Specific Mentoring Programs for Women?

The women do not need “fixing”

But there are issues unique to women
Yes, because...

Women have **more difficulty finding mentors** than their male colleagues\(^1\)

Women **with mentors** report\(^2\):
- greater job satisfaction
- more likely to be promoted
- more time engaged in scholarly activities

Women **without mentors**\(^2\):
- have problems with stress and confidence
- are less likely to establish a solid career network when compared to males

**Women are role models** for other women

Women M.D. and Ph.D. Graduates 1966-2006

*Physical sciences include astronomy, chemistry and physics

Sources: National Science Foundation, Division of Science Resources Statistics, Science and Engineering Statistics
Gender of Medical Students

And the gender of medical students has shifted to equality.

Female Medical School Faculty

BUT no change in the proportion of female medical school faculty.

Projected Year of Equality*

Instructor: 2005
Assistant Professor: 2023
Associate Professor: 2038
Full Professor: 2058

*Assume no change in trends

An aging population and an increasing number of cancer survivors will result in:

**48% to 56%** increase in demand for oncology services but only
**14%** increase in supply of oncology services

**Bottom Line?**
Shortage of 3,800 oncologists, 1/3 of 2005 supply.

*Source: www.asco.org/workforce*
Leaks in the Academic Pipeline for Women

- **Women With Babies**
  - 29% less likely than women without babies to enter a tenure-track position

- **Women Married**
  - 20% less likely than single women to enter a tenure-track position

- **Women**
  - 23% less likely than men to become an associate professor
  - 25% less likely than men to become a full professor within a maximum of 16 years

Reasons for the leak

- Family issues
- Travel
- Employment status of spouse
- Day care
- Career concessions
- Professional preparation (Imposter syndrome)

Personal Interventions

- Discuss family friendly policies
- Ask if tenure track offered/discouraged
- Role models to talk to
- Share your thoughts, did you feel like this?

Institutional Interventions

- Do you have family friendly policies?
- Stop tenure clock policy
- Flex/part time policy to interview them
- Affordable day care

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Reasons for the leak

- Fixed time to obtain tenure
- Childbearing years
- Gender schemas

Personal Interventions

- Help identify sources of grant funds
- Read grants/papers from start to submission
- Do not assign to too many committees
- Suggest as speakers at national conferences
- Help with Personal Advisory Board
- Networking events w/senior women faculty
- Send to development programs (AAMC, etc)

Institutional Interventions

- Grant writing course
- Junior Faculty Development Program
- Mid tenure track review
- Stop the clock policies

### Reasons for the leak
- Family
- Gender schemas
- Time to promotion

### Personal Interventions
- Nominate for awards, honors
- Suggest as speakers for national meetings
- Advise on navigating politics
- Monitor promotions
- Find women faculty, leadership candidates
- Examine institutional policies for those that inadvertently disadvantage women
- Focused workshops on relevant topics (negotiation, speaking up)
- Informal networking with senior women

### Institutional Interventions
- Stop the clock policies
- Annual salary equity review
- Time to promotion analysis

**Source:** Mason, M. et. al. [http://ucfamilyedge.berkeley.edu](http://ucfamilyedge.berkeley.edu)
Women in Leadership in Science and Medicine

In NCI-designated cancer centers\(^1\) (2009):
- 14% of directors

In medical schools\(^2\) (2008):
- 10% of medical school deans
- 12% of department chairs
- 21% of division/section chiefs
- 17% of full professors
- 29% of associate professors
- 40% of assistant professors

In physical sciences (inc. physics)\(^3\) (2006)
- 8% of full professors
- 17% of tenured/tenure track faculty

In mathematics\(^3\) (2006)
- 9% of full professors
- 17% of tenured/tenure track faculty

In life sciences\(^3\) (2006)
- 26% of full professors
- 32% of tenured/tenure track faculty

Why Do We Need Women Leaders

IMPROVES THE BOTTOM LINE!

Top management teams with highest representation of women experience better financial performance.

This finding holds for both financial measures analyzed:

Return on Equity (ROE), which is 35 percent higher, and Total Return to Shareholders (TRS), which is 34 percent higher.

In each of five industries analyzed, companies with the highest women’s representation on their top management teams experienced a higher ROE than the companies with the lowest women’s representation.

In four out of five industries, the companies with the highest women’s representation on their top management teams experienced a higher TRS than the companies with the lowest women’s representation.

In academic science/medicine, leadership gender improves gender demographics.

Source: The Bottom Line: Connecting Corporate Performance and Gender Diversity, www.catalystwomen.org
Career-Related Mentor Support

- Sponsorship
- Exposure and visibility
- Coaching
- Protecting
- Giving challenging assignments that lead to professional growth

Source: Turner SP. Letting the Girls into the Clubhouse. National Leadership Workshop on Mentoring Women in Biomedical Careers, Office of Research on Women’s Health, NIH 2007
We Have to Move Beyond Talk

• Recognition that **structured mentorship** must occur
• We **cannot rely on department chairs**, chance, or the sheer “pluck” of young faculty
• We must **move beyond competition to true collaboration**, and **measure and reward** what we say we value
• Leaders have to **advocate for appropriate changes**
• Leaders have to **budget for faculty development** for all levels of faculty, including our leaders and emerging leaders

Source: Turner SP. Letting the Girls into the Clubhouse. National Leadership Workshop on Mentoring Women in Biomedical Careers, Office of Research on Women’s Health, NIH 2007
Psychological Mentor Support: AKA Ole’ Boys (GIRLS) Network

Benefits of a female mentoring network are many

• Role modeling
• Acceptance
• Confirmation
• Counseling
• Friendship

The goal is to confer an enhanced sense of competence, identity and effectiveness on the job

Source: Turner SP. Letting the Girls into the Clubhouse. National Leadership Workshop on Mentoring Women in Biomedical Careers, Office of Research on Women’s Health, NIH 2007
The Many Faces of Mentoring...

- Professional parent
- Teacher
- Guide
- Counselor
- Motivator
- Sponsor
- Coach
- Advisor
- Role model
- Referral agent
- Door opener

Nobody can be all of them!

Personal Advisory Board

Source: Omary MB. Mentoring the Mentor: Another Tool to Enhance Mentorship. Gastroenterology 2008; 135:13-16
Role of Professional Associations

• Provide **opportunities** for those considering a career choice
• Enhance the **institutional mentoring** for academic faculty
• Provide support and encouragement to **newly practicing scientists/physicians**
• Raise visibility by **nominating women** for awards and office
• Women **on program committees and as speakers**
• **Proportional representation** women on program committees
• Competitive **travel awards** for women students
• **Networking events** at annual meeting
• **Lectureships** honoring women
Mentoring via Personal Stories

Overlapping trends in medicine include:
• Increasing number of women entering medicine
• Growing number of generation X physicians
• Implementation of duty hour regulations
• Diversifying workforce

In pace with the increasing complexity of their lives and practices, women trainees (and men) are seeking creative solutions to the challenges of simultaneous work and parenting.

“The strength and intelligence of these phenomenal women are overwhelming. They will impact the lives of those dealing with the challenges of cancer for generations. I applaud them and celebrate their successes.”

-- Former First Lady Barbara Bush
Life Member of M. D. Anderson’s Board of Visitors

“…The extraordinary women of M. D. Anderson invite us on their journeys and along the way inspire countless young girls to realize that they can be whatever they want to be too.”

-- Nancy L. Snyderman, M.D.
NBC News Chief Medical Editor
Legends and Legacies
The Authors

www.legendsandlegaciesbook.com