

The Center for Faculty
Development & Diversity presents...

Effective Communications for Scientists

Seminar Leader: Thomas H. Lee, MD, MSc

Wednesday, October 24, 2007

4:00 – 5:30 PM



BRIGHAM AND
WOMEN'S HOSPITAL

CENTER FOR

Faculty Development & Diversity

Sharing strategies. Supporting careers.

- ❖ CMEs available;
be sure to register and complete form
- ❖ Evaluations are important to improving our programs and services
- ❖ Slides and articles
bwhbri.partners.org/bwh-opc/home.asp
- ❖ Thank you for your participation



Upcoming Events Sponsored by CFDD and its member offices

Press Appeal: Sharing your Story with the Media

Monday, October 29, 2007 12:00 – 1:30 PM

Research Resource Open House

Tuesday, November 6, 2007 12:00 – 2:00 PM

Native Health Symposium (HUNAP)

November 7th & 8th, 2007

Networking Skills for Postdoctoral Fellows

Friday, November 9, 2007 12:30 – 2:00 PM

Effective Mentoring (CHADD)

Friday, November 16, 2007 12:30 – 2:00 PM

Office for Multicultural Faculty Careers Roundtable

Monday, November 19, 2007 12:00 – 1:00pm

Parenting Teenagers

Thursday, November 29, 2007 12:00 – 1:30 PM

Women in Science: Surviving and Thriving

Monday, December 3, 2007 12:00 – 1:30 PM

Public Speaking

Tuesday, December 4, 2007 12:00 - 1:30 PM

OPRC Case Studies on Ethics and Authorship

Friday, December 14, 2007 12:30 – 2:00 PM

Powerful Presentations

Monday, March 10, 2008 12:00 - 1:30 PM



OPC Evolves to Office for Postdoctoral and Research Careers (OPRC)

Office for Postdoctoral Careers (OPC) was established in June 2006 to address the nationally recognized needs of Postdoctoral Research Fellows.

As we have progressed, our focus has broadened to address research career issues and development at all levels.

Keeping "Postdoctoral" in the name will maintain the momentum and visibility the office has gained regarding postdoc issues.

Office for Postdoctoral and Research Careers (OPRC) retains the postdoctoral identity, and more accurately reflects our mission: to address the needs and interests of researchers at all stages of their career.

NOTE: this provides the opportunity to stay connected with you, as the OPRC continues to offer programs and services as your career progresses past your postdoc position.

Communicating Effectively

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Some General Tips on Style

Key Messages:

- 1. The goal is communication – not dodging responsibility for a mistake.*
- 2. You want your reader/audience to like you, not hate you.*
- 3. Think of every interaction – including presentations and even e-mail -- as a job interview.*

The Challenge

- Communication critical success factor.
- Readers do not *have* to read what you write, and audiences do not need to listen.
- Your goal: Grab them, hold their attention.
- Strategy: Make it as easy for reader/listener.
- Tactics:
 - White space, big fonts, tables, figures.
 - Meet expectations – give readers/audience what they are expecting when they are expecting it.

Structural Principles

(From Gopen and Swan)

- Write with the reader in mind. (Picture him/her on airplane.)
- Every unit of writing has one point.
 - What is it?
 - Is everything in the text aimed at making this point?
- Whose story is it?
 - “Jack loved Jill.” Or “Jill was loved by Jack.”

Look at the Beginning of Each Sentence

The evaluation of acute chest pain remains a difficult clinical challenge despite insights and innovations derived from the last two decades of research. Today, clinicians can use validated decision aids and new markers for myocardial injury to improve diagnosis and risk stratification. Early or even immediate exercise testing can help establish the safety of discharge for low risk patients. Special chest pain units and critical pathways are used to standardize and speed these evaluations.

Look at the Beginning of Each Sentence

The **evaluation of acute chest pain** remains a difficult clinical challenge despite insights and innovations derived from the last two decades of research. Today, **clinicians** **can use validated decision aids** and new markers for myocardial injury to improve diagnosis and risk stratification. **Early or even immediate exercise testing** can help establish the safety of discharge for low risk patients. **Special chest pain units** and critical pathways are used to standardize and speed these evaluations.

Revised Version

The **evaluation of acute chest pain** remains a difficult clinical challenge despite insights and innovations derived from the last two decades of research. Today, **this evaluation** can be enhanced through use of validated decision aids and new markers for myocardial injury. **Further risk stratification** can be performed through early or even immediate exercise testing to establish the safety of discharge for low risk patients. **These strategies** are being standardized and implemented at many institutions standardized through use of critical pathways and special chest pain units.

Structural Principles (II)

(From Gopen and Swan)

- Minimize subject and verb separation.
 - *“Socioeconomic status, after adjusting for conventional cardiac risk factors including obesity, physical activity, and other life-style variables, remains a significant correlate of...”*
- The point of the sentence should be at the end.
(*Don't* add qualifying clauses.)
 - People pay attention at beginning and end of every unit of writing, including individual sentences.
 - Use two sentences instead of one to avoid diffusing reader's concentration with too many words
- Ask yourself what is the backward link to the previous sentence (or paragraph).

First Draft

Contaminant blood cultures are common, in some reports representing about half of positive blood cultures. It is often difficult to determine whether a positive blood culture represents a true positive or a contaminant, particularly when the result first becomes available. Because septicemia is a serious disorder, physicians have a low threshold for performing blood cultures and for beginning empiric antibiotics. Performing blood cultures in patients with a low pretest probability of bacteremia results in contaminants, which in turn lead to unnecessary antibiotics, additional testing and consultation. Since blood cultures are not a morbid procedure, the threshold for performing blood cultures is likely to depend in part upon the costs associated with contaminant blood cultures.

Final Draft

Because septicemia is a potentially life-threatening disorder, physicians have a low threshold for performing blood cultures in patients with suspected bacteremia. However, contaminant blood cultures are common, representing up to half of positive blood cultures. These contaminants may in turn lead to unnecessary antibiotic therapy, additional testing and consultation, and increased length of stay. Thus, the true costs of a blood culture may greatly exceed that of the test itself.

Presentations

Key Message:

*It's a job interview -- Show them you
would be great to work with.*

What Is Your Brand?

- What do you want people to think about when your name comes up?
 - Research focus
 - Personal characteristics
 - The brand I tried to build early in my career:
Chest pain, hard-working, clear thinker/writer
 - *Not* funny or creative
 - Build your brand; do not dilute it

Oral Presentations

- 10-12 slides
 - Goals (1)
 - Methods (3-4)
 - Results (3-4)
 - Conclusion (1-2)
- Subtext message: How hard you have worked (*not* how brilliant you were born).

Making Spoken and Written Words Work Together

- Every word or number on slide should be important enough to be said aloud.
 - Never be in position where you have to apologize for complexity of a slide.
 - Never show tables reproduced from journal, and say, “Just look at last column...”
- Words and numbers should be said in order they appear.

Example

Methods

Population: 1919 patients age ≥ 30 years who presented to ED with acute chest pain unexplained by trauma or CXR findings.

Say: “The patient population included 1919 patients aged 30 or more years ...”

Not “There were 1919 patients with chest pain in the population...”

Style Guidelines

- Structure of Methods and Results should parallel those of paper.
- Consider omitting:
 - Title slide – you don't need to mention names of your co-authors
 - Background slide – make them look at you
 - Limitations slide – issue is whether you have done the best possible study you could

Handling Questions

- Anticipate questions/prepare backup slides
- Write down questions as they are asked
 - They don't want to hire you because you are inept in an endearing way
- Don't be defensive or apologetic
 - *“That's a very important issue -- and we were quite concerned about it, too.”*
- Answer briefly
 - Don't give yourself chance to babble
 - Give other questioners chance to ask their questions
- Do not leave room immediately after talk.

What May Be Obvious...

- Practice ... with an audience that will be honest with you
- Don't be afraid to be animated

Writing Abstracts and Papers

Key Message:

*Picture your reviewer reading your
work*

Similar Structure

- Types of presentations
 - Abstracts
 - Oral presentations/Posters
 - Manuscripts
- Order of components is the same
 - Introduction
 - Methods
 - Results
 - Conclusion

Writing an Abstract

- Subtext message: you've done real work.
- Title words -- “Prospective” “Randomized”
- Introduction -- first half sentence
- Methods -- 2.5 sentences
- Results -- numbers, numbers, numbers
- One sentence conclusion

How to Write a Paper: The Order

(Advice No One Follows – Part I)

- Tables and figures
- Methods
 - Patient population
 - Type of institution
 - Study site
 - Data collected
 - Classification of endpoints
 - Analysis -- univariate, multivariate

How to Write a Paper: Order (II)

- Results -- same order
 - Population characteristics
 - Occurrence of endpoints
 - Univariate/multivariate/subset analyses
- Abstract
- Introduction
- Discussion/conclusions

Results

- Heavy use of tables, figures
- Don't do figure just to show you know how – use them when trends are more important than actual numbers (e.g., survival curves)
- Parallel Methods, using expected order of information
 - Population characteristics – Table 1
 - Occurrence of endpoints – Table 2
 - Univariate/multivariate/subset analyses

Guidelines for Manuscripts

- Length -- 15 pages or less
 - Title page (1)
 - Abstract (1)
 - Introduction (<1)
 - Methods (~5)
 - Results (~3)
 - Discussion (3-4)
- Results should be \geq Discussion in length

Discussion Section

- Summary of findings (1 paragraph)
- Comparison of report to other work (1-2 paragraphs)
 - *“These findings are consistent with and extend those from prior reports...”*)
- Implications (1-3 paragraphs)
- Limitations (1 paragraph)
 - *“These data must be interpreted in the context of the study design.”*
 - Key question: Did you do the best study you could do with resources available
- Conclusions, future avenues of research (1 paragraph)
- Importance of references

Final Advice

- Find mentor or someone else who cares about communication and cares about you.
 - Anyone who you ask to review your work, and returns it with “Looks great” and nothing more is not your friend.
- Writing is re-writing
- Practice your oral presentations, no matter how trivial, before someone who you respect and who will be honest with you.
- Strong communication skills are no substitute for thoughtful study design and analysis -- and hard work.
- Send your best work to NEJM.