



10 Tips for Enhancing Biostatistical Collaborations in Clinical Research: Lessons Learned from the Trenches

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December 9, 2011



Introductory Remarks

- ✓ Effective collaborations require skills not taught in most graduate programs
- ✓ Statisticians often have to learn such skills through trial-and-error
- ✓ Objectives: To share my some tips on how
 - to enhance your own collaborative experiences
 - to advise trainees about approaching collaborations



SSC LIAISON

VOLUME 25 NUMBER • NUMÉRO 4 NOVEMBER • NOVEMBRE 2011



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Some Tips for Enhancing Statistical Consultations or Collaborations in Medical Research:

LESSONS from the TRENCHES

Quelques conseils pour améliorer la consultation ou la collaboration statistique en recherche médicale :

LEÇONS APPRISES à la DURE

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Providing effective statistical consultation or collaboration in medical research often requires skills not often taught in most graduate statistical programmes. After numerous collaborations – some of which worked out really well and others that failed miserably, I share 10 tips based on the lessons I learned



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Pour offrir une collaboration ou un conseil statistique efficace dans le domaine de la recherche médicale, il faut des compétences qui ne sont pas toujours enseignées dans les programmes de statistique. Après de nombreuses collaborations, dont certaines ont abouti et d'autres ont lamentablement échoué, j'ai pensé vous



Emphasis on learning how to ask
"good" questions

Our training systems don't teach us enough about how to ask questions ...

- What ...?
- Why ...?
- When...?
- Where...?
- Which...?
- Who...?
- How ...?
- Can...?
- Could...?
- Should...?
- Would...?
- Is it ...?
- Does it...?

“There's no such thing as a stupid question”



The search for answers start with asking good questions

Spend more time and energy understanding the problem

- Why is it a problem?
- What is the scale of the problem?
 - How common?
 - How serious?
- Has the question been answered?
 - Has a recent systematic review been done?
 - What are the results?

Make sure to understand the relevance: ie So what?



Teaching strategies to visualize the problem - this can help in visualizing the solution

Where do I begin?



Sometimes observing clinical practice can help one to visualize the solution





Teaching how to manage
time effectively

"The Time famine" = not enough time to...

- Perform all analyses
- Read all study protocols
- Review all manuscripts
- Read favorite journals, books, etc
- Calculate the sample size when the deadline is tomorrow
- Attend all meetings
- Drive son to soccer practice, piano lessons, basketball game, etc
- Help kids to their assignments
 - Listen to a friend's problems

Poor time management can result in...

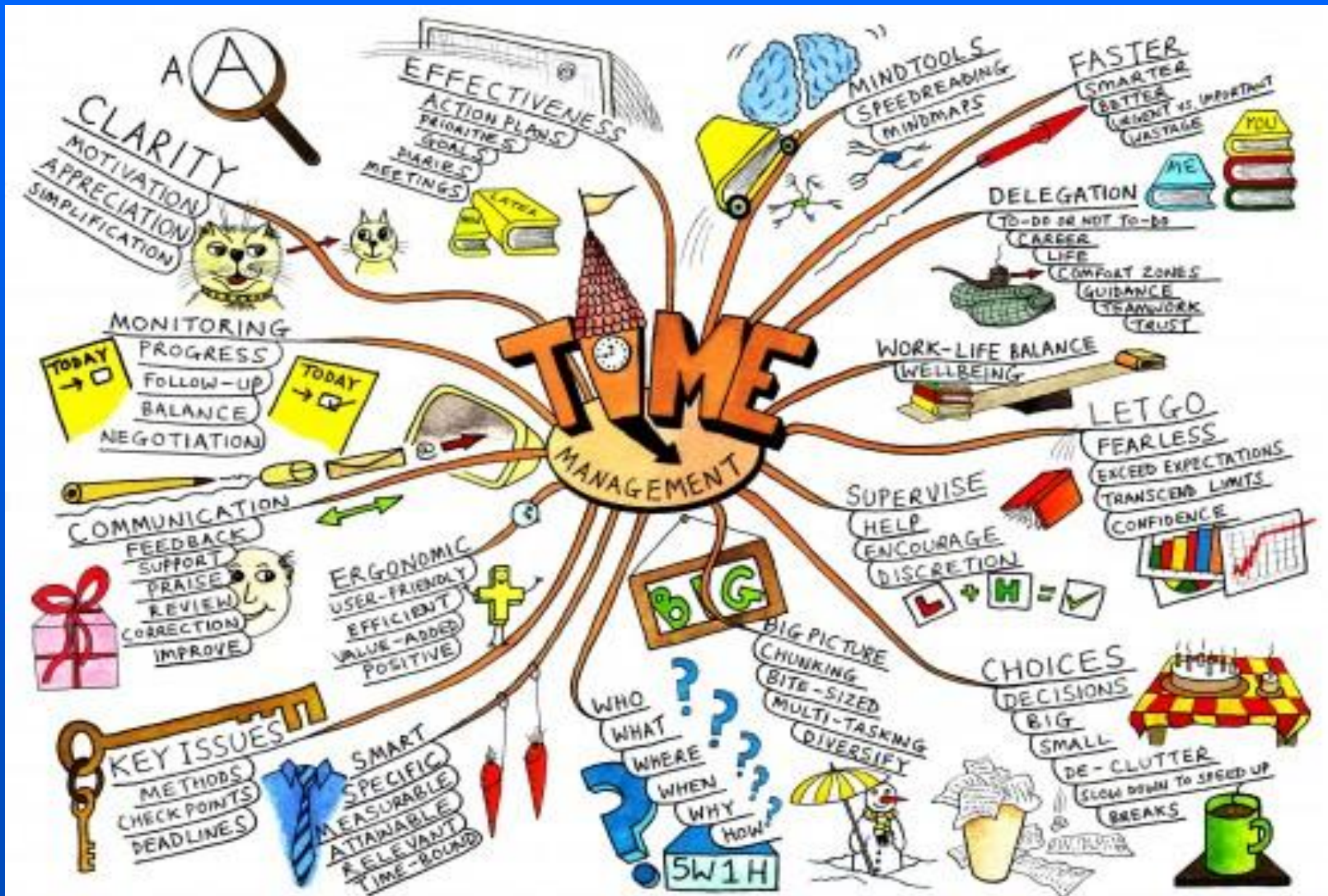
- Disappointments to loved ones, collaborators, etc
- Loss of trust
- Stress, and more stress!
- Poor health
- Missed opportunities
- Failure to achieve success
- Poverty
- Ruining your reputation
- Ruining your career

Be on time for meetings -
shows respect for your colleagues, and
enhances trust!



Good time management=Efficiency!

(Dieter J. Schönwetter. Dealing Effectively and Efficiently with Administrative Tasks: Emails and Chairing Meetings)





Choosing the right communication strategies - be careful about email communication!

Importance of Emails as a Tool

(Dieter J. Schönwetter. Dealing Effectively and Efficiently with Administrative Tasks: Emails and Chairing Meetings)

Positive

- Convenience
- Timely
- Access
- Multiple
- Efficient
- Archival
- Transferring docs
- Cheap - reducing costs

Negative

- Spam
- Time
- Etiquette
- Misinterpretations
- Non-emotional
- One-way
- Sequence, timing
- Not confidential
- Sent before it should
- Permanent record
- Invites a lack of civility
- Addictive

In many cases ... it's best to

- Use a phone
- Meet in person
- Follow-up an email with a phone call



The need to be familiar with reporting guidelines for different designs

Reporting Guidelines

✓ CONSORT Statement

- <http://www.consort-statement.org/> (for updates and extensions)

✓ The TREND Statement

- <http://www.trend-statement.org/asp/trend.asp>

✓ The STROBE Statement

- <http://www.strobe-statement.org/>

**Most are available on the EQUATOR
Network website**

(<http://www.equator-network.org/>)



Fostering good
"citizenship"

Great opportunity to
improve knowledge, network,
get insight...

☺ Review manuscripts

☺ Volunteer to serve on review
committees/boards

☺ Don't wait to be asked....



Familiarity with the national and international research ethics guidelines including the relevant legislation

✓ Importance of research ethics is embodied in several guidelines

- Nuremberg Code
- The Declaration of Helsinki
- The Belmont Report
- CIOMS
- Tri-council Policy Statement (TCPS)

✓ Research Ethics may also covered in certain legislations in different countries



Teaching students to be
flexible and adaptable

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change" Charles Darwin

☺ collaborations means working in teams:

- ☑ with people from different educational backgrounds,
- ☑ different cultures, and
- ☑ diverse views

☺ Being flexible is essential for effective collaborations



Teaching negotiation skills: Clarify
your role in research
collaborations including how
authorship will be handled

- Not all researchers are aware of the criteria for authorship
 - *The American Journal of Occupational Therapy* 2006;60(1):111-7;
 - *Annals of Internal Medicine* 1997; 126: 36-47;
 - *Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication*, <http://www.icmje.org/>
- The key to successful negotiations about authorship is in understanding that authorship is primarily determined based on intellectual contributions

10

The importance of a mentor,
especially when starting a career
in "collaborative" research

Chinese Proverb: A conversation with a wise-man is better than 10 years of study

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Emphasize the importance
taking initiatives to do
things do things for
themselves

Chinese proverb:

"Teachers open the door. You enter by yourself"

Some Concluding Remarks

- ✓ We play very important roles in biomedical research as
 - consultants,
 - collaborators or
 - co-investigators

- ✓ Hope these tips help to enhance your effectiveness in these roles

Acknowledgements

- ✓ This work is supported in part by the CANNeCTIN programme
- ✓ Many thanks to colleagues and students who provided useful feedback and suggestions on the LIAISON article