Building Successful Research Collaborations

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Research is increasingly done by teams

Out of >19M published papers a shift toward “collective research” is evident

Fig. 1. The growth of teams. These plots present changes over time in the fraction of papers and patents written in teams (A) and in mean team size (B). Each line represents the arithmetic average taken over all subfields in each year.
"I make a pretty good team!"
Reasons to Collaborate

You are busy!
- When one is busy the other might find time to make progress

Access to expertise or particular skills
- Specialists → content areas in which you are working

Cross-fertilization across disciplines

Multiple sites for greater patient access

Access to equipment or resources

Improved access to funding

Enhancing trainee education
Who are your closest – likeliest partners?

- People who can share the interest in your topic and with whom you have built-in close contact
  - Colleagues
  - Residents (SPs)
  - Medical students (ISPs)
  - Research students (e.g. Jt. Doc, CORE)
  - MA/LVN/RNs → “PEA” (dual RA + clinical support role)
  - Research assistants
Reach out to the next level

Reach out to other FP departments/CIMs locally, regionally, nationally → they might have similar practices and similar clinical questions/interests

Reaching out to specialists → in the content areas in which you are working who might want to collaborate in PBR efforts

Reach out to researchers in FMPH/CIM → they have lots of needed expertise
On Monday 17 March 2003, WHO called upon 11 laboratories in 9 countries to join a collaborative multi-center research project on SARS diagnosis. An international multi-center research project to expedite identification of the causative agent was established.

http://www.geocities.com/avinash_abhyankar/pgzone/sars_main
Identification of the Agent that Causes SARS on April 16, 2003

Newly Identified Coronavirus

Thin section electron micrograph and negative stained virus particles

Source:
Department of Microbiology, The University of Hong Kong and the Government Virus Unit, Department of Health, Hong Kong SAR China
What is a Scientific Research Team?

Investigator-initiated research

Investigator works on a scientific problem – largely on his or her own.

Research Collaboration

- Group works on a scientific problem, each bringing some expertise to the problem.
- Each member works on a separate part, which are integrated at the end.
- The interaction of the lead investigators varies from limited to frequent with regard to data sharing or brainstorming.

Integrated Research Team

- Team works on a research problem with each member bringing specific expertise to the table.
- There are regular meetings and discussions of the team’s overall goals, objectives of the individuals on the team, data sharing, and next steps.
- One person takes the lead while other members have key leadership roles in achieving the goal.
Building Success

Institutional Support

Physical Space/Resources

Clinical Research Team and Staff
What are necessary for good collaboration?

Trust
Membership (Building a Team)
Shared Vision - Goals
Role Definition – Who will do what?
Sharing Credit
Communication and Negotiation
Conflict Resolution
Team Dynamics
Leadership
“Sometimes I think the collaborative process would work better without you.”
Trust: Sufficient confidence in another person to be vulnerable to their actions
Trust and the Team

Trust goes hand-in-hand with your scientific confidence in the results generated by your:

- Postdoc, Collaborator, Colleagues, etc...

If trust is never established or damaged once formed...confidence will slip
What is Expected from a Collaborator?

What did you say?
Open and Honest Discussion:

Any team member can raise a concern.

Every team-member is allowed to express his attitudes, desires, and needs.

All team-members agree to participate actively when they have the information to do so.

Adapted from The Ideal Speech Situation - Jürgen Habermas
Model of Team Development

Transforming

Forming

Performing

Brainstorming

Norming

Bruce Tuckman, 1965, 1977
Managing Diversity: Harnessing Differences

**Essential Differences** – disciplinary world-views, methodologies to reach goals, technologies, criteria for credit and authorship.
- ✓ Require integration

**Incidental Differences** – personality styles, work habits, identity factors – race, gender, etc.
- ✓ Require effective management
Culture clash: collaboration between researchers and clinicians

Views of how to do research: rigor vs. pragmatism

Meeting times: during regular work hours vs. before or after hrs.

Distinguishing roles; roles for clinicians:
- Knowledge of the clinical practice system
- Knowledge of practice-based pragmatic questions
- Knowledge of how to integrate research effort into practice
Getting the work done

**Essential Work**
Division Priorities and Objectives

**Passions**
Tasks that Engage the Mind and Spirit

**Strengths**
Competencies and Expertise

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**The Sweet Spot**
Personal strengths and passions align with essential work in a setting which provides opportunities for challenge and growth.
References

L. Michelle Bennett, PhD
Deputy Scientific Director, NHLBI, NIH

Howard Gadlin, PhD
Ombudsman, OD, NIH

teamscience.nih.gov