
BRINGING SCIENCE TO LIFE: THE INTERDISCIPLINARY ADVANTAGE

OMNI SHOREHAM HOTEL
Washington, D.C.
April 27, 2011

CONTENTS

Executive Summary	2
Meeting Presentations	3
The Science of Collaboration: Establishing One Clear Path	3
Panel: Navigating Interdisciplinary Research Toward Success	4
Q&A	6
Breakout Sessions	6
Breakout Session Report: Skill Set	7
Breakout Session Report: Environment	7
Breakout Session Report: Peer Review	8
Breakout Session Report: Resources	8
Conclusions	9
Additional Information	9
Appendix A: Meeting Agenda	10
Appendix B: List of Planning Committee Members	12
Appendix C: List of Participants	15

EXECUTIVE SUMMARY

On April 27, 2011, more than 100 nurses, physicians, dentists, optometrists, business administrators, educators, and public health scientists gathered for the Bringing Science to Life: The Interdisciplinary Advantage meeting. The meeting was organized by the National Center for Research Resources (NCRR) and the National Institute of Nursing Research (NINR) with participation from the Clinical and Translational Science Awards (CTSA) Nurse Scientist Special Interest Group. The meeting was designed to prompt interdisciplinary thinking and communication, to stimulate the generation of new research ideas and directions, and to improve dissemination and enhance public health. The organizers also hoped to build new teams to effectively conduct interdisciplinary research in the future. There were three specific objectives:

- Identify opportunities and challenges inherent in interdisciplinary science,
- Evaluate successful examples, and
- Analyze the essential components of effective team science.

The meeting consisted of three presentations—covering a model for interdisciplinary research, team science research, and the business case for cross-disciplinary research—a panel discussion, and a brainstorming session on the essential elements of effective interdisciplinary translational research. The final presentation of the afternoon highlighted future directions and the overarching themes that emerged from the presentations and the breakout sessions. .

The speakers served to remind attendees that multidisciplinary team science has been a subject of research for more than 50 years. In the study of chronic disease and other research efforts, it is often practiced by default. However, the success of some cross-disciplinary teams has highlighted the creative, unexpected, and in some cases groundbreaking answers that can result. Increasingly, science poses questions that are best answered through the efforts of cross-disciplinary teams. In some fields, pressing questions and possible solutions cannot be answered otherwise. Studying team science can help investigators who want to do it plan better and those who are already engaged in it improve their ongoing efforts. The following are highlights and priority considerations that emerged from the meeting.

- **Be aware of the effort required to set up a team.** The initial investment in team science is greater than for single-discipline efforts, but with careful planning and coordination, cross-disciplinary teams can attain the ultimate goal of expediting research.
- **Make sure all team members understand the mission and know how they contribute to it.** Clarity of vision is essential. One way to accomplish this is to create a detailed vision of the subject: who will benefit from the effort; the people, expertise, and skills necessary for the team; and the research process itself.
- **An effective team relies on trust.** Be sure to dedicate time for team-building exercises, which can contribute to a sense of trust among team members.
- **Consider language carefully.** The meaning of specific terms is often not shared from one discipline to another, so using terms carefully and making sure the intended meaning is understood is crucial. It is important to remember that terminology—as well as body language—can either build or hinder trust. Finally, team leaders need sharp language skills to speak to potential recruits persuasively and to interpret among different communities, including an institution’s administration, industry, and the wider community.
- **Open the doors to all interested participants.** Team is a fluid concept. By inviting everyone to the initial conversation, you might encounter some unexpected partners, but this can benefit the process and improve results.
- **Clearly determine metrics.** What does the team define as success and how is that measured?
- **What is the quickest way to an answer?** A preliminary or tentative answer can play a vital role in shaping the direction of research or simply bring an end to unproductive offshoots.

- **Consider the marketplace.** Potential partners tend to look at the whole while team members consider individual parts. Although the collaborative process might not match the demands or meet the rigors of the marketplace, it can be productive for those most closely involved to look at process with a fresh eye.
- **Take advantage of existing resources, including the significant body of literature on team science.** As organizations make plans to engage in, and support team science administratively, researchers who have studied teams and what makes them effective should be brought in to the discussion.
- **Team science requires a paradigm shift.** Academia is currently oriented toward single investigators pursuing knowledge deeply to further a particular discipline. Funding, journal publication, promotion, and tenure all are oriented to support this paradigm. Therefore, systems at universities, funding organizations, and publishers will have to change in order to accommodate and effectively support team-based research.

MEETING PRESENTATIONS

THE SCIENCE OF COLLABORATION: ESTABLISHING ONE CLEAR PATH

Terry Fadem; University of Pennsylvania

Terry Fadem is the managing director of the Office of Corporate Alliances at the University of Pennsylvania's School of Medicine, where he leads the school's various corporate relations initiatives.

Mr. Fadem described the model developed at his office at the University of Pennsylvania. The Office for Corporate Alliances was set up to sponsor and arrange collaborative research with industry, foundations, and other institutions. The ultimate goal is to translate research to the marketplace. The office coordinates 10 to 15 percent of the 3,000 open trials at the university. In the seven years of its existence, staff at the office has made an effort to concentrate all necessary components in one place: communication about ongoing and potential studies, conflict of interest policy guidance, contract negotiations, IP, licensing and new business development, confidentiality agreements for team members, and access to funding (which is tied to submission of quarterly reports).

A survey of people in industry, academia, and government suggests that collaboration is universally considered beneficial. However, fewer see themselves engaged in collaboration as part of their own future research. The survey also revealed misunderstanding about the true nature of collaboration, as opposed to working with someone else to complete a simple transaction.

Mr. Fadem noted that the best collaboration results from opening the doors wide to potential collaborators and bringing together those with an interest in the goal. Team is a fluid concept. This means contributions might come from unexpected partners—from clinicians, nurses, and public health workers to engineers, building staff, and social workers. Anyone who indicates interest can engage in the initial conversation. Specific roles for this broad group of people are determined as the conversation proceeds.

The model developed by the Office for Corporate Alliances is guided by the overall mission. This takes precedence over the specific protocol designed to carry it out. Part of being mission-focused is realizing that the aim is not to finish the study; it is to accomplish something of value for patients and caregivers. It is crucial for all team members to understand the value of the overall mission and their individual contribution to it.

Deciding what to accomplish includes knowing what to measure and the metrics to do that. This governs individual studies as well as the overall endeavor or encouraging multidisciplinary science. The Office of Corporate Alliances

has identified the following factors: the volume of studies, number of external collaborators, number of university team members (internal collaborators), value of studies, turnaround time, publications, intellectual property, and revenue. When determining these criteria, it is good to be aware of what outsiders are looking at as well. Commercial partners and other potential collaborators do not necessarily see the whole process, but may focus on only a part. For example, taking a long time to turn around an agreement could hinder a company's eagerness to collaborate. How does the process compare in the marketplace?

Individual members of a team might have different approaches and goals. When coordinating these efforts, it is important to remember that trust is the most important element in building a team.

In responding to questions from the attendees, Mr. Fadem highlighted the tension that can exist between publication or tenure requirements for academics and the aims of community practitioners or industry researchers who want to get a product to market. The practical does not always translate to the intellectual, he said, and that is the yin and yang of where we find ourselves. But it is a conversation that is necessary each time. The tension can be eased by making sure this kind of collaboration is important to the school leadership. In addition, one big, industry-funded publication can make a big difference in academic researchers' interest in participating.

PANEL: NAVIGATING INTERDISCIPLINARY RESEARCH TOWARD SUCCESS

Moderator: *Richard M. Allman, M.D.; University of Alabama at Birmingham*

Holly Falk-Krzesinski, Ph.D.; Northwestern University

Patrick McNees, Ph.D., FAAN; University of Alabama at Birmingham

Holly Falk-Krzesinski, Ph.D., is a research assistant professor and the director of Research Team Support and Development at the CTSA-supported Northwestern University Clinical and Translational Science (NUCATS) Institute, where she engages in navigation and support for clinical and translational collaboration, cross-disciplinary research, research teams, and grantsmanship for collaborative opportunities.

Dr. Falk-Krzesinski noted cross-disciplinary research has three basic orientations: interdisciplinary, multidisciplinary, and transdisciplinary. None of these has a strict definition; it is best to think of them on a spectrum. But differences among the three can be characterized by imagining a single discipline as a piece of fruit—an apple, for example, or an orange.

- Multidisciplinary science is like a fruit basket. Several disciplines are together, but it is easy to distinguish among them.
- Interdisciplinary science is represented by a fruit salad, in which the kinds of fruit are mixed, but the taste of each is still distinct.
- Transdisciplinary science can be symbolized by a fruit smoothie. The smoothie does not look like what you started with, but “things taste better when everyone is working together.”

Although it is easy to get excited about the idea of team science for the pursuit of solutions to intractable problems, it is important to remember a fundamental contradiction: While the ultimate goal is to expedite research, initially team science takes more time to set up. Once the team is established, however, it accelerates the overall pace of translational research.

The more researchers can learn about how teams work effectively, the more resources there will be to support effective teamwork. The science of team science—a rapidly emerging field—is important for making cross-disciplinary efforts more efficient and effective. Team science is receiving increased attention from funders and the

public—there is pressure for these efforts to have value. In addition, it is important to remember that the concept of team science is backed by five decades of research into what makes teams effective. Not only is the published work in this field a valuable resource, the social scientists and other investigators who do this research should be brought into the conversation of how to support and encourage effective team science.

Several resources have been developed to support team science, including lists of training and available funding, including:

- www.nordp.org. The website of the National Organization of Research Development Professionals includes a list of funding resources specifically for establishing a research team.
- www.teamscience.net. This ~6-hour online training module for team science was designed to encourage familiarity and practical expertise with team science.
- <http://teamscience.nih.gov>. In 2010, the NIH ombudsman published a field guide on collaboration and team science posted on this site.

Patrick McNees, Ph.D., FAAN, has a 30-year history of assembling and managing interdisciplinary teams to address significant health concerns. Dr. McNees' presentation highlighted the business case for cross-disciplinary team science. Working as part of an interdisciplinary or transdisciplinary team, he noted, results in a bigger return for the investment. Although economists have a formula for this, costs and returns do not have to be calculated strictly in monetary terms. Nonetheless, return is consistently higher with a diversity of disciplines and skills devoted to a particular project.

Several considerations go in to building and managing an effective team:

Who should be on the team? When thinking about the necessary roles and people to incorporate on a team, it is important to be detailed. The team might need a nurse, but what kind of nurse is best? What skills and expertise should this person have? How can they contribute to the team? What other skill sets will be needed to complement what they do? Team facilitation should also be considered explicitly—it is naïve to think a group of people who fill the necessary roles will instinctively know how to communicate or work together as a team. Who will facilitate this interaction?

Who is the user? Similarly, when identifying the target of the device, service, or protocol being developed, the more detailed a persona, the better. Who is this person? What do they need the device to do? What are the demands on their time when they are not using the device? Having a clear portrait of the user—this person's needs, wants, and interests—helps immeasurably to focus the efforts of team members.

How does each team member fit in? Clarity of vision is crucial. Team members do not necessarily have a common language starting out, nor do they understand other members' roles. One tool that can make this clear is a detailed, layered diagram of the project, showing what people are connected to which roles and how one stage leads to the next. The combined steps can give the team a greater appreciation of the project as a whole. This kind of tool gives individuals a clear notion of how they fit into the overall mission of the project and teaches the importance of what others are doing as well.

What should meetings accomplish? There is no single type of team meeting; each has its own nuances. A brainstorming session will differ significantly from a presentation to clients. Some meetings should be firmly led, while others benefit from an unplanned, organic discourse. As a result, it is helpful to think ahead, defining goals and requirements for each meeting's specific aims. Meeting protocols can be as individualized as treatment or nursing care plans.

What can the team answer quickly? There is a great deal to be gained from getting a preliminary, tentative, or cursory answer without expending considerable time, effort, or money. Valuable answers arrived at rapidly or key components tested early can move an entire enterprise forward efficiently. However, it is not necessary that these all be successful efforts. The next best thing to yes might be a quick no.

Q&A

The panelists discussed questions from the attendees addressing the comparative value of discipline-specific and cross-disciplinary research, knowing when to embark on a team effort and when to hold back, benefits for existing teams, and the importance of creating a common language.

To look at a given question deeply, disciplinary expertise will continue to be essential. We know how to do discipline-based research and training well, the panelists said, but we're not as good at team-based science. There is a utility for both, and both are important. All of those involved in planning research need to understand when it is best to orient toward unidisciplinary efforts and when to invest in cross-disciplinary research.

Defining the vision for the research is crucial to answering this question for any individual research effort. It also depends on how established the team relationships are already. If the collaborative effort is new, a single unit or smaller team would be the best way to begin. Consider the time and effort it will take to plan the launch, and consider the possibility of using pilot funds. There is value in considering an initial question that can be answered quickly, even if it is tentative. There would be an obvious advantage to team science if the aim of the research is to have findings that are easily generalized to the larger community, build evidence for a general rule, or show that research can be carried out in multiple settings.

Even once the team has been set up and collaboration is ongoing, the team can benefit from quality improvement techniques. It is not that team science is new, but that it has been approached unscientifically. With improvements, perhaps teams could get more done or do it with less conflict. Even if members agree the team functions well, it might not look that way from the perspective of the marketplace. It is not a question of whether team science can be done, but if it can be done in an effective, efficient way that ultimately makes a difference in people's lives.

CTSAs primarily have a biomedical focus, which can make it difficult to engage public health scientists, economists, and other researchers who speak a different scientific language. When talking to potential recruits, each message needs to be customized to speak to that person. But over the long term, creating a common language is a crucial endeavor and part of the larger aim of building trust. These conversations are not just about the science, but about what collaborators from different disciplines believe to be science or data. What is verifiable? Ultimately, it is about language and the philosophical underpinnings of research. Not addressing language can be fatal to a project. It also requires training, self-appraisal, and re-evaluation because often collaborators do not realize the barriers that language can create. Certain terms can be off-putting to other team members, even when the desire to collaborate is there. Important elements are communicated through body language, too, which means collaborators should not depend solely on remote means of communication, such as telephone, email, and videoconference. The Toolbox Project, hosted by the University of Idaho, is an online tool for enhancing cross-disciplinary conversations (<http://www.cals.uidaho.edu/toolbox>).

BREAKOUT SESSIONS

Facilitators: Pamela Mitchell, Ph.D., R.N., FAAN, FAHA; University of Washington
Carolyn Sampelle, Ph.D., R.N., FAAN; University of Michigan

Attendees joined one of four groups to generate a list of the essential components and characteristics that enhance interdisciplinary translational research. The ideas presented by each group after 30 minutes of discussion are highlighted below.

BREAKOUT SESSION REPORT: SKILL SET

The discussion in the first group, which addressed the skill set needed for conducting or beginning a successful interdisciplinary translational research project, focused on the requirements for team science leaders.

- **Leadership: Vision.** The team leader is in charge of facilitating the team, supplying the project's vision, and keeping members oriented toward that vision. Leaders should be able to convey respect for the team's efforts and for individual members, and the ability to manage other viewpoints is key. The leader also can play an important role in defining the metrics by which the team's efforts are measured and evaluated.
- **Leadership: Team-building.** The leader needs skill at recruiting top people to the team. Once the group takes shape, skill at engaging members in team-building becomes more important. Leaders often underestimate how much administrative support team science requires, so skill at getting access to the right people and obtaining the necessary support is an important priority.
- **Leadership: Communication.** It is crucial for a team leader to be able to talk about the team's goals and vision to potential recruits, administrators, investigators in other disciplines, industry and other stakeholders, and the community at large. The leader must understand the politics of the team environment as well, and be skilled at navigating that environment.
- **Leadership: Philosophy.** Leaders should enjoy learning from others. In addition, it is good for a leader to be able to learn from not always being right, and to be comfortable with not always knowing. Finally, it is important for leaders—and the team as a whole—to realize different skills or styles of leadership might be preferable at various stages of the research process and to recognize when a switch is necessary.
- **Personal attributes.** Participants identified certain attributes in leaders and group members alike, including creativity, a sense of humor, an ability to learn from not being right, and a willingness to try something they think will not work. In sum, they should be risk-tolerant, adaptable, and flexible. All team members should have deep knowledge they can bring to the table, as well as openness to other ideas.

BREAKOUT SESSION REPORT: ENVIRONMENT

What does the interdisciplinary research environment look like?

- **Administration.** Participants in this group quickly identified buy-in from administrative leadership, including support for team-building and encouragement of individual members, as a key element of a successful research environment. Because team science takes longer initially, a different timeline is needed for people devoting their career to such efforts and new criteria of success.
- **Tenure.** Participants concluded that generally today's tenure system does not support team science. Investigators' contributions to team science should be identified in promotion and tenure packages and rewarded. Monetary incentives should be specific and concrete. Participants also predicted that team science will change job descriptions and how people are hired for research.
- **Models.** Universities might want to take a page from industry in determining how to support and recognize team science activities. In particular, the Ohio State University seemed to have many attractive approaches in place.
- **Indirect costs.** Currently, several formulas for allocating indirect costs are used. Some teams allocate funds strictly based on percentage of effort. Other teams negotiate a formula at the start of a project. This can be a motivating factor for team participants, so team leaders need to be good at negotiation.
- **Training.** Interdisciplinary courses should be promoted, and students should be given credit for attending. Training courses should be offered through CTSA's.

BREAKOUT SESSION REPORT: PEER REVIEW

The group discussing the elements necessary for successful and meaningful peer review identified separate lists for peer reviewers and for the process of review itself.

- **Peer reviewers.** Reviewers should not only be familiar with team science, but have had success at obtaining grant awards for their own interdisciplinary research efforts. They should be unbiased and be skilled at giving instructive feedback. Participants noted that team science review panels would themselves need to be balanced in terms of the disciplinary expertise of the panel members. Good training also should be available to reviewers.
- **Peer review process.** It will be helpful to keep in mind that review criteria and approaches could vary, depending on whether the panel in question is reviewing a team, the science, or an individual, as for tenure. A successful and meaningful peer review process should start with clear review criteria and ensure that applicants receive clear, timely feedback. It is also crucial that adequate time be allotted for the review process—additional time might be required to review team science applications. During review, panel leaders should ensure all points of view are heard. Like tenure, the peer review process now is focused on a single principal investigator. To support effective team science, this review paradigm might need to be redefined.
- **Recommendations.** To help build a successful review process, it would be helpful to identify models where people are doing this kind of review well. NIH-wide support for team science also should aim for consistency in the review process across Institutes and Centers. It would be worth considering the benefits of establishing a dedicated study section or special emphasis panel for the review of highly interdisciplinary research. On the application itself, a section where applicants could address team structure, process, and functioning would improve review; perhaps a checkbox identifying applications as interdisciplinary or translational could be added, or criteria in the scoring section evaluating these attributes. Applications for team science efforts also would benefit from special receipt dates.

BREAKOUT SESSION REPORT: RESOURCES

Participants in the group discussing essential resources for successful interdisciplinary translational research identified money, first and foremost. In addition, they outlined the following priorities for support.

- **Core.** Participants discussed a model in which the university establishes an interdisciplinary research hub to draw the attention of potential collaborators and to coordinate the logistics of team science. This core would be led by an individual champion or group that could advocate for team science as well as bring people together. It would offer team investigators statistical support as well as an organizational structure that would facilitate communication.
- **Institutional resources.** Institutions should offer a systematic method for identifying content experts and those with particular skills, expertise, or interest in team science, the participants said. They also identified institutional buy-in in the form of release time as a key form of support. Institutions also could offer team-building workshops—bringing together potential team members to discuss strategies for working together—and facilitate mentoring relationships.
- **Conferences.** Participants encouraged individual investigators to attend conferences outside of their own discipline because these conferences offer a valuable opportunity to meet and network with researchers from other disciplines. Potential collaborators could be invited back to visit and discuss research.
- **Funding sources.** The group encouraged individual investigators to seek out funding opportunities that support the establishment of interdisciplinary efforts, as well as those inclusive of their discipline that require a team science approach.
- **Reward system.** Participants recommended that the reward system be changed so that team science is rewarded.

CONCLUSIONS

Denise Russo, Ph.D.; National Institute of Nursing Research, Director of Extramural Activities; National Institute of Nursing Research; National Institutes of Health

Denise Russo, Ph.D., presented a summary of the highlights of the meeting and recommendations. Dr. Russo is the director of the Division of Extramural Activities at the National Institute of Nursing Research (NINR).

Dr. Russo highlighted five major elements of effective team science that emerged clearly in the conversation.

- **Mission:** Have a clear vision and make sure everyone understands how they contribute.
- **Trust:** An essential element in establishing an effective team.
- **Common language:** Crucial element that is easily overlooked.
- **Understanding personae:** Invaluable team exercise consists of painting a detailed portrait of potential team members or users.
- **Understanding partnerships:** Subject of existing research, team science continues to be a significant opportunity for research to promote disease prevention and improve patient QOL and health.

Science, teaching, community, and the community good all are woven into team science efforts. Cross-disciplinary research is not a cookie-cutter process, but some common elements are crucial: listening to each other, asking questions, understanding the mission, thoughtful planning, getting buy-in from stakeholders on the project's goals, and having an open marketplace for ideas.

It is also important to remember that the virtual world is not a substitute for meeting face to face and understanding through body language how one member is committed to advancing another's scientific endeavor. The members of a team need to come together to understand new ideas and move science forward.

Engaging in interdisciplinary science is both an opportunity and a challenge. Despite current CTSA successes, there is room to improve. Opportunities exist to include more players and to do team science better. By coming together, scientists of different disciplines can foster efficiency, keep the focus on the mission, create a common language, and accelerate the pace at which research goals are accomplished.

Training and career development support will be central to NIH efforts to encourage cross-disciplinary science. The Institutes also look forward to maintaining the momentum from the meeting to encourage CTSA partnerships and to identify and remove barriers to team research.

ADDITIONAL INFORMATION

For questions about program content, please contact:

Donna Jo McCloskey, Ph.D., R.N.

Program Officer

National Center for Research Resources

mccloskd@mail.nih.gov

Karen Huss, Ph.D., R.N., ANP-BC, FAAAAI, FAAN, FAHA

Program Director

National Institute of Nursing Research

husk@mail.nih.gov

APPENDIX A: MEETING AGENDA



Translating research from basic discovery to improved patient care

BRINGING SCIENCE TO LIFE: THE INTERDISCIPLINARY ADVANTAGE

Omni Shoreham Hotel ♦ Washington, D.C.

April 27, 2011

Goal: Enhance participant's ability to successfully engage in interdisciplinary research.

Purpose: In the health sciences the value of interdisciplinary teams for translational research is increasingly recognized. However, non-medical disciplines such as dentistry, nursing, nutrition, pharmacy, public health, psychology, rehabilitation and social work are too often omitted from such research, when their disciplinary perspective could contribute to study goals. The purpose of this four-hour session is to illustrate successful interdisciplinary collaborations that have advanced the translational trajectory from bench to bedside to community practice. In discussion sessions, groups will develop strategies to maximize diverse disciplinary strengths.

Objectives:

- Identify opportunities and challenges when planning and conducting interdisciplinary research.
- Evaluate successful exemplars of interdisciplinary research.
- Analyze essential components of interdisciplinarity and characteristics that enhance research.

12:45 – 1 p.m. **Registration/Coffee/Light Refreshments**

1 – 1:15 p.m. **Welcome and Introductions**

Donna Jo McCloskey, Ph.D., R.N.
National Center for Research Resources

Karen Huss, Ph.D., R.N., ANP-BC, FAANA,
FAAN, FAHA
National Institute of Nursing Research

Welcome Remarks

Barbara Alving, M.D.
Director
National Center for Research Resources

Patricia Grady, Ph.D., R.N., FAAN
Director
National Institute of Nursing Research

1:15 – 1:45 p.m.	The Science of Collaboration: Establishing One Clear Path	Terry Fadem University of Pennsylvania
1:45 – 2 p.m.	Q & A	
2 – 2:45 p.m.	Panel: Navigating Interdisciplinary Research Toward Success	Moderator: Richard M. Allman, M.D. University of Alabama at Birmingham
	Research Toward Success	Speakers: Holly Falk-Krzesinski, Ph.D. Northwestern University Patrick McNees, Ph.D., FAAN University of Alabama at Birmingham
2:45 – 3:15 p.m.	Q & A	
3:15 – 3:30 p.m.	Break	
3:30 – 4:15 p.m.	Breakout Session: What are the essential components and characteristics that enhance FAHA interdisciplinary translational research?	Facilitators: Pamela Mitchell, Ph.D., R.N., FAAN, University of Washington Carolyn Sampselle, Ph.D., R.N., FAAN University of Michigan
4:15 – 4:30 p.m.	Breakout Session Summaries	Facilitators: Pamela Mitchell, Ph.D., R.N., FAAN, FAHA University of Washington Carolyn Sampselle, Ph.D., R.N., FAAN University of Michigan
4:30 – 5 p.m.	Overall Meeting Summary and Next Steps	Denise Russo, Ph.D. Director, Office of Extramural Activities, National Institute of Nursing Research
5 p.m.	Wrap-up and Adjourn	Donna Jo McCloskey, Ph.D., R.N. National Center for Research Resources Karen Huss, Ph.D., R.N., ANP-BC, FAANA, FAAN, FAHA National Institute of Nursing Research

APPENDIX B: LIST OF PLANNING COMMITTEE MEMBERS

CTSA NURSE SCIENTIST SPECIAL INTEREST GROUP PLANNING COMMITTEE

Richard Allman, M.D.

Director
Birmingham Veterans Affairs Geriatric Research,
Education, and Clinical Center
Parrish Endowed Professor of Medicine
University of Alabama at Birmingham
933 South 19th Street, CH19-201
Birmingham, AL 35294
Phone: (205) 975-8550
Fax: (205) 934-7354
E-mail: rallman@aging.uab.edu

David Banks, M.P.H., M.S.W., Ph.D., R.N.

Training Program Director
Office of Extramural Activities
National Institute of Nursing Research
1 Democracy Plaza, Room 710
6701 Democracy Boulevard
Bethesda, MD 20892
Phone: (301) 496-9558
Fax: (301) 480-8260
E-mail: banksdh@mail.nih.gov

Carrie Jo Braden, Ph.D., R.N., FAAN

Professor and Associate Dean for Research
Family and Community Health Systems
University of Texas Health Science Center at San
Antonio School of Nursing
Building NSG, Room 2.392
San Antonio, TX 78299
Phone: (210) 567-5808
E-mail: bradenc@uthscsa.edu

Ann Cashion, Ph.D., R.N., FAAN

Robert Wood Johnson Executive Nurse Fellow
Professor and Chair
Department of Acute and Chronic Care
College of Nursing
The University of Tennessee Health Science Center
920 Madison, Suite 507 North
Memphis, TN 38163
Phone: (901) 448-1176
Fax: (901) 448-1762
E-mail: acashion@uthsc.edu

Willa Doswell, Ph.D., R.N., FAAN

Associate Professor
Health Promotion and Development
School of Nursing
University of Pittsburgh
440 Victoria Building
3500 Victoria Street
Pittsburgh, PA 15261
Phone: (412) 624-8977
Fax: (412) 624-8521
E-mail: wdo100@pitt.edu

Judith Erlen, Ph.D., R.N., FAAN

Professor, Ph.D. Program Coordinator and Chair
Department of Health and Community Systems
Associate Director
Center for Research in Chronic Disorders
School of Nursing
University of Pittsburgh
415 Victoria Building
3500 Victoria Street
Pittsburgh, PA 15261
Phone: (412) 624-1905
Fax: (412) 624-8521
E-mail: jae001@pitt.edu

Karen Huss, Ph.D., R.N., A.N.P.-B.C., FAAAAI, FAAN, FAHA

Program Director
Section on Acute and Long-Term Care, End-of-Life,
and Training
Critical Care and Trauma; Cardiovascular (Acute and
Chronic); Pulmonary (Acute and Chronic to
include Asthma and Sedation Management I in
Pediatric Patients)
Office of Extramural Programs
Division of Extramural Activities
National Institute of Nursing Research
1 Democracy Plaza, Room 710
6701 Democracy Boulevard
Bethesda, MD 20892
Phone: (301) 594-5970
Fax: (301) 451-5649
E-mail: hussk@mail.nih.gov

Renée Joskow, D.D.S., M.P.H., FAGD

Captain
U.S. Public Health Service Commissioned Corps
NIH Coordinator
Clinical and Translational Science Awards Dental
Network
Medical Officer
Division for Clinical Research Resources
National Center for Research Resources
1 Democracy Plaza, Room 923
6701 Democracy Boulevard
Bethesda, MD 20892
Phone: (301) 435-0961
Fax: (301) 480-3661
E-mail: joskowr@mail.nih.gov

Marilyn Laken, Ph.D., R.N.

Professor
Nursing and Medicine
Director
Office of Special Initiatives
College of Nursing
Medical University of South Carolina
159.5 Rutledge Avenue
Charleston, SC 29425
Phone: (843) 792-2110
Fax: (843) 792-7476
E-mail: lakenm@musc.edu

Elaine Larson, Ph.D., R.N., C.I.C., FAAN

Professor of Pharmaceutical and Therapeutic
Research
Associate Dean for Research
School of Nursing
Professor of Epidemiology
Joseph Mailman School of Public Health
Columbia University
630 West 168th Street, Room 330
New York, NY 10032
Phone: (212) 305-0723
Fax: (212) 305-0722
E-mail: ell23@columbia.edu

Donna Jo McCloskey, Ph.D., R.N.

Program Officer
Division for Clinical Research Resources
National Center for Research Resources
1 Democracy Plaza, Room 921
6701 Democracy Boulevard
Bethesda, MD 20892
Phone: (301) 451-4216
Fax: (301) 451-5378
E-mail: mccloskd@mail.nih.gov

Barbara Medoff-Cooper, Ph.D., R.N., C.R.N.P., FAAN

Ruth M. Colket Professor in Pediatric Nursing
Director
Center for Biobehavioral Research
School of Nursing
University of Pennsylvania
Fagin Hall, Room 483
418 Curie Boulevard
Philadelphia, PA 19104
Phone: (215) 898-3399
E-mail: medoff@nursing.upenn.edu

Pamela Mitchell, Ph.D., R.N., FAAN , FAHA

Professor
Biobehavioral Nursing and Health Systems
Department
School of Nursing
Adjunct Professor
Department of Health Services
School of Public Health and Community Medicine
Director
Center for Health Sciences Interprofessional
Education
University of Washington
Box 357266
Seattle, WA 98195
Phone: (206) 616-1463
Fax: (206) 543-4771
E-mail: pmitch@u.washington.edu

Elizabeth Reifsnider, Ph.D., R.N., PHCNS-BC, WHNP

Constance Brewer Koomey Professor
Associate Dean for Research
School of Nursing
University of Texas Medical Branch
301 University Boulevard
Galveston, TX 77444
Phone: (409) 772-8262
Fax: (409) 747-1554
E-mail: elreifsn@utmb.edu

Carolyn Sampsel, Ph.D., R.N., FAAN

Carolyn K. Davis Collegiate Professor of Nursing
School of Nursing
Director
Community Engagement Program
Michigan Institute for Clinical and Health Research
Division of Health Promotion and Risk Reduction
University of Michigan
400 North Ingalls Building, Room 4236
Ann Arbor, MI 48109
Phone: (734) 764-9555
E-mail: csampsel@umich.edu

Clark Stanford, D.D.S., Ph.D.

Associate Dean for Research
Dows Institute for Dental Research
Centennial Fund Professor
College of Dentistry
University of Iowa
N419 DSB
Iowa City, IA 52242
Phone: (319) 335-7381
E-mail: clark-stanford@uiowa.edu

Lois Tully, Ph.D.

Program Director
Section on Neuroscience, Genetics, and Symptom
Management
Office of Extramural Programs
Division of Extramural Activities
National Institute of Nursing Research
1 Democracy Plaza, Suite 710
6701 Democracy Boulevard
Bethesda, MD 20892
Phone: (301) 594-5968
Fax: (301) 480-8260
E-mail: lois.tully@nih.gov

Elizabeth Walker, Ph.D., R.N.

Professor
Department of Medicine
Department of Epidemiology and Population Health
Albert Einstein College of Medicine
Jack and Pearl Resnick Campus
Belfer Building, Room 705
1300 Morris Park Avenue
Bronx, NY 10461
Phone: (718) 430-3242
Fax: (718) 430-8557
E-mail: elizabeth.walker@einstein.yu.edu

Linda Weglicki, M.S.N., Ph.D., R.N.

Health Scientist Administrator
Section on Child and Family Health, and Health
Disparities
Office of Extramural Programs
Division of Extramural Activities
National Institute of Nursing Research
1 Democracy Plaza, Room 710
6701 Democracy Boulevard
Bethesda, MD 20892
Phone: (301) 594-6908
E-mail: weglickils@mail.nih.gov

APPENDIX C: LIST OF PARTICIPANTS

Richard M. Allman, M.D.

University of Alabama at Birmingham

E-mail: rallman@uab.edu

Expertise: Clinical and translational research in geriatric populations with a focus on mobility, cardiovascular disease, health disparities and health care.

Barbara Alving, M.D.

National Center for Research Resources

E-mail: barbara.alking@nih.gov

Jesus Angulo, M.S., Ph.D.

Hunter College, The City University of New York

E-mail: angulo@genectr.hunter.cuny.edu

Expertise: Drug development.

Nedal Arar, Ph.D.

University of Texas Health Science Center at San Antonio

E-mail: ararn@uthscsa.edu

Expertise: Novel theory and methods in translational research.

David Banks, Ph.D., R.N.

National Institute of Nursing Research

E-mail: banksdh@mail.nih.gov

Melissa Begg, Sc.D.

Columbia University

E-mail: mdb3@columbia.edu

Courtney Bell, M.P. A.

National Institutes of Health Clinical Center

E-mail: bellcd@mail.nih.gov

Expertise: Program coordinator for NIH Bench to Bedside program.

Meryl Bloomrosen, M.B.A.

American Medical Informatics Association

E-mail: meryl@amia.org

Leigh Botner

University of Delaware

E-mail: lbotner@udel.edu

Beth Bowers, M.Div., M.S.W.

National Institute of Mental Health

E-mail: beth.bowers@hhs.gov

Shaunagh Browning, M.S.N., R.N.

Georgetown University

E-mail: quad.brownings@verizon.net

Yvonne Bryan, Ph.D.

National Institute of Nursing Research

E-mail: bryany@mail.nih.gov

Carla Calhoun, M.S.W.

The Catholic University of America

E-mail: ccalhoun2005@comcast.net

Judith Callan, Ph.D., R.N.

University of Pittsburgh

E-mail: callanja@pitt.edu

Jeanne Cartier, Ph.D.

Massachusetts General Hospital Institute of Health Professions

E-mail: jcartier@mghihp.edu

Catherine Chesla, D.N.Sc., R.N.

University of California, San Francisco

E-mail: kit.chesla@ucsf.edu

Expertise: Community-based participatory research, interdisciplinary work with psychology, interpretive methods.

Mike Conlon, Ph.D.

University of Florida

E-mail: mconlon@ufl.edu

Annette DeVito Dabbs, Ph.D., R.N., FAAN

University of Pittsburgh

E-mail: ajdst42@pitt.edu

Expertise: Beginning level of understanding; interested in design, outcome measures and implementation of translational research.

Jennifer Elder, Ph.D., R.N., FAAN

University of Florida

E-mail: ajdst42@pitt.edu

Olga Epifano, Ph.D.
National Institute of Dental and Craniofacial Research
E-mail: olgae@mail.nih.gov
Expertise: Deputy director of the NIH common fund interdisciplinary research program.

Judith Erlen, Ph.D., R.N., FAAN
University of Pittsburgh
E-mail: jae001@pitt.edu
Expertise: Type 2 translation, bedside to community

Terry Fadem
University of Pennsylvania
E-mail: fadem@mail.med.upenn.edu

Holly Falk-Krzesinski, Ph.D.
Northwestern University
E-mail: h-falk@northwestern.edu
Expertise: Team science; science of team science; interdisciplinary research.

Deborah Finnell, D.N.S., PMHNP-BC, CARN-AP
University at Buffalo, The State University of New York
E-mail: finnell@buffalo.edu
Expertise: Interventions to promote taking medication and reduction in substance use for veterans with chronic health disorders.

Cynthia George, F.N.P., M.S.N.
Cystic Fibrosis Foundation
E-mail: cgeorge@cff.org

Julie Gilmore, Ph.D.
The University of Iowa
E-mail: julie-gilmore@uiowa.edu

Patricia Grady, Ph.D., R.N., FAAN
National Institute of Nursing Research
E-mail: patricia.grady@nih.gov

Amanda Greene, M.P.H., Ph.D., R.N.
National Institute of Nursing Research
E-mail: amanda.greene@nih.gov
Expertise: Program evaluation and evaluation methods.

Joyce Griffin-Sobel, Ph.D., R.N., ANEF, C.N.E.
Hunter-Bellevue School of Nursing
E-mail: jgri@hunter.cuny.edu
Expertise: Transdisciplinary clinical outcomes.

Evelyn Hayes, M.P.H., Ph.D., F.N.P.-B.C.
University of Delaware
E-mail: erhayes@udel.edu

Jean Henry, Ph.D.
University of Arkansas
E-mail: ljhenry@uark.edu

Kathleen Hickey, A.N.P., Ed.D., F.N.P.
Columbia University
E-mail: kth6@columbia.edu
Expertise: Cardiac electrophysiology, arrhythmias, genetics.

Katie Holden
University of Delaware
E-mail: kholden@udel.edu

Karen Huss, Ph.D., R.N., ANP-BC, FAAAI, FAAN, FAHA
National Institute of Nursing Research
E-mail: hussk@mail.nih.gov
Expertise: Acute and long-term care, end of life, and training for scientific areas related to critical care, trauma, cardiovascular, pulmonary and hospital care delivery/patient outcomes.

Richard Huss, M.D.
Private Practice
E-mail: richardhuss@comcast.net
Expertise: Internal medicine, allergy, and immunology with emphasis on translational research.

Holly Jacobson, Ph.D.
National Institutes of Health
E-mail: jacobsonhe@mail.nih.gov

Anita Jones, R.N.
Howard University Hospital
E-mail: anita.jones@howard.edu

Louise Kaplan, Ph.D., ARNP, FAANP, F.N.P.-B.C.
American Nurses Association
E-mail: louise.kaplan@ana.org

Kathy Kelly, Ed.D., P.T.
Children's National Medical Center
E-mail: kakelly@cnmc.org
Expertise: Childhood cancer clinical trials organization.

Emily Keshner, Ed.D., P.T.
Temple University
E-mail: ekeshner@temple.edu
Expertise: Rehabilitation.

Jill Kilanowski, APRN, Ph.D., CPNP
Case Western Reserve University
E-mail: jfk19@case.edu
Expertise: Community-based research focused on healthy weight and healthy nutrition in migrant farmworker children and families.

Marilyn Laken, Ph.D., R.N.
Medical University of South Carolina
E-mail: lakenm@musc.edu

Nancy Langston, Ph.D., R.N.
Virginia Commonwealth University
E-mail: nlangston@vcu.edu

Elaine Larson, Ph.D., R.N., C.I.C., FAAN
Columbia University
E-mail: ell23@columbia.edu
Expertise: Director, Center for Interdisciplinary Research to Reduce Antimicrobial Resistance.

Elena Libin, Ph.D.
Georgetown University
E-mail: robo.therapy@yahoo.com

Susan Lin, OTR/L, Sc.D.
American Occupational Therapy Association
E-mail: slin@aota.org
Expertise: Facilitating performance of daily activities after injury, disease, illness.

Debra Lyon, Ph.D., R.N.
Virginia Commonwealth University
E-mail: delyon@vcu.edu

Susan Marden, Ph.D.
National Institute of Nursing Research
E-mail: mardens@mail.nih.gov

Donna Jo McCloskey, R.N., Ph.D.
National Center for Research Resources
E-mail: mccloskd@mail.nih.gov
Expertise: Clinical phase I and II.

Maggie McGuire
National Institutes of Health Clinical Center
E-mail: mcguirema@mail.nih.gov
Expertise: Communications specialist for the NIH Clinical Center; I publicize the translation research that happens there.

Lynne McIntyre
National Institute of Mental Health; The Catholic University of America
E-mail: lynne@lynnemcintyre.com

Patrick McShane
Beaufort Jasper Hampton Comprehensive Health Services, Inc.
E-mail: pmcshane@bjhchs.org
Expertise: Community engagement research.

Patrick McNeese, Ph.D., FAAN
University of Alabama at Birmingham
E-mail: mcneesp@uab.edu
Barbara Medoff-Cooper, Ph.D., R.N., FAAN
University of Pennsylvania
E-mail: medoff@nursing.upenn.edu
Expertise: Behavioral intervention research with high-risk infants based on descriptive research.

Pamela Mitchell, Ph.D., R.N., FAAN, FAHA
University of Washington
E-mail: pmitch@uw.edu
Expertise: Biobehavioral efficacy studies of interventions to improve recovery from brain injury; comparative effectiveness research.

Alison Montpetit, Ph.D., R.N.
Virginia Commonwealth University
E-mail: ajmontpetit@vcu.edu
Expertise: National Institute of Nursing Resources (F31/K99)-funded predoctoral training in an interdisciplinary lab and postdoctoral training in a clinical interdisciplinary team.

Runa Musib, Ph.D.
National Institute of Nursing Research
E-mail: musibr@mail.nih.gov

Maria Obeid, R.N.
Clinical Research and Consulting Center, LLC
E-mail: mobeid@clinicalresearch.com

Cara Osburne, M.S.N.
University of Arkansas
E-mail: cxo004@uark.edu

Jerry Parker, Ph.D.
University of Missouri School of Medicine
E-mail: parkerjc@health.missouri.edu

Barbara Parry, M.D.
University of California, San Diego
E-mail: bparry@ucsd.edu

Karen Perkins, M.Ed.
National Institutes of Health Clinical Center
E-mail: kperkins@mail.nih.gov

Patricia Piringer, M.S.N., R.N.
National Institutes of Health Clinical Center
E-mail: ppiringer@nih.gov
Expertise: Manage NIH Bench to Bedside program under Clinical Center director.

Susan Pusek, M.P.H., M.S.
University of North Carolina
E-mail: suspusek@med.unc.edu
Expertise: Program administrator for education core of CTSA.

Kathryn Richdale, M.S., O.D.
The Ohio State University College of Optometry
E-mail: richdale.1@osu.edu

Carmen Rodriguez, ARNP, Ph.D.
University of Florida
E-mail: rodrics@ufl.edu

Denise Russo, Ph.D.
National Institute of Nursing Research
E-mail: drusso1@mail.nih.gov

Carolyn Sampsel, Ph.D., R.N., FAAN
University of Michigan
E-mail: csampsel@umich.edu

Joanne Samuels, Ph.D., R.N.
University of New Hampshire
E-mail: joanne.samuels@unh.edu
Expertise: Acute care pain management practice factors.

David Sarrett, D.M.D., M.S.
Virginia Commonwealth University
E-mail: dcsarrett@vcu.edu
Expertise: Dental restorative materials.

Kathleen Schell, Ph.D.
University of Delaware
E-mail: kaschell@udel.edu

Janet Schneiderman, Ph.D., R.N.
University of Southern California
E-mail: juschnei@usc.edu
Expertise: I am working on a proposal for an early phase I intervention for attachment and development of infants who are in relative foster care; I have a KO1 grant to study medical neglect in the child welfare system and improve access and use of health services for children.

Lisa Schrader, Ph.D., R.N.
Mayo Clinic
E-mail: schrader.lisa@mayo.edu
Expertise: Practice-based research

Geralyn Schulz, Ph.D.
The George Washington University
E-mail: schulz@gwu.edu
Expertise: Neurophysiology of speech motor control, especially in Parkinson's disease.

Mark Schuyler, M.D.
The University of New Mexico
E-mail: mschuyler@salvd.unm.edu

Lisa Schwartz, Ed.D., M.S., C.G.C.
The George Washington University
E-mail: hsp1ss@gwumc.edu
Expertise: Program manager for the research education, training and career development program for the CTSA at Children's National Medical Center and The George Washington University.

Cathleen Scully, R.N.
Clinical Research and Consulting Center, LLC

Benjamin Seligman
Stanford University School of Medicine
E-mail: bense1@stanford.edu

Victoria Shanmugam, MBBS, MRCP
Georgetown University Hospital
E-mail: vks4@gunet.georgetown.edu

Ron Shorr
University of Florida
E-mail: rshorr@ufl.edu

Lena Sorensen, Ph.D., R.N.
Massachusetts General Hospital Institute of Health Professions

E-mail: lsorensen@mghihp.edu
Expertise: Participatory research with underrepresented populations; teaching research methods; consumer informatics research: moving from informational needs to tailored informational resources and interactive tools.

Jim Spilbury, M.P.H., Ph.D.
Case Western Reserve University
E-mail: james.spilbury@case.edu
Expertise: Community practice.

Susan Sullivan-Bolyai, C.N.S., D.N.Sc., R.N.
University of Massachusetts Medical School
E-mail: susan.sullivan-bolyai@umassmed.edu

Paul Targonski, M.D., Ph.D.
Mayo Clinic
E-mail: targonski.paul@mayo.edu
Expertise: Practice-based research.

Tami Thomas
Emory University
E-mail: tami.thomas@emory.edu

Beth Tigges, Ph.D., P.N.P., R.N.
The University of New Mexico College of Nursing
E-mail: btigges@salud.unm.edu
Expertise: Clinical research with T2 applicability; survey methods; psychometrics; focus groups.

Xenia Tigno
National Institute of Nursing Research
E-mail: tignox@mail.nih.gov

Melinda Tinkle, Ph.D., R.N., WHNP-BC
The University of New Mexico College of Nursing
E-mail: mtinkle@salud.unm.edu

Lois Tully, Ph.D.
National Institute of Nursing Research
E-mail: lois.tully@nih.gov
Expertise: Genomics.

Gail Wade, Ph.D., R.N.
University of Delaware
E-mail: ghwade@udel.edu
Expertise: Novice, hoping to learn more. Current research focus is on prevention of preterm birth through preconceptional health care.

Elizabeth Walker, Ph.D., R.N.
Albert Einstein College of Medicine
E-mail: elizabeth.walker@einstein.yu.edu

Joan Wasserman, Dr.P.H., R.N.
National Institute of Nursing Research
E-mail: wassermanje@mail.nih.gov

Julie Waterhouse, Ph.D., R.N.
University of Delaware
E-mail: jkw@udel.edu

Allison Webel, Ph.D., R.N.
Case Western Reserve University
E-mail: allison.webel@case.edu
Expertise: HIV self-management.

Linda Weglicki, M.S.N., Ph.D., R.N.
National Institute of Nursing Research
E-mail: weglickils@mail.nih.gov
Expertise: Health promotion/risk reduction in infants, children, adolescents and young adults; community-based participatory research and interdisciplinary health-related research in urban populations.

Morris Weinberger, Ph.D.
The University of North Carolina
E-mail: mweinber@email.unc.edu
Expertise: Health services research: T2 translation.

Karla Zadnik, O.D., Ph.D.
The Ohio State University
E-mail: zadnik.4@osu.edu

Marie Zeimetz, Ph.D.
National Institute of Nursing Research
E-mail: zeimetz@mail.nih.gov
Expertise: Research dissemination and evaluation.