



BRC

Building Research Capacity


"The building blocks of family medicine research."



What Does “Research Capacity” Mean to Your Department: A BRC Dialogue


**David Schneider MD MSPH, Bernard Ewigman MD MSPH
CJ Peek PhD, Andrew Bazemore MD**

**ADFM Annual Meeting
Washington, DC
February 23, 2018**





Outline of Our Presentation Today

- Overview of BRC – David Schneider, MD MPSH
 - Findings from Research Capacity Survey – Bernard Ewigman, MD MSPH
 - University of Minnesota: A Culture of Inquiry – CJ Peek PhD
 - Reactions – Janet Albers, MD; Myra Muramoto, MD, MPH
 - Small Group Dialogue – All Participants
 - Reflections and Next Steps – Andrew Bazemore, MD MPH
- 

2014 Task Force

Recommended Development
of a Building Research Capacity
Initiative

Approved by NAPCRG & ADFM

November, 2015

Published Commentary

Annals of Family Medicine
January/February, 2016,
Vol 14. no 1. pages 82-83



From the Association
of Departments of
Family Medicine



From the North
American Primary Care
Research Group

Ann Fam Med 2016;14:82-83. doi: 10.1370/afm.1901.

**BUILDING RESEARCH & SCHOLARSHIP
CAPACITY IN DEPARTMENTS OF FAMILY
MEDICINE: A NEW JOINT ADFM-NAPCRG
INITIATIVE**



THE BUILDING RESEARCH CAPACITY (BRC) INITIATIVE: LAUNCHED AT THE 2016 ANNUAL NAPCRG MEETING

Bernard Ewigman, Frederick Chen, Ardis Davis, Lee Green,
Dana King, Tony Kuzel, David Schneider, Tom Vansaghi
(BRC Steering Committee)

Ann Fam Med 2016;14:585-586.

<http://www.annfammed.org/content/14/6/585>





BRC Purpose

**The BRC initiative aims to provide opportunities
for all family medicine departments, residency programs,
research networks and centers...**

**to engage in a mutually beneficial learning community
leveraging our strengths and resources
for building research and scholarship capacity...**

to improve the health of North Americans.



Governance of BRC

BRC Sponsoring and Supporting Organizations

- ADFM-Sponsoring Organization
- NAPCRG-Sponsoring Organization
- STFM-Supporting Organization
- More supporting organizations in development

BRC Steering Committee

- Reports to the ADFM & NAPCRG Boards
- Coordinates Work Groups and Task Forces

BRC Work Groups & Task Forces

BRC Work Groups

- Curriculum Work Group
- Consultation Work Group
- Assessment & Evaluation Work Group

BRC Task Forces

- Patient & Clinician Engagement in Research (PaCE)
- Research Mentoring for Trainees
- Others in development



BRC Consultants

Frank deGruy MD MAFM

- Professor and Chair; University of Colorado

Bernard Ewigman MD MSPH

- Professor and Chair; The University of Chicago and the NorthShore University Health System

Lee Green, MD PhD

- Professor and Chair; University of Alberta

Dana King, MD MS

- Professor and Chair; West Virginia University

Anton Kuzel MD MPH

- Professor and Chair; Virginia Commonwealth University

Lynn Meadows PhD

- Associate Emerita Professor; University of Calgary

Truls Ostbye, MD PhD

- Professor/ Vice Chair of Research; Duke University

C.J. Peek PhD

- Professor; clinical psychology; University of Minnesota

Robert Post MD MPH

- Chair and Research Director; Virtua Health

Mack T. Ruffin IV MD MPH

- Professor and Chair; Penn State University

John Saultz MD

- Professor Emeritus; Oregon Health & Science University

David Schneider MD MSPH

- Professor and Chair; UT Southwestern



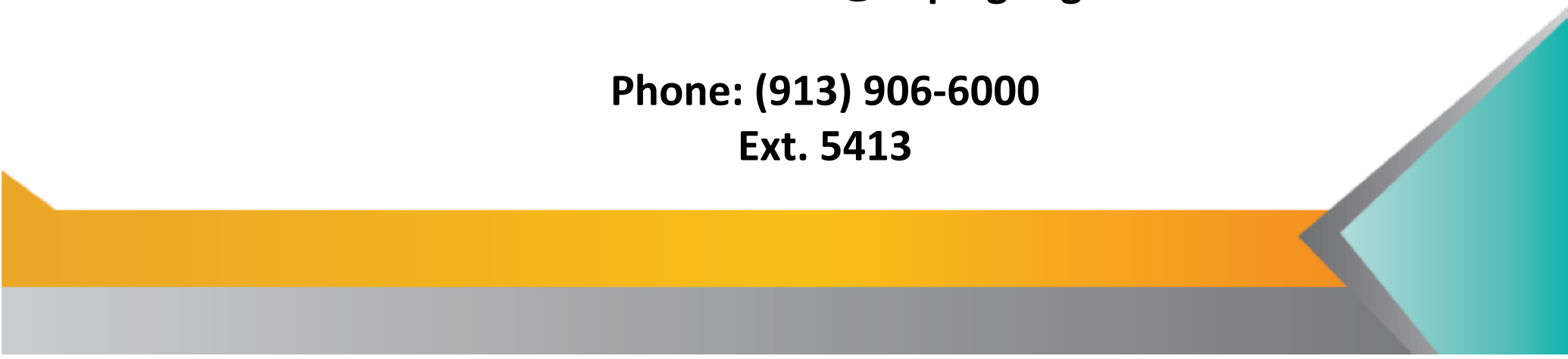
For More Information Contact BRC

**Hannah Bruins
BRC Program Coordinator**

[http://www.napcrg.org/Programs/BuildingResearchCapacity\(BRC\)](http://www.napcrg.org/Programs/BuildingResearchCapacity(BRC))

Email: hbruins@napcrg.org

**Phone: (913) 906-6000
Ext. 5413**





**What Does “Research Capacity”
Mean to Your Department:
Findings from the 2016 Research Capacity Survey**

**February 23, 2018
ADFM Annual Meeting**

**Bernard Ewigman, MD MSPH
Chair, BRC Steering Committee**

**Professor & Owen L Coon Endowed Chair of Family Medicine
University of Chicago/NorthShore University HealthSystem**



ADFM-CERA-FMAH 2016 Chairs Survey Selected Findings

- **DFM Chair Self Assessment of Department Research Capacity**
- **Characteristics of Departments by Research Capacity Level**
- **DFM Chair Satisfaction with Department Research Capacity Level**
- **DFM Chair Satisfaction with Department Scholarly Curiosity and Inquiry**



Survey Question #1 on Self Assessment of Department Research Capacity

1. Which of the following categories best describes your department?
 - a. *No (or almost no) Research*
 - b. *Minimal/Emergent Research*
 - c. *Moderate/Entrepreneurial Research*
 - d. *Significant/Self-sustaining Research*
 - e. *Extensive/Replication Research*

| Category Assigned by DFM Chair | Combined Categories | N (%) |
|---|--------------------------------|-----------------------|
| No (or Almost No) Research | Minimum | 43 (44%) |
| Minimal/Emergent Research | | |
| Moderate/Entrepreneurial Research | Moderate | 22 (22%) |
| Significant/Sustainable Research | Significant | 33 (34%) |
| Extensive/Replicable Research | | |
| | | 98 (100%)* |
| *missing one response | | |

Characteristics of Departments with Minimal vs. Moderate vs. Significant Research Capacity

| | Minimal Research | Moderate Research | Significant Research | P values |
|--|------------------|-------------------|----------------------|----------|
| <i>Has >4 faculty with protected research time</i> | 3 (7%) | 9 (41%) | 28 (85%) | <.0001 |
| <i>Has >4 FTE of total protected research FTE</i> | 1 (2%) | 3 (14%) | 28 (85%) | <.0001 |
| <i>Has >50% external salary support for FTE above</i> | 3 (7%) | 6 (27%) | 22 (67%) | <.0001 |

Characteristics of Departments with Minimal vs. Moderate vs. Significant Research Capacity

| | Minimal Research | Moderate Research | Significant Research | p values |
|---|------------------|-------------------|----------------------|----------|
| <i>Has ≥ 3 PIs/Co-PIs in department</i> | 3 (7%) | 5 (23%) | 25 (76%) | <.0001 |
| <i>Have ≥ 1 faculty who has served on a research or research training peer-review panel</i> | 8 (19%) | 7 (32%) | 25 (76%) | <.0001 |

Characteristics of Departments with Minimal vs. Moderate vs. Significant Research Capacity

| | Minimal Research | Moderate Research | Significant Research | p values |
|--|------------------|-------------------|----------------------|----------|
| <i>Has ≥ 3 "research laboratories" and sources of data used by faculty</i> | 21 (49%) | 14 (67%) | 27 (82%) | 0.01 |
| <i>Chair spent most of pre-chair career as researcher with significant research track record</i> | 9 (21%) | 5 (23%) | 15 (46%) | 0.05 |



Chair Satisfaction Questions

How satisfied are you with your department's current level of **research productivity** (*external awards, peer reviewed presentations and publications*)?

How satisfied are you with your department's current level of **scholarly curiosity and inquiry** more broadly (*evidence based practice, clinical reviews, data driven quality improvement, educational creativity and evaluation, narrative publications, etc*)

Chair Satisfaction with Department Research Productivity

| | Minimal Research | Moderate Research | Significant Research | All Departments Subtotal | p value |
|--|------------------|-------------------|----------------------|--------------------------|----------------------------|
| Dissatisfied with Research Productivity | 36 (61%) | 9 (15%) | 14 (24%) | 59 (100%) | |
| Satisfied with Research Productivity | 7 (18%) | 13 (33%) | 19 (49%) | 39 (100%) | .0001 |
| | | | | 98* | *missing 1 response |

Chair Satisfaction with Department Scholarly Curiosity and Inquiry

| | Minimal Research | Moderate Research | Significant Research | Sub- totals | p value |
|--|---------------------|----------------------|-------------------------|----------------|------------|
| <u>Dissatisfied with Scholarly Curiosity and Inquiry</u> | 29 (56%) | 8 (16%) | 15 (28%) | 52 (100%) | .04 |
| <u>Satisfied with Scholarly Curiosity and Inquiry</u> | 14 (31%) | 14 (31%) | 17 (38%) | 45 (100%) | |
| | | | | 97 | |

*missing 2 responses



KEY POINTS-DEPARTMENT OF FAMILY MEDICINE REPORTING SIGNIFICANT RESEARCH CAPACITY

1. 33 (34%) of DFMs self classified as significant research capacity
2. These 33 DFMs report characteristics associated with research productivity in most academic disciplines:
 - Leadership that values research and scholarship
 - Externally funded principal investigators
 - A critical mass of researchers
 - Multiple sources of data
 - Internal investment and support



KEY POINTS-DEPARTMENTS OF FAMILY MEDICINE REPORTING *SIGNIFICANT RESEARCH CAPACITY*

3. 14 of 33 DFMs (42%) were *dissatisfied* with their research productivity
4. 15 of 33 DFMs (45%) were *dissatisfied* with scholarly curiosity and inquiry



KEY POINTS-DEPARTMENTS OF FAMILY MEDICINE REPORTING MINIMUM RESEARCH CAPACITY

1. 43 (44%) of DFMs self classified as having minimum research capacity
2. These 43 DFMs have not developed characteristics associated with research productivity in most academic disciplines.
3. 36 of 43 **(84%) were dissatisfied** with research productivity
4. 29 of 43 **(67%) were dissatisfied** with their scholarly curiosity and inquiry more broadly



Acknowledgements

- North American Primary Care Research Group
 - Tom Vansaghi PhD
- CAFM Educational Research Association
 - Chip Mainous, PhD
- Society of Teachers of Family Medicine
 - Ray Biggs
- ADFM Research Development Committee
 - Ardis Davis, Amanda Weidner
- Family Medicine for America's Health Research Tactics Team
 - Lars Peterson, MD PhD
- Robert Graham Center
 - Andrew Bazemore, MD MPH, Winston Liaw MD MPH
- American Board of Family Medicine
 - Lars Peterson, MD PhD
- Biostatistics Core-NorthShore University HealthSystem
 - Avisek Datta, MS, Ed Wang, PhD



University of Minnesota—A Case Study of Building Scholarship Capacity Across All Faculty

Survey responses from the University of Minnesota
(with permission)

- *Significant* department research capacity
- *Greater than 10 faculty FTE* with protected time for research and scholarship
- *External salary support* for research FTE: >10 – 50%
- *Seven funding sources*: NIH, AHRQ, Private and State Foundations, Industry
- *Five PIs/CO-PIs* in department



University of Minnesota—A Case Study of Engaging All Faculty in Research & Scholarship

- *Seven faculty on peer-review panels* in last year:
 - 4 for NIH
 - 3 for AHRQ
- *Greater than three* research laboratories/data sources
- Chair *never had a research career*
- Chair *satisfied* with research productivity
- Chair *satisfied* with scholarly curiosity & inquiry



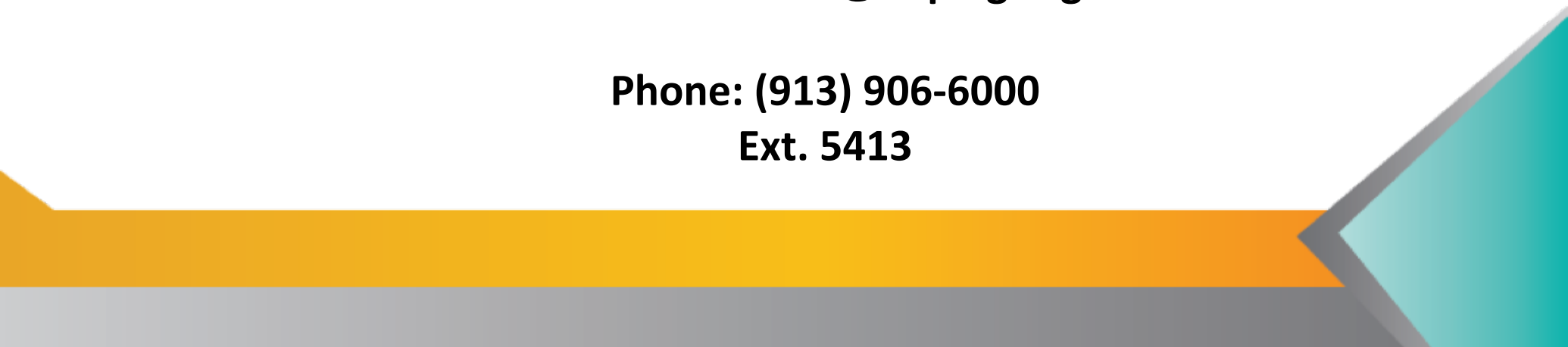
For More Information Contact BRC

**Hannah Bruins
BRC Program Coordinator**

[http://www.napcrg.org/Programs/BuildingResearchCapacity\(BRC\)](http://www.napcrg.org/Programs/BuildingResearchCapacity(BRC))

Email: hbruins@napcrg.org

**Phone: (913) 906-6000
Ext. 5413**



Building Scholarship Capacity Across all Faculty: A Minnesota Case Example

C.J Peek PhD

Dept. of Family Medicine and Community Health
University of Minnesota Medical School



Presentation in

***What Does Research Capacity Mean to Your
Department: A BRC Dialogue***

**Association of Departments of Family Medicine (ADFM)
February 23, 2018
Washington, D.C.**

Results (1): Faculty Peer Reviewed Articles

| Year | Research Faculty | Clinical Faculty | Total |
|------|------------------|------------------|-------|
| 2013 | 32 | 10 | 42 |
| 2014 | 41 | 21 | 62 |
| 2015 | 57 | 20 | 77 |
| 2016 | 74 | 24 | 98 |
| 2017 | 63 | 39 | 102 |

Fac approx:
13 Research
74 clinical

Data extracted from Scopus: all publications for the department

- Limited to only peer-reviewed journal articles
- Does not include electronic publications for government or foundations
- Does not include book chapters or editorships

Results (2): Change in scholarship: 2014-16

Simplistic “increase-decrease” count from residencies to ACGME

Four residencies in “all faculty” scholarship plan

| | At least one peer-reviewed pub | Leadership role in grant application | At least one conference pres. |
|----------|--------------------------------|--------------------------------------|-------------------------------|
| Same | | | |
| Decrease | | 1 | 1 |
| Increase | 4 (100%) | 3 (75%) | 3 (75%) |

Thanks to Melissa Stevens MA; GME

Four residencies NOT fully participating

| | At least one peer-reviewed pub | Leadership role in grant application | At least one conference pres. |
|----------|--------------------------------|--------------------------------------|-------------------------------|
| Same | 3 | 2 | |
| Decrease | 1 | 2 | 1 |
| Increase | 0 (0%) | 0 (0%) | 3 (75%) |

Results (3): Evaluation Hub Use: July 2016 – Sept 2017

| Role | | Requests | Status of Hub projects | |
|----------------------|-------|----------|------------------------|----------|
| Clinical faculty | | 63 (45%) | Completed | 62 (45%) |
| Research faculty | | 37 (27%) | In dissemination | 33 (24%) |
| Dept leadership team | | 10 (7%) | Data analysis | 5 (4%) |
| Residents / fellows | | 10 (7%) | Data collection | 17 (12%) |
| Med students | | 19 (14%) | In planning | 13 (9%) |
| | Total | 139 | On-hold | 9 (7%) |

Thanks to Deb Finstad, Evaluation and Statistics
Hub Manager

Results(4): Clinical Faculty Scholarship Groups

Self-organized to develop & evaluate own work in clinic

Methods:

- Ask who is interested—at operations meetings—take names
- Newsletter Ad: "Wanted—faculty for chronic pain scholarship group"

Chronic pain group:

Care process across 4 programs to improve safety, equity, efficacy—and evaluate level of implementation.

Opioid addiction group:

Minnesota DHS grant to implement & evaluate MAT—train all residents—spread to all 4 programs.

How: The goal

Goal:

To increase quality, volume, and satisfaction with the scholarly aspects of faculty work—

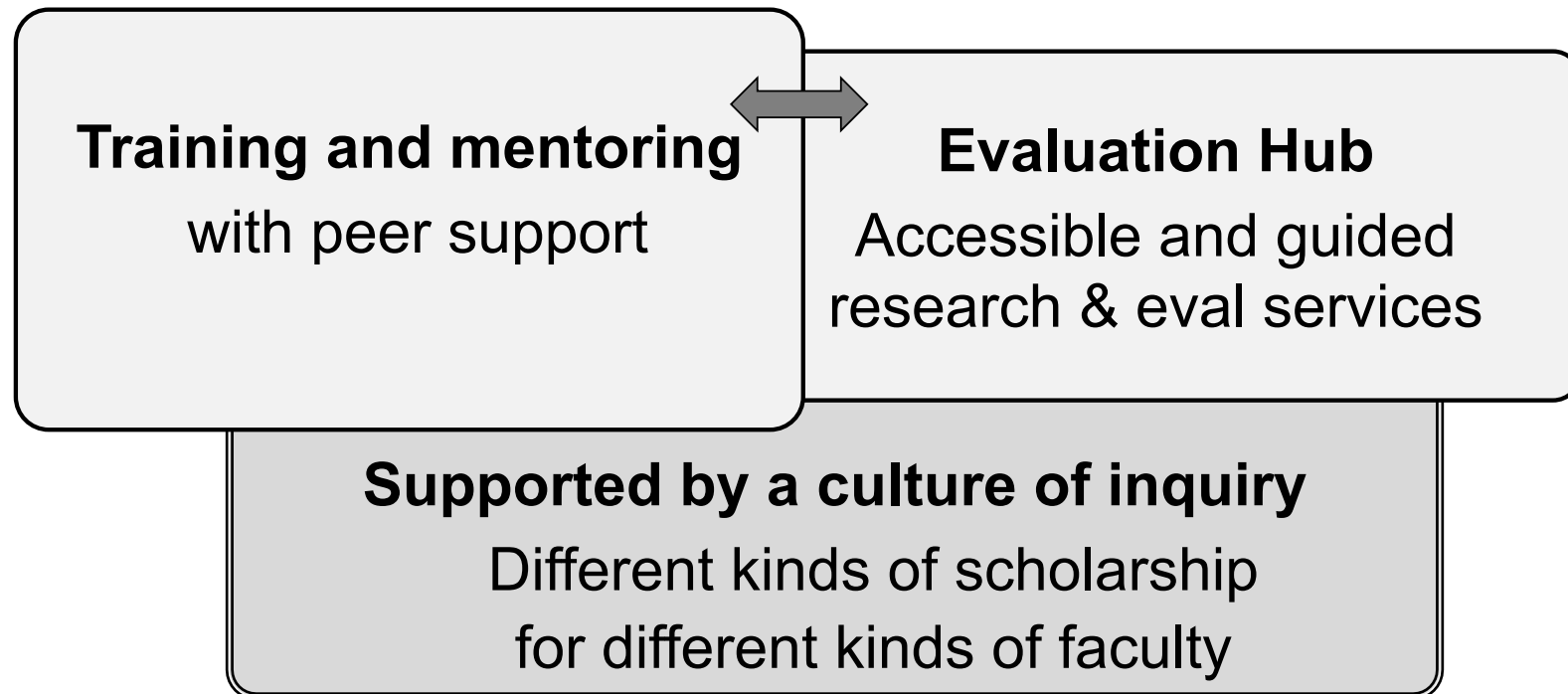
Becoming more of what you probably always wanted to be as a faculty member

Everyone meeting their own hopes and expectations—

With improved standing for the Department:
Dean, state legislature, national visibility, national ranking

How: An ensemble of interlocking components

Helping faculty make research & scholarship feasible and gratifying



A Culture of Inquiry (1): Scholarship is for everyone

1. **Your own work, whatever that is, can be scholarly**
“Why not write the book, not just teach from others’ books?” (Saultz 2016)
2. **From *externally imposed* to *internally proposed***
Everyone is interested in something
that can become their scholarship
3. **Think collaboration:** Build a scholarship network, robust like your care & education networks
4. **Reminder: It can be feasible and gratifying.**
Tap into training, mentorship, infrastructure, and peers
Have some fun with it.



A culture of inquiry (2): All Scholarship types are welcome

Scholarship of...

- Discovery
Empirical or historical research—new knowledge
- Practice
Application of knowledge to consequential problems
- Integration
Knowledge in larger context, connections across disciplines, new insights on original research
- Teaching
Design, methods, content, analysis, outcomes

Cited from Boyer (1990) in Faculty Annual Review process



A culture of inquiry (3): All types of scholarship doesn't mean “soft”

Hallmarks of excellent scholarship:

- Clear goals, important question
- Adequate preparation, resources, skills
- Appropriate methods
- Significant results or meeting stated goals
- Reflective critique
- Effective **presentation / publication**

Such scholarship can take place in any faculty role.

Based in Boyer (1990), cited from Glassic (1997) in Faculty Annual Review process

A culture of inquiry (4): Research and Evaluation are both welcome

Research

- Produces generalizable knowledge
- Scientific inquiry paramount—intellectual curiosity
- Advances broad knowledge and theory
- Controlled setting
- Researcher focused—publish in academic journals

Evaluation

- Judges merit or worth of an activity
- Policy and program interests of stakeholders paramount
- Provides information for decision-making on specific programs
- Setting of changing actors, priorities, resources, timelines
- Stakeholder focused—report and publish where they will find & read

Training / mentoring example: Collaborative Scholarship Intensive (CSI-FM)

Six sessions over 6 months—Intensive with mentoring and peer support

Examples: lit reviews; IRB; framing good questions; choice of methods / design, statistics; writing; templates & self-organization

At course completion:

- FPIN Help Desk Answer (first/last author)
- Submission ready manuscript
- Abstract to MN Acad of Family Physicians Research & Innovation Forum



Thanks to Angie Buffington PhD and research faculty

Collaborative Scholarship Intensive (CSI-FM): The record so far

- 3 cohorts of 8 or 9
(about 33% of all clinical faculty)
- 22 out of 25 completed submissions to FPIN Help Desk
- Cohort 1: All 9 with published product first year post-course
- Before-after: Scholarly work more than twice as high in year following course
- Some participants getting promoted

Evaluation and Statistics Hub

Purpose: Make it simpler for faculty to conceive, design, and carry out research and evaluation—accessible, organized, guided.

“A service for DFM by DFM”: Adapted from UC Denver Family Medicine

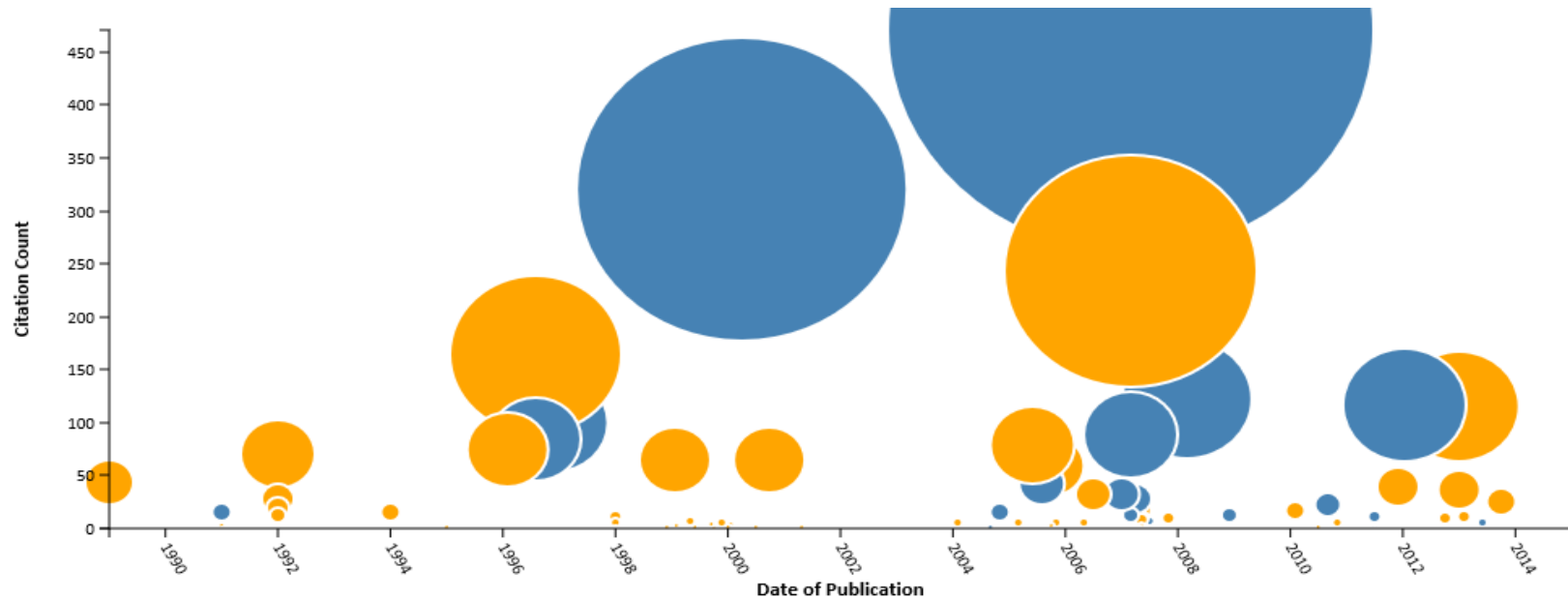
Components:

- 1. Local research facilitators in all residencies:** Helping faculty & residents get clear, get started, come together, keep moving
- 2. Triage / navigator:** Helps frame up the question, approach and help needed
- 3. Methods expertise:** Quantitative, qualitative; statistics, surveys, kinds of data
- 4. Data manager:** Pool, clean, and relate data; help people use it
- 5. Library and editorial help:** Lit review, manuscript formats, editorial
- 6. On tap: a senior research and evaluation design consultant:** Doctoral level for advanced topics or issues

Publication “player stats”: from UMN “Manifold”

| Name | Rank | H-index | Tot pubs | First/last | Tot citations | F/L cites |
|-----------|-----------|---------|----------|------------|---------------|-----------|
| W Roberts | Professor | 26 | 129 | 90 | 3065 | 1465 |

Each circle a published paper by year (horizontal) and citation count (vertical)
 Size of circle: Citation count. Gold = first or last author



1981-1989 young family

Private practice

2003 join MN Fam Med

What is driving this work

1. Joy of practice for faculty

“Competing masters” vs. “whole faculty jobs”

2. Obvious operational disconnects between missions, especially research/scholarship

“Harmonized Transformation”

3. Stakeholder respect and demand, e.g.

Dean, University president, state legislature—and ourselves

NIH ranking for sure, but medical school also expects all-faculty scholarship

Acknowledgements

For the evolution of this work, thanks goes to:

Research leadership and scholarship development teams:

Angie Buffington PhD, Bill Roberts MD, Michele Allen MD, Susie Nanney PhD, Denise Windenburg MHA, CCRC, Carol Lange, Kola Okeyemi MD, MPH

Department “Harmonized Transformation group”:

Pete Harper MD, Casey Martin MD, Melissa Stevens MA, Kristi Van Riper MPH, CEHS, Liz Miller, Deb Finstad, Wendy Nickerson, Cathy Godlewski CPA, C.J. Peek PhD

Research faculty, research facilitators and staff

Clinical and teaching faculty & staff of our residency and other clinical sites

Medical student education faculty and staff

Department Executive Team:

James Pacala MD (Dept. Head), and Tom DePhillips (Administrative Director);
Macaran A. Baird MD MS (former Dept. Head)



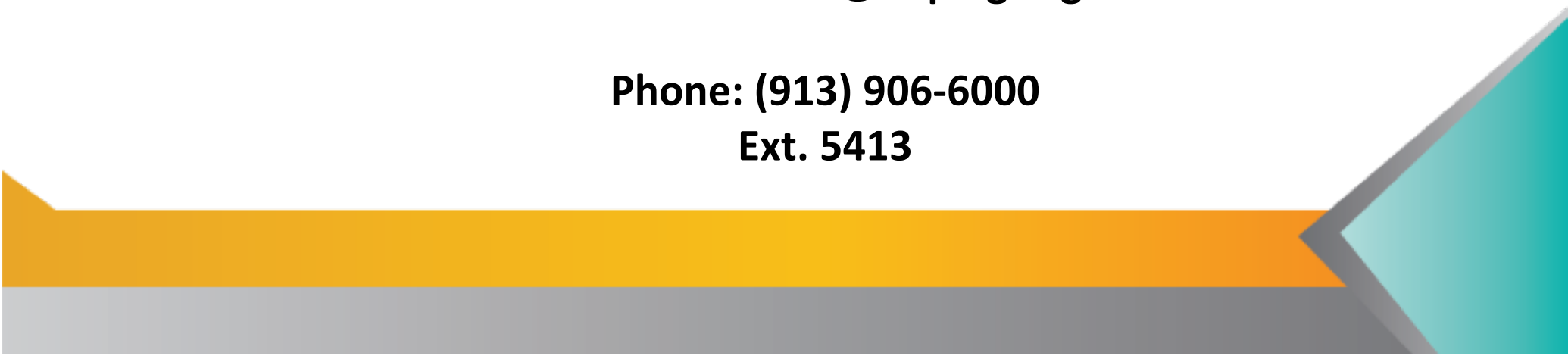
For More Information Contact BRC

**Hannah Bruins
BRC Program Coordinator**

[http://www.napcrg.org/Programs/BuildingResearchCapacity\(BRC\)](http://www.napcrg.org/Programs/BuildingResearchCapacity(BRC))

Email: hbruins@napcrg.org

**Phone: (913) 906-6000
Ext. 5413**





Small Group Assignments at Tables

- Maximum of one BRC Steering Committee, Work Group or Task Force Member per table
- Discuss the presentations, use the worksheet as a prompt for discussion
- Complete a worksheet for your Department (at the table at which the Department Chair is sitting) represented at the table

EITHER, turn in your worksheet to ADFM Staff or the presenters

OR, if you desire, take your worksheet back home to follow up

You will have 30 to 40 minutes for this conversation

Reflections on Building Research Capacity in Family Medicine

Andrew Bazemore, MD, MPH

Reflections

- Building Research Capacity (BRC) requires
- Assessing Research Capacity (ARC?) &
- Tracking Research Capacity (TRaC?)

Results (1): Faculty Peer Reviewed Articles

| Year | Research Faculty | Clinical Faculty | Total |
|------|------------------|------------------|-------|
| 2013 | 32 | 10 | 42 |
| 2014 | 41 | 21 | 62 |
| 2015 | 57 | 20 | 77 |
| 2016 | 74 | 24 | 98 |
| 2017 | 63 | 39 | 102 |

Fac approx:
13 Research
74 clinical

Data extracted from Scopus: all publications for the department

- Limited to only peer-reviewed journal articles
- Does not include electronic publications for government or foundations
- Does not include book chapters or editorships

Partnering with BRC to Measure Family Medicine Research Capacity & Productivity in (MFMRC&P?)

- How do multiple methods to capture research productivity compare?
- What is the research productivity of family medicine departments?

Any researcher knows that all measurement is flawed (has limitations)... do it anyway

- It's also time consuming
- Goals – find methods that are feasible, sustainable, and valuable (just valid enough to be useful, not perfect)
- Feasible/sustainable: Can secondary data get one started?
- Valuable: Can we overcome absence of specificity in secondary data (surname challenges, etc) to pass a sniff test and get a conversation started, generate motivation towards further scholarship (and more accurate data gathering?)

How do multiple quantitative methods to capture research productivity compare?

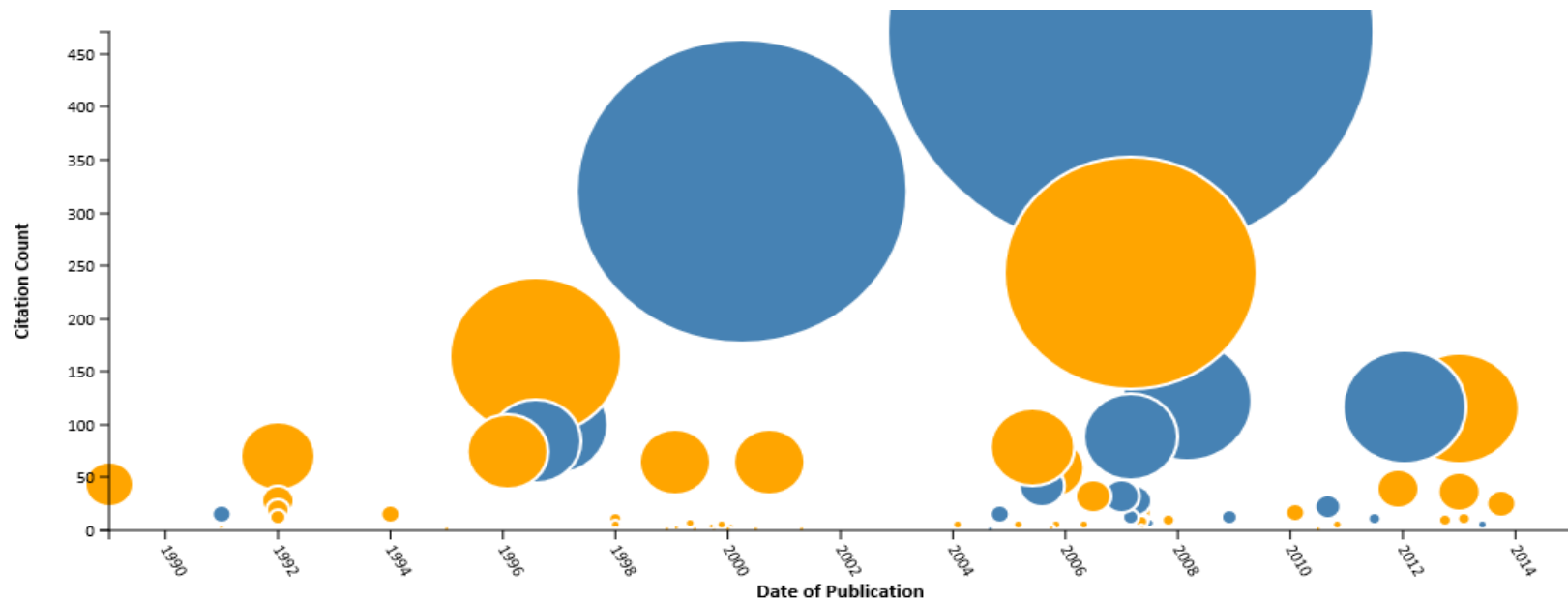
- We assessed three methods:
 - Web of Science
 - PubMed
 - Department reported
- 13 departments, many of whom were on the ADFM Research Development Committee
- We found 70% of the Department-reported publications in Web of Science
- We missed publications because:
 - Faculty were not listed on websites
 - The publications were not indexed in Web of Sciences
- Therefore, our 2931 figure is likely an underestimate and could be 30% higher (3,810)

And in the spirit of enabling CJ's 'Culture of Inquiry', use it for inspiration not shaming

Publication “player stats”: from UMN “Manifold”

| Name | Rank | H-index | Tot pubs | First/last | Tot citations | F/L cites |
|-----------|-----------|---------|----------|------------|---------------|-----------|
| W Roberts | Professor | 26 | 129 | 90 | 3065 | 1465 |

Each circle a published paper by year (horizontal) and citation count (vertical)
 Size of circle: Citation count. Gold = first or last author



1981-1989 young family

Private practice

2003 join MN Fam Med

Seek out Bright Spots... for inspiration and ideas

- Engaged multiple organizations around defining bright spots:
 - Publications, grants, training of others, robust networks, idea bright spots, historical bright spots
- Used snowball sampling to identify bright spots
- Semi-structured interviews
- 8 departments: chairs and research directors
- We used a template-driven approach to data analysis, iteratively defining and modifying codes.

Many lessons can be gained from studying our Bright Spots

- Leadership values research and commits resources to support it
 - "the biggest thing is that you have a chair that wants research to be part of our portfolio and that supports research and empowers us to both do research and find researchers and train new researchers and keep things going"
 - "You need to have leadership that values research that keeps it in the fore for all faculty that our department is about doing patient care and teaching and clinical, leadership, and research. So that's important and I've had the good fortune to work under most of my time with someone who's been very focused on research and wanted to see that built."

Thanks