

Mentorship in graduate training: the evidence-based approach

Lehana Thabane
Professor of Biostatistics



Disclosure and Confidentiality

- No financial COI to declare
- As a professor, I get academic credit by giving workshops like this

My track-record in mentorship

- ❑ Over 70 PhD/MSc students (past and current) as the main supervisor
 - ❑ At least 40 receiving some awards, scholarships or fellowships under his supervision,
- ❑ Over 200 MSc/PhD students (past and current) as a thesis committee member;
- ❑ 10 junior faculty mentees of whom
 - ❑ 6 received career awards from CIHR or HHS, and
 - ❑ 4 received CIHR RCT mentorship awards
- ❑ Mentor, CIHR HIV CTN international Fellowship program
 - ✓ Botswana, Cameroon, Uganda, Zambia, Lesotho, South Africa
- ❑ Co-I/Mentor, ADAPT (African Development of AIDS Prevention Trials Capacities) program
- ❑ Over 100 informal mentees around

- ❑ The CE&B Teaching Excellence Award (2004-2006) and
- ❑ The FHS Graduate Supervision Award in 2012,
- ❑ The 2016 Carnegie African Diaspora Fellowship to provide research mentorship to the University of Cape Town, South Africa.
- ❑ Co-PI/mentor: DSECT (Drug Safety and Effectiveness Cross-Disciplinary Training) Program
 - ✓ CIHR funded program
- ❑ PI/Co-I, over 200 funded national and international studies
 - ✓ Over \$300 millions
 - ✓ Over 800 publications (with about 50% as led by mentees)
- ❑ Taken formal training on mentorship

My track-record in global and multi-cultural mentorship



Learning Objectives

- 1) What is mentorship?
- 2) Why mentorship?
- 3) How to: What mentors can do for their mentees?
- 4) How to: What mentees do for themselves?
- 5) What to do when the relationship go sour?



What is mentorship?

Mentor [n]

- 1. trusted counselor or guide;*
- 2. a friend of Odysseus entrusted with the education of Odysseus' son Telemachus*

[Latin, from Greek word Mentōr]

Synonyms for mentor

- ✓ coach
- ✓ counsel
- ✓ lead
- ✓ guide
- ✓ pilot
- ✓ shepherd
- ✓ tutor

Instructor: Builds expertise and knowledge base

Teacher: Teaches new skills to build competence

Guide: Provides guidance to deal with challenges

Questioner: Questions to promote critical or innovative thinking

Mentor: Meets to

Coach:

Builder:

Giver: Gives commi

Connector: network

Wise m

Role model: I through words

Advisor: achiev

Supporter: support

Friend: Provides mentee-focused friendship

Protector: Protects mentee from institutional politics

Confidante: Establishes and maintains trust, confidentiality in the relationship with mentee

Leader: Leads by example

A mentor can play many roles simultaneously or at different times during your career

Figure 1: How I See my Roles as a Mentor along Mentee's Career Path

(Source: Oduyungbo A, Thabane L. Mentoring in biostatistics: some suggestions for reform. *Journal of Multidisciplinary Healthcare* 2012;5 265–272.)

Key attributes of best mentors

Good traits

- ✓ Respect
- ✓ Power/Influence
- ✓ Experience
- ✓ Political Acceptance
- ✓ Honesty
- ✓ Trust
- ✓ Patience
- ✓ Humility
- ✓ Good judgment

Good behaviors

- ✓ Nurturing
- ✓ Adaptable
- ✓ Proactive
- ✓ Encouraging
- ✓ Committed
- ✓ Considerate
- ✓ Responsible
- ✓ Respectful
- ✓ Unselfish
- ✓ Objective

Track Record as Mentor

Gordon Guyatt's attributes of a good mentor



- ✓ objectivity, disinterested
 - keep yourself out of it
- ✓ unselfishness
 - commitment
- ✓ good judgment
 - wisdom
- ✓ highly skilled
 - productive
- ✓ patience

What Mentoring Isn't

(Giacomini M. Faculty Mentoring in the Department of Clinical Epidemiology and Biostatistics, McMaster University. May 15, 2007)



❑ Insurance

- ✓ Mentors don't ensure the success of the Mentee's own work
- ✓ Mentors don't compensate for the Mentee's own work

❑ Supervision

- ✓ Mentoring is based on mutual respect and understanding
- ✓ Relationship can be stopped if not working

❑ Indefinite relationship

- ✓ Mentoring period should have beginning, middle and end

I strongly believe in mentorship

Mentoring Young Statisticians: Facilitating the Acquisition of Important Career Skills

Lehana Thabane¹, Marroon Thabane² and Charles Harry Goldsmith³

The African Statistical Journal, Volume 4, May 2007

Journal of Multidisciplinary Healthcare

Dovepress
open access to scientific and medical research

Open Access Full Text Article

REVIEW

Mentoring in biostatistics: some suggestions for reform

This article was published in the following Dove Press journal:
Journal of Multidisciplinary Healthcare
4 October 2012
[Number of times this article has been viewed](#)

Adefowope Oduyungbo¹
Lehana Thabane²

Abstract: Mentoring is routinely used as a tool to facilitate acquisition of skills by new professionals in fields like medicine, nursing, surgery, and business. While mentoring has been

Training Young Statisticians for the Development of Statistics in Africa

Lehana Thabane,¹ Oliver Chinganya,² and Chenglin Ye³

The African Statistical Journal, Volume 7, November 2008

Journal of Multidisciplinary Healthcare

Dovepress
open access to scientific and medical research

Open Access Full Text Article

COMMENTARY

How to set-up a long-distance mentoring program: a framework and case description of mentorship in HIV clinical trials

This article was published in the following Dove Press journal:
Journal of Multidisciplinary Healthcare
7 January 2013
[Number of times this article has been viewed](#)

Lawrence Mbuagbaw^{1,2}
Lehana Thabane^{2,3}

Abstract: Mentoring plays an important role in learning and career development. Mentored researchers are more productive and more likely to publish their work. However, mentorship pro-



The
Research
Institute
of St. Joe's Hamilton

Developing a Biostatistical Collaboration Course in a Health Science Research Methodology Program

Lehana Thabane, Stephen D. Walter, Steven Hanna, Charles H. Goldsmith, and Eleanor Pullenayegum
McMaster University

Journal of Statistics Education Volume 16, Number 2 (2008), www.amstat.org/publications/jse/v16n2/thabane.html

s.ca

**Most critical characteristic of an
ideal mentor**

**The decision to
be a mentor**



✓ Why mentorship?

The root causes of inequality in our society are structural, institutional, cultural, and psychosocial—and have nothing to do with merit or behaviour

Nixon *BMC Public Health* (2019) 19:1637
<https://doi.org/10.1186/s12889-019-7884-9>


BMC Public Health

DEBATE

Open Access

The coin model of privilege and critical allyship: implications for health



Stephanie A. Nixon^{1,2} 

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research.stjoes.ca

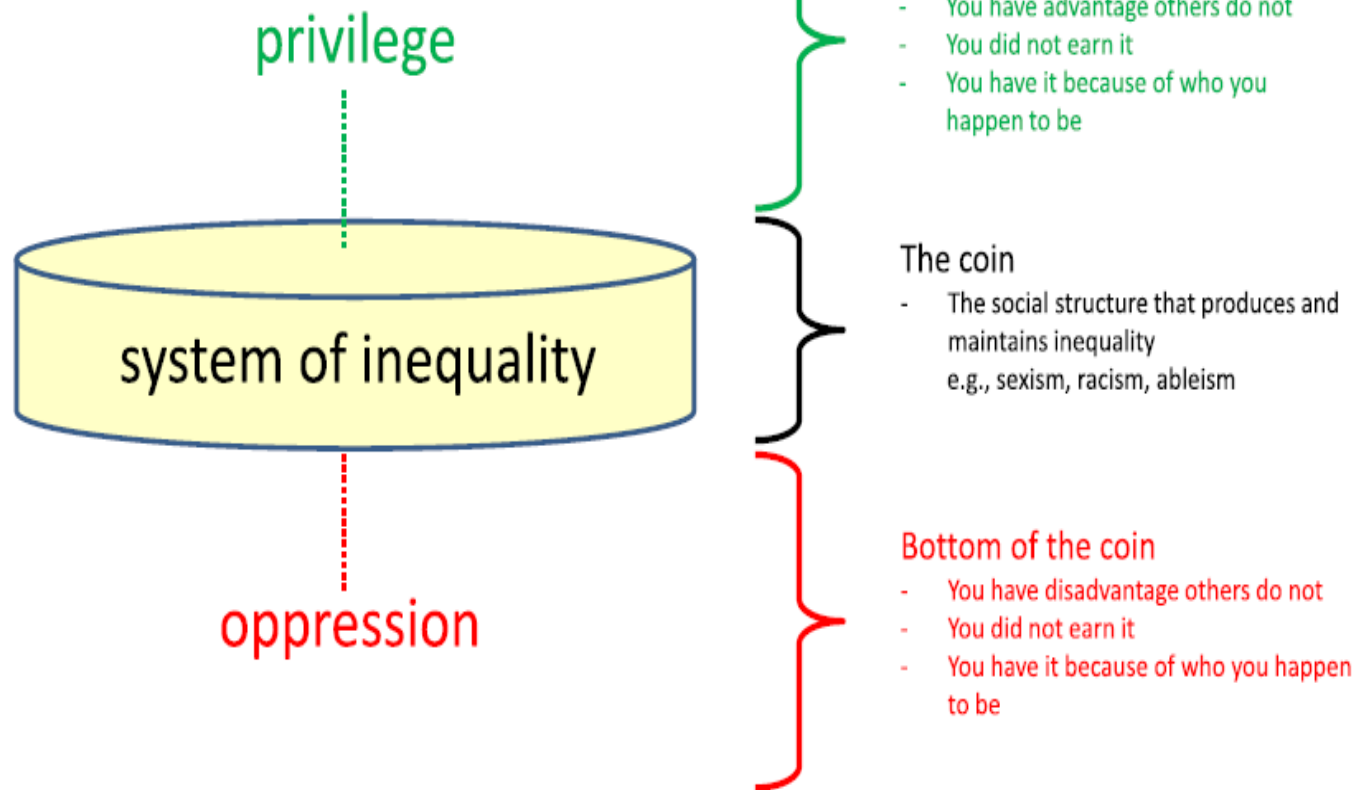
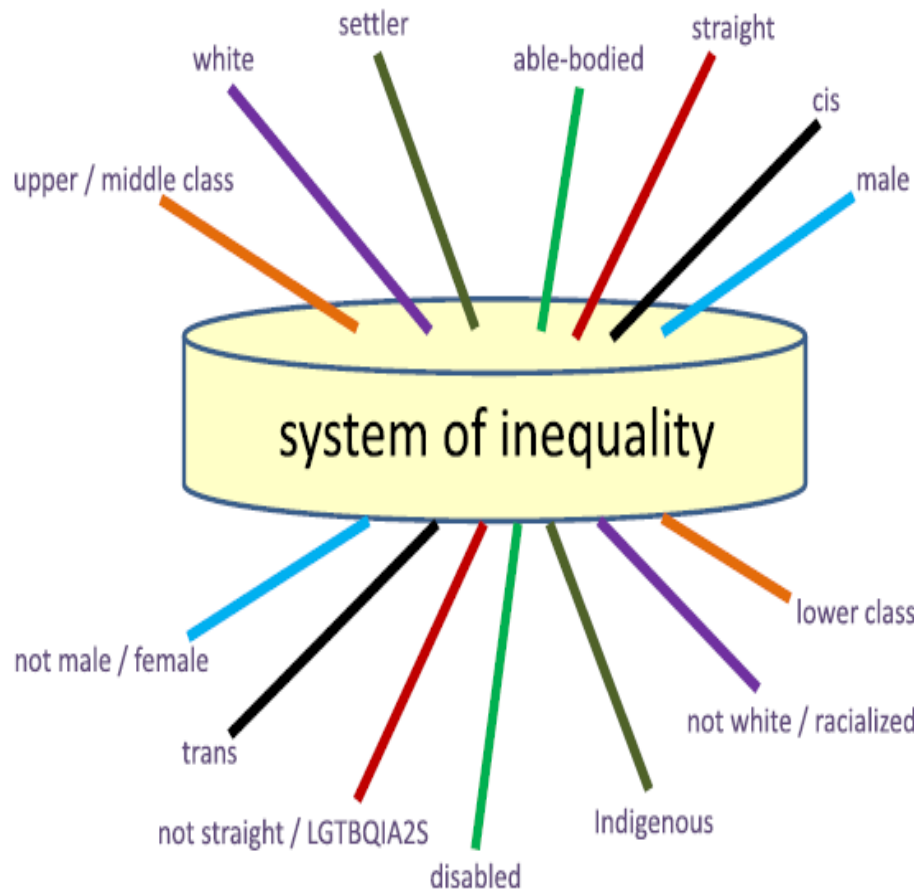


Fig. 1 The coin



Each of the following systems of inequality* (or coins) intersects with the others to co-constitute inequalities:

- classism
- racism
- settler colonialism
- ableism
- heterosexism
- cisgenderism
- sexism

*These examples do not represent all systems of inequality; e.g., other coins not presented here include systems of inequality related to age, religion, accent, or shade of skin.

Fig. 2 The intersecting nature of the coins, which produces complex patterns of advantage and disadvantage

**There is empirical evidence
showing the existence of
gender bias in many areas of
academic medicine**

ORIGINAL INVESTIGATIONS



Characteristics of Heart Failure Trials Associated With Under-Representation of Women as Lead Authors



Sera Whitelaw, BSc,^a Lehana Thabane, PhD,^a Mamas A. Mamas, BM, BCH, DPhil,^b Nosheen Reza, MD,^c Khadijah Breathett, MD, MS,^d Pamela S. Douglas, MD,^e Harriette G.C. Van Spall, MD, MPH^{a,f,g}

The purpose of this review was to evaluate temporal trends in representation of women as authors in heart failure RCTs published in high-impact medical journals and explore RCT characteristics associated with women as lead authors

Underrepresentation of Women as Authors in Randomized Controlled Trials of Heart Failure 2000-2019

Women represented:



15.6% of
lead authors



12.9% of
senior authors



11.4% of
corresponding
authors



19.6% of
total authors



Characteristics associated with decreased odds of women as lead authors



Multicenter trials (OR 0.58)



Trials coordinated in North America
(OR 0.21) or Europe (OR 0.33)

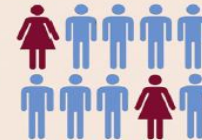


Drug interventions (OR 0.42)



Men senior authors (OR 0.50)

2000



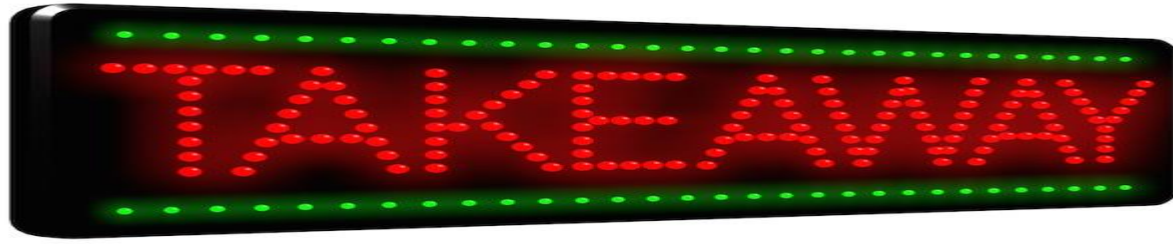
2019



The proportion of women
authors did not change
between 2000 and 2019

Whitelaw, S. et al. J Am Coll Cardiol. 2020;76(17):1919-30.

Of 403 randomized controlled trials (RCTs) published in high-impact journals, women were under-represented as authors of heart failure (HF) RCTs, with no change in temporal trends. Women had lower odds of lead authorship in RCTs that were multicenter, coordinated in North America or Europe, tested drug interventions, or had men as senior authors. OR = odds ratio.



Women are under-represented
as lead authors of HF RCTs,
with no change in temporal
trends

TABLE 4 Recommendations to Increase the Representation of Women as Authors in Randomized Controlled Trials

Recommendations for early- and mid-career women cardiologists	Engage in online and social media networks, limiting content to science Participate in national and international research networks or registries that offer women research collaboration, mentorship, and sponsorship opportunities Invest in clinical research training (certificate programs offered by societies, advanced degrees and fellowships offered by universities)
Recommendations for senior men and women cardiologists	Mentor and sponsor the next generation of women trialists Create a supportive culture to ensure equal opportunity and recognition Learn to recognize and intervene during harassment
Recommendations for academic and departmental leadership	Receive education about gender disparities in research career advancement Eliminate inappropriate questions during interviews for recruitment and promotion, and mitigate implicit bias in selection processes Develop mentoring and sponsoring programs for career growth of researchers Include women as board or executive committee members at research institutes Ensure equal opportunity (in recruitment and retention, compensation, access to resources) and recognition for researchers based on objective criteria Encourage self-nominations and eliminate reliance on department chairs or committees to nominate researchers for awards or advancement opportunities Implement a zero-tolerance policy for workplace harassment Implement flexible promotion policies that recognize the familial and child rearing demands of early-career investigators Encourage women to apply for funding opportunities Participate in anti-bias training
Recommendations for industry and grant funding agencies	Conduct blind reviews of applications and use more equitable review criteria Provide gender breakdown of applicants and awards Include women scientists as reviewers and chairs on funding committees Include women in luminary networks (key opinion leaders, scientific advisory boards)
Recommendations for journals	Provide equitable peer review Set objective criteria and avoid informal networks for the selection of editors and editorial boards

**Cardiology is most likely
not the only area where
this bias exists**

April 2017

Differences in Mentor-Mentee Sponsorship in Male vs Female Recipients of National Institutes of Health Grants

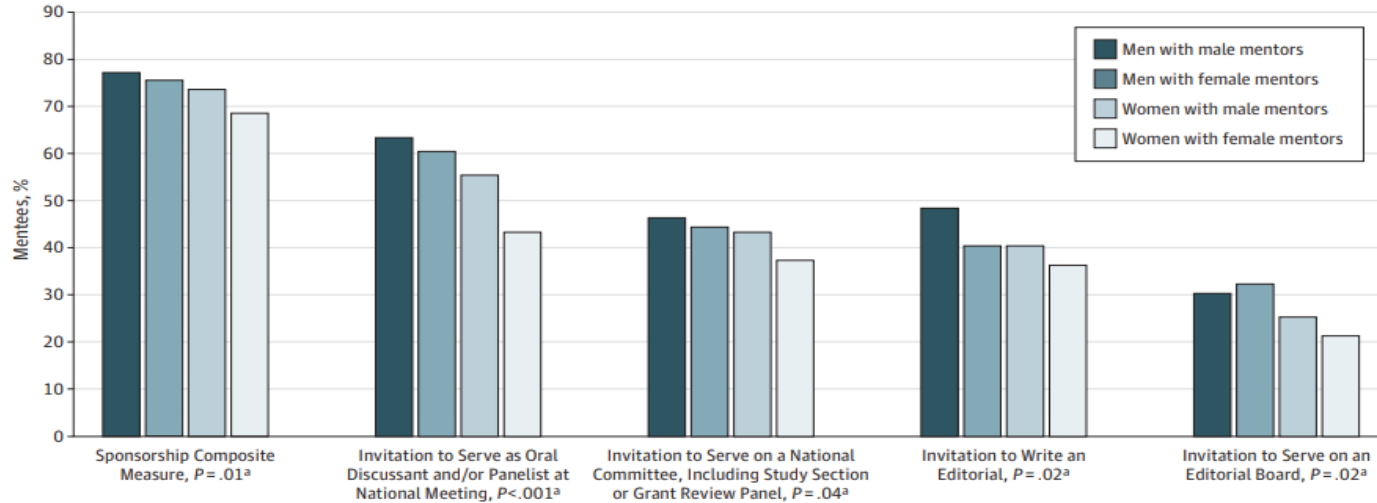
Elizabeth W. Patton, MD, MPhil, MSc^{1,2}; Kent A. Griffith, MS³; Rochelle D. Jones, MS^{4,5}; et al

» [Author Affiliations](#) | [Article Information](#)

JAMA Intern Med. 2017;177(4):580-582. doi:10.1001/jamainternmed.2016.9391

The study surveyed National Institutes of Health (NIH) Mentored Career Development (K) grant awardees to determine if sponsorship differs among men and women.

Figure. Experiences of Sponsorship by Sex



This graph depicts self-reported experiences of sponsorship by K08 and K23 award recipients for men with male mentors ($n = 442$), men with female mentors ($n = 89$), women with male mentors ($n = 323$), and women with female mentors ($n = 131$). Unadjusted percentages are depicted for each of 4 individual sponsorship experiences and for a composite binary measure of having reported at least 1 of the 4 individual experiences.

^a P values evaluate the presence of a difference between men and women holding National Institutes of Health (NIH) Mentored Career Development (K) awards in regression models that adjust for other demographic characteristics (age, race), job characteristics (grant type, year of grant award, medical specialty), level of funding for the NIH institute that granted the K award, and level of NIH funding received by the individual's institution of employment.

"Given that sponsorship appears common and is associated with success, further attention to gender equity in this regard is critical. Male and female mentors alike should consciously act as sponsors by reviewing opportunities and offering high-profile opportunities to mentees. Mentees should seek connections with higher-level leaders to cultivate sponsors as part of their mentorship team..."

Deliberate mentorship is
one potential solution to
address this gap

Where is the evidence
to support the potential
benefits of mentorship?

Mentoring in Academic Medicine

A Systematic Review

JAMA. 2006;296:1103-1115

Dario Sambunjak, MD

Sharon E. Straus, MD, MSc, FRCPC

Ana Marušić, MD, PhD

MEDICAL SCHOOLS AND residency and fellowship programs are charged with training health care professionals and with advancing clinical care, research, and edu-

Context Mentoring, as a partnership in personal and professional growth and development, is central to academic medicine, but it is challenged by increased clinical, administrative, research, and other educational demands on medical faculty. Therefore, evidence for the value of mentoring needs to be evaluated.

Objective To systematically review the evidence about the prevalence of mentorship and its relationship to career development.

Data Sources MEDLINE, Current Contents, Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects, Cochrane Central Register of Controlled Trials, PsycINFO, and Scopus databases from the earliest available date to May 2006.

Assessing the Role of Influential Mentors in the Research Development of Primary Care Fellows

Acad Med. 2004;79:865-872.

John F. Steiner, MD, MPH, Peter Curtis, MD, Bruce P. Lanphear, MD, MPH, Kieu O. Vu, and Deborah S. Main, PhD

Cutting Close to the Bone: Student Trauma, Free Speech, and Institutional Responsibility in Medical Education

Arno K. Kumagai, MD, Brittani Jackson, MD, and Saleem Razack, MD

Acad Med. 2017;92:318-323.

The American Journal of Surgery (2011) 201, 260-265

The American
Journal of Surgery*

Surgical Education

Surgical mentors' and mentees' productivity from 1993 to 2006

Babak J. Orandi, M.D., M.S., Susan Blackburn, M.S., R.N., Peter K. Henke, M.D.*

REVIEW

J Gen Intern Med 25(1):72-8



A Systematic Review of Qualitative Research on the Meaning and Characteristics of Mentoring in Academic Medicine

Dario Sambunjak, MD^{1,2}, Sharon E. Straus, MD MSc FRCPC³, and Ana Marusic, MD^{1,4}

- ❑ Greater career satisfaction
- ❑ More research productivity:
 - ✓ More grants and more publications;
 - ✓ More protected time for research

- ❑ Faster academic promotion
- ❑ Enhanced retention
- ❑ It impacts mentors as well

Medical Teacher, Vol. 24, No. 5, 2002, pp. 550–557



Dutta et al. *BMC Medical Education* 2011, 11:13
http://www.biomedcentral.com/1472-6920/11/13



Effective faculty preceptoring and mentoring during reorganization of an academic medical center

CAROLE A. BENSON, PAGE S. MORAHAN, AJIT K. SACHDEVA
& ROSALYN C. RICHMAN

MCP Hahnemann University, Philadelphia, PA, USA

EDUCATION

J Obstet Gynaecol Can 2004;26(2):127–36.

FACTORS AFFECTING ACADEMIC PROMOTION IN OBSTETRICS AND GYNAECOLOGY IN CANADA

Michelle R. Wise, MD,^{1,2,5} Heather Shapiro, MD, FRCSC,¹ Janet Bodley, MD, FRCSC,² Richard Pittini, MD, FRCSC,²
Darren McKay, BCS,⁵ Andrew Willan, PhD,^{3,4,5} Mary E. Hannah, MDCM, FRCSC^{2,3,5}

RESEARCH ARTICLE

Open Access

One year outcomes of a mentoring scheme for female academics: a pilot study at the Institute of Psychiatry, King's College London

Rina Dutta¹, Sarah L. Hawkes², Elizabeth Kuipers², David Guest³, Nicola T. Fear^{4†} and Amy C. Iversen^{5††}

Mentoring in Academic Medicine A Systematic Review

JAMA. 2006;296:1103-1115

Dario Sambunjak, MD

Sharon E. Straus, MD, MSc, PRCPC

Ana Marušić, MD, PhD

MEDICAL SCHOOLS AND residency and fellowship programs are charged with training health care professionals and with advancing clinical care, research, and edu-

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A Systematic Review of Qualitative Research on the Meaning and Characteristics of Mentoring in Academic Medicine

Dario Sambunjak, MD^{1,2}, Sharon E. Straus, MD MSc FRCPC³, and Ana Marusic, MD^{1,4}

What are the attributes of effective mentors and mentees?

❑ 4 studies explored mentees

- Mentees should be in the 'driver's seat'
- Respectful, organised, committed

❑ 6 studies explored mentors

- Personal: altruistic, understanding, honest, nonjudgmental, active listener, motivator
- Relational: accessible, sincere, compatible
- Professional: knowledgeable and experienced



A Systematic Review of Qualitative Research on the Meaning and Characteristics of Mentoring in Academic Medicine

Dario Sambunjak, MD^{1,2}, Sharon E. Straus, MD MSc FRCPC³, and Ana Marusic, MD^{1,4}

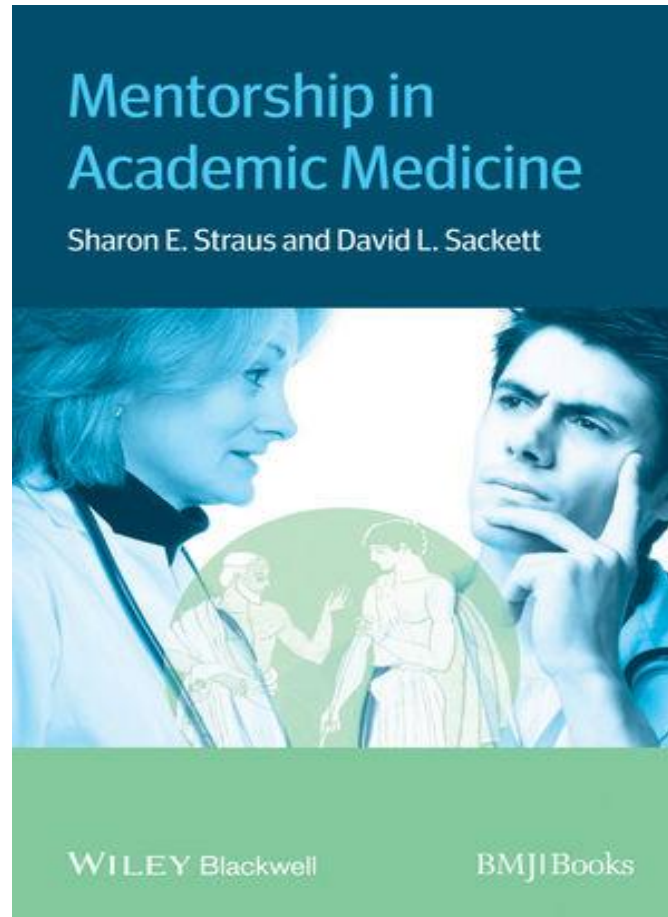
What are the actions of an effective mentors?

☐ Personal

- ✓ Providing moral support
- ✓ Addressing private/personal issues
- ✓ Goal setting/vision building
- ✓ Role modeling
- ✓ Developing skills
- ✓ Career monitoring
- ✓ Navigating the institution
- ✓ Connecting/networking

☐ Institutional

- ✓ Protection and advocacy



Clinician-trialist rounds: 7. Mentoring: why every clinician-trialist needs to get mentored

Sharon E Straus and David L Sackett*

CLINICAL
TRIALS COLUMN

Clinical Trials 2012; 9: 128–131

Clinician-trialist rounds: 8. Mentoring – part 2: the structure and function of effective mentoring: linkage, resources, and academic opportunities

Sharon E Straus and David L Sackett*

CLINICAL
TRIALS COLUMN

Clinical Trials 2012; 9: 272–274

Clinician-trialist rounds: 9. Mentoring – part 3: the structure and function of effective mentoring: advice and protection

Sharon E Straus and David L Sackett*

CLINICAL
TRIALS COLUMN

Clinical Trials 2012; 9: 367–369

Clinician-trialist rounds: 10. Mentoring – part 4: attributes of an effective mentor

Sharon E Straus and David L Sackett*



How to approach mentorship: strategies for mentors

**Make your mentees a
priority and let it be
known!**



Improve your own time-management skills



Provide timely feedback on manuscripts
✓ Endless # of readings and revisions



Set time to meet with them regularly and timely



Be prepared to help them practice their presentations, and provide constructive feedback



**Get them involved in your research,
REB, DSMB meetings**



Department of Clinical Epidemiology and Biostatistics
Biostatistics Unit, Father Sean O'Sullivan Research Centre
St. Joseph's Healthcare Hamilton, 3rd floor Martha Wing
50 Charlton Avenue East
Hamilton ON Canada L8N 4A6

March 26, 2014

Re: FSORC Scholarship: Guowei Li

**Write letters of recommendations or
nomination for awards**

FOR PEER REVIEW ONLY

**Get them involved in reviewing manuscripts
and grants**



**Provide some resources to facilitate
research for them**

Remember that as
a mentor, you are
expected to be a
role model!

Show them by example how
to model collegial, fair,
equitable, caring, diverse,
nurturing, and inclusive
behaviours including how to
share credit



**How to mentor:
strategies for mentees**

research.stjoes.ca

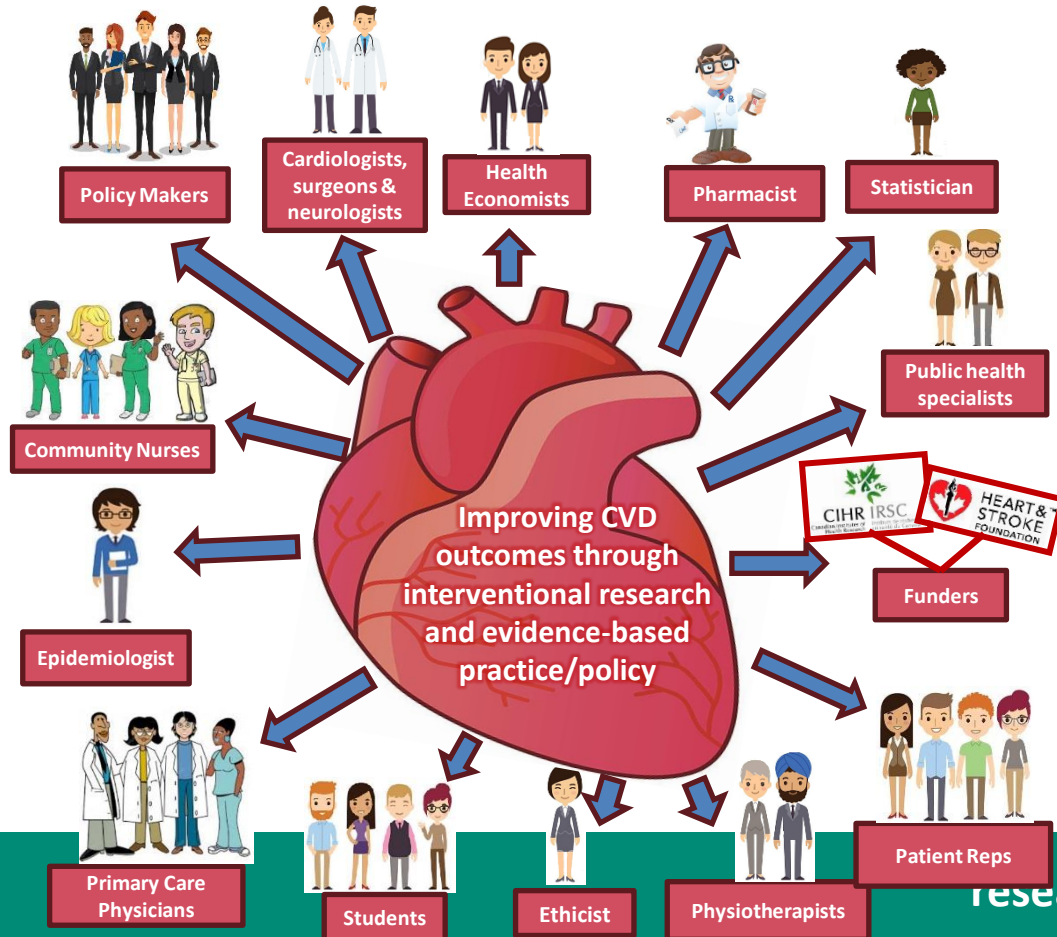
I share this advice with all
my mentees at the beginning
of our relationship to
advance all their self-
efficacy

First:
**Adopt Some core
principles for
success**

Principle #1: **Think Collaboration!**

Effective problem-solving
Mentorship
Efficiency
Sharing
Interaction
Education
Interdisciplinary
Shared vision
Research productivity
Multidisciplinary
Collaboration
Structure
Capacity building
Sustainability
Teamwork
Training
Partnership
Resources
Goal orientated
Communication
Leadership

Every project is a collaboration with colleagues from different backgrounds and disciplines

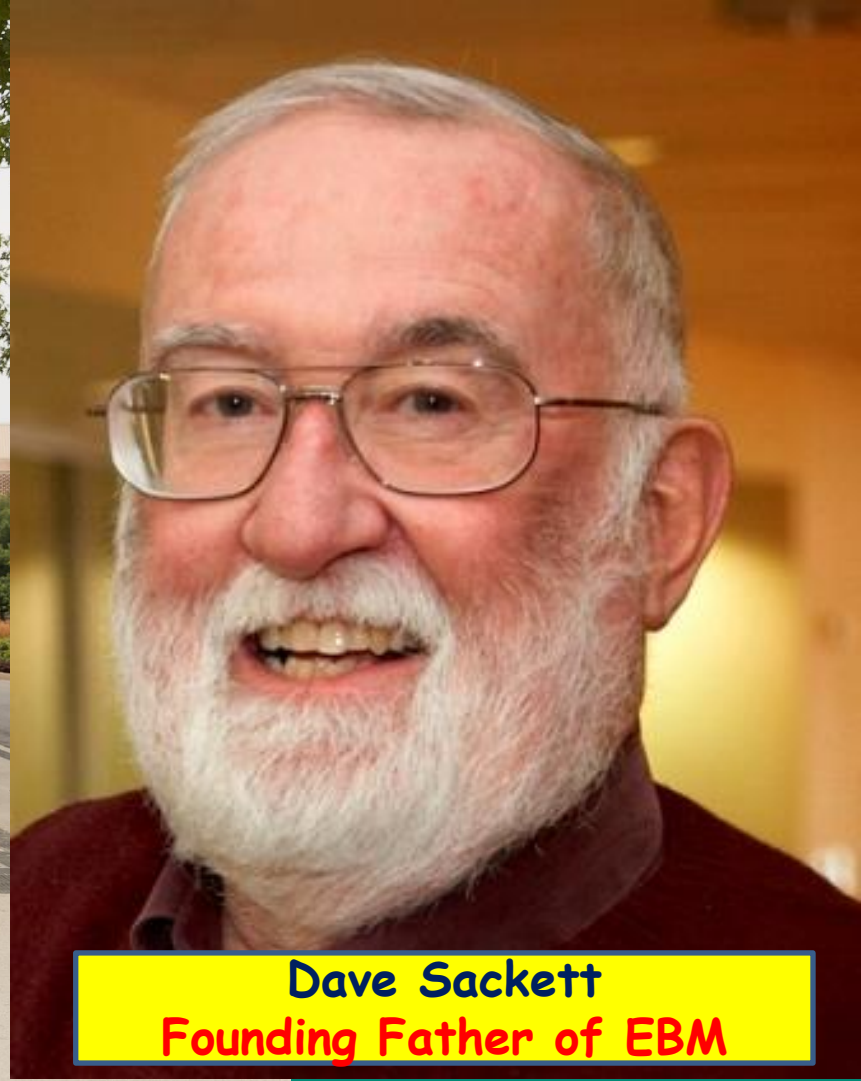


Benefits of collaboration

- ❑ It's more fun than doing it alone
- ❑ Learn from your colleagues
- ❑ Gain life-long friends
- ❑ Good for your CV—More collaborative publications
- ❑ Gain experience in collaborative research, equity, diversity, inclusion

Principle #2:

"You can
always behave
yourself to a
successful
outcome"



Dave Sackett
Founding Father of EBM

There is power in
positive thinking!
Stay hopeful!

Principle #3:

Make deliberate
effort to improve
your soft skills

Time management



Stress management



Communication skills



Principle #4

Be Kind and
generous to
others!

Remember
"you are because
they are!"

These principles are also essential pillars in building and nurturing a collegial, equitable, equal, diverse, and inclusive culture

Second:

Thesis writing—your
approach is the key to
success!

Writing a thesis can feel like a mammoth task





**Success
breeds
success**

Courtney Kennedy took about 4 years to do the PhD thesis

Kennedy et al. Implementation Science 2012, 7:48
http://www.implementationscience.com/content/7/1/48



IMPLEMENTATION SCIENCE



Open Access

STUDY PROTOCOL

An interdisciplinary knowledge translation intervention in long-term care: the vitamin D and osteoporosis study (ViDOS) pilot cluster randomized controlled trial

Courtney C Kennedy^{1,2,3*}, George Ioannidis^{1,4}, Lora M Giangregorio⁵, Suzanne N Morin⁶, Richard G Crilly⁷, Sharon Marr^{1,2}, Robert G Josse⁸, Susanne King^{1,2}, Mary-Lou van der Horst^{1,2}, Glenda Campbell⁹, Jackie Stroud², Lisa Dolovich¹, Anna M Sawka⁵, Ravi Jain², Lynn Nash¹⁰ and Alexandra Papaioannou^{1,2*}

RESEARCH
Successful knowledge translation intervention in long-term care: final results from the vitamin D and osteoporosis study (ViDOS) pilot cluster randomized controlled trial



PubMed Central CANADA

Author Manuscript / Manuscrit d'auteur

J Am Med Dir Assoc. Author manuscript; available in PMC 2016 November 04.

Published in final edited form as:

J Am Med Dir Assoc. 2014 December ; 15(12): 943–945. doi:10.1016/j.jamda.2014.05.007.



PubMed Central CANADA

Author Manuscript / Manuscrit d'auteur

Can J Aging. Author manuscript; available in PMC 2016 November 10.

Published in final edited form as:

Can J Aging. 2015 June ; 34(2): 137–148. doi:10.1017/S0714980815000057.

Osteoporosis Prescribing in Long-Term Care: Impact of a Provincial Knowledge Translation Strategy*

Courtney C. Kennedy^{1,2}, George Ioannidis^{1,2}, Lehana Thabane^{3,4}, Jonathan D. Adachi^{1,4,5}, Denis O'Donnell⁶, Lora M. Giangregorio⁷, Laura E. Pickard^{1,2}, and Alexandra Papaioannou^{1,2,8}

Implementing a Knowledge Translation Intervention in Long-Term Care: Feasibility Results From the Vitamin D and Osteoporosis Study (ViDOS)

C. Kennedy, PhD^a, Lehana Thabane, PhD^b, George Ioannidis, PhD^a, Jonathan D. Adachi, MD, FRCPC^a, and Alexandra Papaioannou, MD, MSc, FRCP (C), FACP^{a,*} on behalf of the ViDOS Investigators

George Ioannidis did 4 papers for PhD in our program: Took 3 years doing it part-time

I Program Description

Can Fam Physician 2007;53:1694-1700

Canadian Quality Circle pilot project in osteoporosis

Rationale, methods, and feasibility

George Ioannidis MSc, Alexandra Papaioannou MD FRCP, Lehana Thabane PhD, Amiram Gafni PhD,
Anthony Hodsmann MD FRCP, Brent Kvern MD, Dan Johnstone, Nathalie Plumley, Alanna Baldwin MD,
M. Doupe PhD, Alan Katz MBChB CCFP, Lena Salach MA, Jonathan D. Adachi MD FRCP

BMC Musculoskeletal Disorders



Research article

Open Access

Optimizing care in osteoporosis: The Canadian quality circle project

George Ioannidis^{*1,8}, Lehana Thabane^{2,3,8}, Amiram Gafni^{2,8},
Anthony Hodsmann^{4,8}, Brent Kvern^{5,8}, Dan Johnstone^{6,8}, Nathalie Plumley^{6,8},
Lena Salach^{7,8}, Famida Jiwa^{7,8}, Jonathan D Adachi^{1,8} and
Alexandra Papaioannou^{1,8}

BMC Medical Education

Research article

Open Access

The utilization of appropriate osteoporosis medications improves following a multifaceted educational intervention: the Canadian quality circle project (CQC)

George Ioannidis^{*1}, Alexandra Papaioannou¹, Lehana Thabane^{2,3},
Amiram Gafni², Anthony Hodsmann⁴, Brent Kvern⁵, Aleksandra Walsh⁶,
Famida Jiwa⁷ and Jonathan D Adachi¹

POPULATION HEALTH MANAGEMENT
Volume 12, Number 3, 2009
© Mary Ann Liebert, Inc.
DOI: 10.1089/pop.2008.0025

Family Physicians' Personal and Practice Characteristics that Are Associated with Improved Utilization of Bone Mineral Density Testing and Osteoporosis Medication Prescribing

George Ioannidis, Ph.D.,¹ Alexandra Papaioannou, M.D.,¹ Lehana Thabane, Ph.D.,²
Amiram Gafni, Ph.D.,² Anthony Hodsmann, M.D.,³ Brent Kvern, M.D.,⁴ Aleksandra Walsh, B.Sc.,⁵
Famida Jiwa, D.C.,⁶ and Jonathan D. Adachi, M.D.¹



They need to take
specific deliberate
steps to succeed
at this!

Step #1:

Set goals early and devise strategies
to achieve them

Clear goals provide the
basis for defining
"success"



SPECIAL FEATURE

On the determinants of academic success as a clinician-scientist

David L. Sackett, MD

Director, Trout Research & Education Centre at Irish
Lake, Markdale, Ont.

Medical subject headings: education; learning; mentors; teaching; time management; writing

Clin Invest Med 2001;24(2):94-100.

© 2001 Canadian Medical Association

Dave's determinants of success

- ✓ Mentoring—get a mentor
- ✓ Regular use of priority checklist
- ✓ Good time management skills

Step #2:

Protect time each week for writing

Need to avoid
email and Phone
disruptions



Step #3:

Find a place conducive for productive writing



Step #4:

Write it down: Always start with

a) An abstract or synopsis

b) An outline



Structure of a protocol synopsis: General Format

- ❑ **Background**
 - ✓ provide a brief overview of the study background and context
- ❑ **Objectives/aims**
 - ✓ state the primary and secondary objectives of the study
- ❑ **Intervention/program description (if applicable)**
 - ✓ for evaluation studies, include brief details of the programme/intervention under investigation
- ❑ **Setting**
 - ✓ indicate the study setting (hospital, clinic, community). Also include the level of the clinical area (for example, primary or tertiary; private practice or instructional)
- ❑ **Design/Methods**
 - ✓ describe study design and methods, including dates of data collection, eligibility criteria, sample size justification, sampling method, outcome/variable description, methods of data collection and analysis
- ❑ **Relevance of the study**
 - ✓ state the relevance or potential usefulness of the results of the study

Step #5:

- ☐ Use conferences to present only the works that you plan to publish
- ☐ Use conference presentation or poster as a starting point



Step #6:

Produce a complete draft before editing or revising



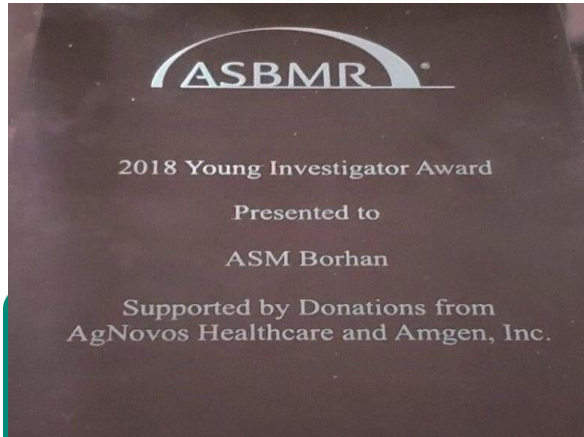
Third:

Strengthen your CV

- ✓ Enhance chances of getting awards
- ✓ Enhance your research productivity

Enhance your chances of getting academic "Oscars"





- ⦿ FHS Publication Award, 2020
- ⦿ FHS Diversity Award, 2020
- ⦿ FHS Teaching Assistant Excellence Award, 2020
- ⦿ HSGSF Excellence in Open Communication and Collaboration award, 2020



- ⦿ Drug Safety and Effectiveness Cross-Disciplinary Training (DSECT) Trainee Award, 2017



- ⦿ Canadian Multicentre Osteoporosis Study (CaMos) Fellowship, 2019
- ⦿ Tim Murray Award, 2018



- ⦿ Ontario Graduate Scholarship, 2016, 2018, 2019

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Some practical strategies to enhance your research productivity:

All worked for my trainees
through deliberate planning or
trial-and-error

Enhancing research publications and advancing scientific writing in health research collaborations: sharing lessons learnt from the trenches

This article was published in the following Dove Press journal:
Journal of Multidisciplinary Healthcare

Guowei Li¹⁻³

Yanling Jin¹

Lawrence Mbuagbaw^{1,2}

Lisa Dolovich^{1,2,4}

Jonathan D Adachi^{2,5}

Mitchell AH Levine^{1-3,5}

Deborah Cook^{1,2,5}

Zainab Saman^{1,2}

Lehana Thabane^{1,2}

¹Department of Health Research Methods, Impact and Evidence, McMaster University, Hamilton, ON, Canada; ²St. Joseph's Healthcare Hamilton, McMaster University, Hamilton, ON, Canada; ³Centre for Evaluation of Medicines, Programs for Assessment of Technology in Health (PATH) Research Institute, McMaster University, Hamilton, ON, Canada; ⁴Department of Family Medicine, McMaster University, Hamilton, ON,

Background: Disseminating research protocols, processes, methods or findings via peer-reviewed publications has substantive merits and benefits to various stakeholders.

Purpose: In this article, we share strategies to enhance research publication contents (ie, what to write about) and to facilitate scientific writing (ie, how to write) in health research collaborations.

Methods: Empirical experience sharing.

Results: To enhance research publication contents, we encourage identifying appropriate opportunities for publications, publishing protocols ahead of results papers, seeking publications related to methodological issues, considering justified secondary analyses, and sharing academic process or experience. To advance writing, we suggest setting up scientific writing as a goal, seeking an appropriate mentorship, making full use of scientific meetings and presentations, taking some necessary formal training in areas such as effective communication and time and stress management, and embracing the iterative process of writing.

Conclusion: All the strategies we share are dependent upon each other; and they advocate gradual academic accomplishments through study and training in a “success-breeds-success” way. It is expected that the foregoing shared strategies in this paper, together with other previous guidance articles, can assist one with enhancing research publications, and eventually one’s academic success in health research collaborations.

Keywords: research publication, scientific writing, health research collaboration

Strategy #1:

Every stage of the planning of a study should yield at least one paper

Table 1 Examples of studies with published protocols and results papers

Study design	Study name	Protocol paper*	Results paper*
Randomized controlled trials	CAMPS trial	Mbuagbaw, 2011 ⁹	Mbuagbaw, 2012 ¹⁰
	PROTECT	Cook, 2011 ¹¹	Cook, 2011 ¹²
Observational studies	TOMIS III	Sword, 2009 ¹³	Sword, 2011 ¹⁴
	N/A	Li, 2015 ¹⁵	Li, 2016 ¹⁶
Systematic reviews and meta-analyses	N/A	Morfaw, 2012 ¹⁷	Morfaw, 2013 ¹⁸
	N/A	Li, 2013 ¹⁹	Li, 2014 ²⁰
Individual patient data meta-analysis	N/A	Mbuagbaw, 2011 ²¹	Mbuagbaw, 2012 ²²
	OA Trial Bank study	van Middelkoop, 2013 ²³	van Middelkoop, 2016 ²⁴

Note: *Expressed as first author, publication year^{reference number}.

Abbreviations: CAMPS trial, Cameroon Mobile Phone Short Message Service trial; PROTECT, Prophylaxis for Thromboembolism in Critical Care Trial; TOMIS III, The Ontario Mother and Infant Study III; OA Trial Bank, Osteoarthritis Trial Bank study; N/A, not applicable.

Example 1: The effects of treatments for acute diarrhea and acute gastroenteritis in children



Florez et al. *Systematic Reviews* (2016) 5:14
DOI 10.1186/s13643-016-0186-8

Systematic Reviews

PROTOCOL

Open Access



The effectiveness and safety of treatments used for acute diarrhea and acute gastroenteritis in children: protocol for a systematic review and network meta-analysis

Ivan D. Florez^{1,2*}, Reem Al-Khalifah^{1,3,4}, Javier M. Sierra², Claudia M. Granados⁵, Juan J. Yepes-Núñez^{1,2}, Carlos Cuello-García^{1,6}, Giordano Pérez-Gaxiola⁶, Adriana M. Zea⁷, Gilma N. Hernández², Areti-Angeliki Veroniki⁸, Gordon H. Guyatt^{1,9} and Lehana Thabane^{1,10}

PLOS ONE

RESEARCH ARTICLE

Comparative effectiveness and safety of interventions for acute diarrhea and gastroenteritis in children: A systematic review and network meta-analysis

Ivan D. Florez^{1,2*}, Areti-Angeliki Veroniki^{3,4}, Reem Al Khalifah⁵, Juan J. Yepes-Núñez^{1,2}, Javier M. Sierra², Robin W. M. Vernooij^{6,7}, Jorge Acosta-Reyes⁸, Claudia M. Granados⁸, Giordano Pérez-Gaxiola¹⁰, Carlos Cuello-García^{1,11}, Adriana M. Zea¹², Yuan Zhang¹, Naghmeh Foroutan^{1,13}, Gordon H. Guyatt^{1,14}, Lehana Thabane^{1,11,15}

Example 2: WelTel Kenya 1 Trial

Trials



Highly accessed

Open Access

Study protocol

The HAART cell phone adherence trial (WelTel Kenya I): a randomized controlled trial protocol

Richard T Lester^{*1,2}, Edward J Mills³, Antony Kariri¹, Paul Ritvo⁴, Michael Chung⁵, William Jack⁶, James Habyarimana⁶, Sarah Karanja¹, Samson Barasa¹, Rosemary Nguti¹, Benson Estambale⁷, Elizabeth Ngugi¹, T Blake Ball², Lehana Thabane⁸, Joshua Kimani^{1,2}, Lawrence Gelmon^{1,2}, Marta Ackers⁹ and Francis A Plummer^{2,10}



Effects of a mobile phone short message service on antiretroviral treatment adherence in Kenya (WelTel Kenya1): a randomised trial

Richard T Lester, Paul Ritvo, Edward J Mills, Antony Kariri, Sarah Karanja, Michael H Chung, William Jack, James Habyarimana, Mohsen Sadatsafavi, Mehdi Najafzadeh, Carlo A Marra, Benson Estambale, Elizabeth Ngugi, T Blake Ball, Lehana Thabane, Lawrence J Gelmon, Joshua Kimani, Marta Ackers, Francis A Plummer

Summary

Lancet 2010; 376: 1838–45

Published Online
November 9, 2010
DOI:10.1016/S0140-
6736(10)61997-6

Background Mobile (cell) phone communication has been suggested as a method to improve delivery of health services. However, data on the effects of mobile health technology on patient outcomes in resource-limited settings are limited. We aimed to assess whether mobile phone communication between health-care workers and patients starting antiretroviral therapy in Kenya improved drug adherence and suppression of plasma HIV-1 RNA load.

Example 3: Pilot trials

Samaan et al. *Pilot and Feasibility Studies* (2015) 1:39
DOI 10.1186/s40814-015-0034-y

 **PILOT AND FEASIBILITY
STUDIES**

STUDY PROTOCOL

Open Access



A pragmatic pilot randomized trial to investigate the effectiveness of behavioural activation group therapy in reducing depressive symptoms and improving quality of life in patients with depression: the BRAVE pilot trial protocol

Zainab Samaan^{1,2,3,4*}, Kathryn Litke², Kathleen McCabe^{1,2}, Brittany Dennis³, Jeff Whattam², Laura Garrick², Laura O'Neill^{1,2}, Terri Ann Tabak^{1,2}, Scott Simons², Sandra Chalmers², Brenda Key^{1,2}, Meredith Vanstone³, Feng Xie³, Gordon Guyatt^{3,5} and Lehana Thabane^{3,6,7,8,9}

Samaan et al. *Pilot and Feasibility Studies* (2016) 2:22
DOI 10.1186/s40814-016-0064-0

Pilot and Feasibility Studies

RESEARCH

Open Access



Behavioral activation group therapy for reducing depressive symptoms and improving quality of life: a feasibility study

Zainab Samaan^{1,2,4,7,13*}, Brittany B. Dennis^{3,4,7}, Lindsay Kalbfleisch⁵, Herman Bamfi⁶, Laura Zielinski^{1,4}, Monica Bawor^{1,3}, Kathryn Litke^{2,13}, Kathleen McCabe^{1,2,13}, Jeff Whattam^{2,13}, Laura Garrick², Laura O'Neill^{1,2,13}, Terri Ann Tabak^{1,2,13}, Scott Simons^{2,13}, Sandra Chalmers^{2,13}, Brenda Key^{1,2,13}, Meredith Vanstone⁷, Feng Xie⁷, Gordon Guyatt^{7,8} and Lehana Thabane^{7,9,10,11,12}

Example 4: This can be done for type of study

Mixed methods

Open Access Protocol

BMJ open Investigating community ownership of a text message programme to improve adherence to antiretroviral therapy and provider-client communication: a mixed methods research protocol

IPD meta-analysis

Open Access Protocol

BMJ open Mobile phone text messages for improving adherence to antiretroviral therapy (ART): a protocol for an individual patient data meta-analysis of randomised trials

Observational studies

BMC Pregnancy and Childbirth



Study protocol

Open Access

The Ontario Mother and Infant Study (TOMIS) III: A multi-site cohort study of the impact of delivery method on health, service use, and costs of care in the first postpartum year

Wendy Sword^{*1}, Susan Watt², Paul Krueger^{3,4}, Lehana Thabane^{3,5}, Christine Kurtz Landy¹, Dan Farine⁶ and Marilyn Swinton¹

Systematic survey of the literature

Downloaded from <http://bmjopen.bmj.com/> on March 20, 2017 - Published by group.bmj.com

Open Access

Protocol

BMJ Open Framing of research question using the PICOT format in randomised controlled trials of venous ulcer disease: a protocol for a systematic survey of the literature

Strategy # 2:

Plan to multiply the
opportunities

Use 5-3 Rule



Manuscripts:

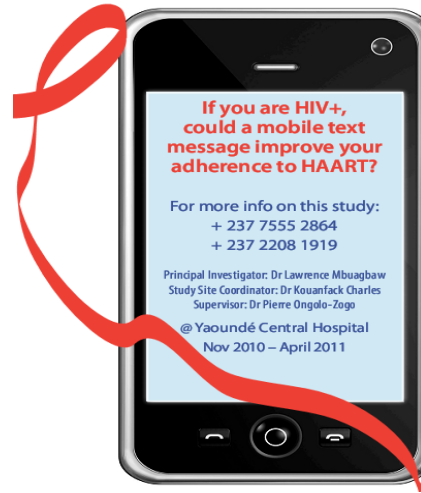
- 👍 Protocol paper of the systematic review
- 👍 Results paper for the systematic review
- 👍 Protocol paper for the study
- 👍 Results paper for the study
- 👍 Qualitative results paper to supplement quantitative work



Presentations at a professional meeting

- 👍 Local presentation in Department/Faculty
- 👍 National meeting
- 👍 International meeting

Dr Lawrence Mbuagbaw



- ✓ **CIHR HIV Clinical Trials Network International Fellowship: Training and mentorship in HIV trials**
- ✓ **CAMPS (Cameroon Mobile Phone SMS) Trial had excellent output**

Considerations in us
adherence to highly
a qualitative study ar
Cameroon

The Cameroon
a protocol for
mobile phone
for improving
anti-retroviral

The Cameroon Mobile
Randomized Trial of Te
for Adherence to Antire

Mbuagbaw et al. *AIDS Research and Therapy* 2012, 9:37
http://www.aidsrestherapy.com/content/9/1/37



AIDS RESEARCH AND THERAPY

RESEARCH

Open Access

Mbuagbaw et al. *BMC Research Notes* 2011, 4:10
http://www.biomedcentral.com/10.1186/1745-6215-4-10

SHORT REPORT

Opening
living with
messaging

That's 14
manuscripts and
still counting...

Mbuagbaw et al. *Trials* 2011, 12:5
http://www.trialsjournal.com/content/12/1/5

Open Access

Research

7 January 2013
Number of times this article has been viewed

COMMENTARY

BMJ Open

The challenge
clinical trial
the Cameroon
an investigation
Lawrence Mbuagbaw^{1*},
Lahar

*Journal of Multidisciplinary
Healthcare*

Mbuagbaw et al. *BMC Health Services Research* 2011, 11:106
DOI 10.1186/1471-2913-11-106

PanAfrican
Medical
Journal

RESEARCH ARTICLE

Mobile phone
HIV and other
systematic review
transfer

Workshop report
Setting the stage for research

Lawrence Mbuagbaw^{1,2,3,4*}, Lehana Thabane^{1,2,3,4}

¹ Department of Clinical Epidemiology
Research Centre, St Joseph's Healthcare
Yaounde, Cameroon, ² Departments of Paediatrics
St Joseph's Healthcare - Hamilton, ON, ³ Department
of Medicine and Biomedical Sciences, University of

Interventions to promote adherence to antiretroviral
therapy in Africa: a network meta-analysis

Edward J Mills, Richard Lester, Kristian Thorlund, Maria Lorenz, Katherine Muldoon, Steve Kanters, Sebastian Linnemayr, Robert Gross,
Yvette Calderon, K Rivet Amica, Harsha Thirumurthy, Cynthia Pearson, Robert H Remien, Lawrence Mbuagbaw, Lehana Thabane,
Michael H Chung, Ira B Wilson, Albert Liu, Okalekan A Uthman, Jane Simoni, David Bangsberg, Sami Yaya, Till Barnighausen, Nathan Ford,
Jean B Nachega

Summary

Background Adherence to antiretroviral therapy (ART) is necessary for the improvement of the health of patients and
for public health. We sought to determine the comparative effectiveness of different interventions for improving ART
adherence in HIV-infected people living in Africa.





Naji et al
DOI

Through
collaborations,
Britt has now co-
authored over
50 manuscripts and
still counting...

Strategy #3:

For every study, look for opportunities to use the data to write more papers for publication



BMC Medical Research Methodology



Research article

Open Access

Comparison of Bayesian and classical methods in the analysis of cluster randomized controlled trials with a binary outcome: The Community Hypertension Assessment Trial (CHAT)
Jinhui Ma¹, Lehana Thabane^{*1}, Janusz Kaczorowski², Larry Chambers³, Lisa Dolovich⁴, Tina Karwalajtys⁴ and Cheryl Levitt⁴

Address: ¹Department of Epidemiology and Biostatistics, McMaster University, Hamilton, Ontario, Canada; ²Centre for Applied Health Research & Evaluation, University of British Columbia, Vancouver, British Columbia, Canada; ³Department of Epidemiology and Community Medicine, University of Ottawa, Ottawa, Ontario, Canada and ⁴Department of Family Medicine, McMaster University, Hamilton, Ontario, Canada

Email: Jinhui Ma - maj26@mcmaster.ca; Lehana Thabane^{*} - thabane@mcmaster.ca; Janusz Kaczorowski - janusz.kaczorowski@familymed.ubc.ca; Larry Chambers - lchamber@scs.on.ca; Lisa Dolovich - ldolovich@mcmaster.ca; Tina Karwalajtys - karwalt@mcmaster.ca; Cheryl Levitt - levitt@mcmaster.ca

^{*} Corresponding author

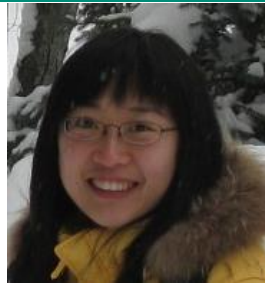
RESEARCH ARTICLE

Open Access

Comparison of population-averaged and cluster-specific models for the analysis of cluster randomized trials with missing binary outcomes: a simulation study

Jinhui Ma^{1,2,3}, Parminder Raina^{1,2}, Joseph Beyene¹ and Lehana Thabane^{1,3,4,5*}

Research
Institute
of St. Joe's Hamilton



Chu et al. *BMC Medical Research Methodology* 2011, 11:21
<http://www.biomedcentral.com/1471-2288/11/21>

BMC
Medical Research Methodology

RESEARCH ARTICLE

Open Access

Comparing methods to estimate treatment effects on a continuous outcome in multicentre randomized controlled trials: A simulation study

Rong Chu^{1,2*}, Lehana Thabane^{1,2,4}, Jinhui Ma^{1,2}, Anne Holbrook^{1,3,4}, Eleanor Pullenayegum^{1,2,4}, Philip James Devereaux¹

Competing events in patients with malignant disease who are at risk for recurrent venous thromboembolism

S. Parpia^a, J.A. Julian^a, L. Thabane^b, A.Y.Y. Lee^c, F.R. Rickles^d, M.N. Levine^{a,*}

^a Ontario Clinical Oncology Group, Dept of Oncology, McMaster University, 711 Concession Street, 60 (G) Wing, Hamilton, ON, L8V 1C3, Canada

^b Centre of Evaluation of Medicines, McMaster University, 50 Charlton Avenue East, Hamilton, ON, L8N 4A6, Canada

^c Division of Hematology, University of British Columbia, Diamond Health Care Centre, 2775 Laurel Street, 10th Floor, Vancouver, BC, V5Z 1M9, Canada

^d Katzen Cancer Research Center, George Washington University, 2150 Pennsylvania Ave NW, Washington, DC 20037, USA



ABSTRACT

Patients with malignant disease enrolled in trials of thrombotic disorders may experience competing events such as death. The occurrence of a competing event may prevent the thrombotic event from being observed. Standard survival analysis techniques ignore competing risks, resulting in possible bias and distorted inferences. To assess the impact of competing events on the results of a previously reported trial comparing low molecular weight heparin (LMWH) with oral anticoagulant (OAC) therapy for the prevention of recurrent venous thromboembolism (VTE) in patients with advanced cancer, we compare the results from standard survival analysis with those from competing risk techniques which are based on the cumulative incidence function (CIF) and Gray's test. The Kaplan-Meier method overestimates the risk of recurrent VTE (17.2% in the OAC group and 8.7% in the LMWH group). Risk of recurrence using the CIF is 12.0% and 6.0% in the OAC and LMWH groups, respectively. Both the log-rank test ($p = 0.002$) and Gray's test ($p = 0.006$) suggest evidence in favor of LMWH. The overestimation of risk is 30% in each treatment group, resulting in a similar relative treatment effect; using the Cox model the hazard ratio (HR) is 0.48 (95% confidence interval [CI], 0.30 to 0.78) and HR = 0.47 (95% CI, 0.29 to 0.74) using the CIF model. Failing to account for competing risks may lead to incorrect interpretations of the probability of recurrent VTE. However, when the distribution of competing risks is similar within each treatment group, standard and competing risk methods yield comparable relative treatment effects.

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Strategy # 4:

Every research process
or experience is worth
sharing

Papers based on my mentor-mentee relationships

Journal of Multidisciplinary Healthcare

Dovepress

open access to scientific and medical research

Open Access Full Text Article

COMMENTARY

How to set-up a long-distance mentoring program: a framework and case description of mentorship in HIV clinical trials



This article was published in the following Dove Press journal:
Journal of Multidisciplinary Healthcare
7 January 2013
Number of times this article has been viewed

Lawrence Mbuagbaw^{1,2}
Lehana Thabane^{2,3}

Abstract: Mentoring plays an important role in learning and career development. Mentored researchers are more productive and more likely to publish their work. However, mentorship pro-

Journal of Multidisciplinary Healthcare

Dovepress

open access to scientific and medical research

Open Access Full Text Article

REVIEW

Mentoring in biostatistics: some suggestions for reform



This article was published in the following Dove Press journal:
Journal of Multidisciplinary Healthcare
4 October 2012
Number of times this article has been viewed

Adefowope Odueyungbo¹
Lehana Thabane²

Abstract: Mentoring is routinely used as a tool to facilitate acquisition of skills by new professionals in fields like medicine, nursing, surgery, and business. While mentoring has been

The
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Papers based on challenges in studies

Mbuagbaw et al. *Trials* 2011, 12:145
<http://www.trialsjournal.com/content/12/1/145>



COMMENTARY

Open Access

The challenges and opportunities of conducting a clinical trial in a low resource setting: The case of the Cameroon mobile phone SMS (CAMPS) trial, an investigator initiated trial

Lawrence Mbuagbaw^{1*}, Lehana Thabane^{2,3}, Pierre Ongolo-Zogo¹ and Trudie Lang⁴

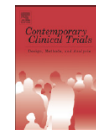
Contemporary Clinical Trials 32 (2011) 318–322



Contents lists available at ScienceDirect

Contemporary Clinical Trials

journal homepage: www.elsevier.com/locate/conclintrial

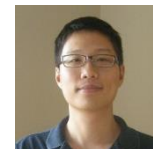


Editorial letter

Data withdrawal in randomized controlled trials: Defining the problem and proposing solutions

A commentary

Chenglin Ye^{a,d,e}, Lora Giangregorio^b, Anne Holbrook^{c,d,f}, Eleanor Pullenayegum^{d,e,f},
Charlie H. Goldsmith^{d,e,f}, Lehana Thabane^{d,e,f,g,*}



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Advice for Junior Faculty Regarding Academic Promotion: What Not to Worry About, and What to Worry About

This article was published in the following Dove Press journal:
Journal of Multidisciplinary Healthcare

Lawrence Mbuagbaw¹⁻³
Laura N Anderson^{ID 1}
Cynthia Lokker^{ID 1}
Lehana Thabane^{1,2,4}

Abstract: Junior faculty in many universities must go through the promotion process to advance from entry level, e.g., assistant professorship to associate Professor, and ultimately to professorship. The process may often be stressful for some junior faculty, mostly due to some uncertainty about how to optimise their chances of successful promotion. In this paper, we summarise some strategies that would enhance their chances of a smooth promotion

WHAT NOT TO WORRY ABOUT AND WHAT TO WORRY ABOUT

HELLO, NEW AND JUNIOR FACULTY! EVER WONDERED WHAT IT TAKES TO GET PROMOTED? HERE ARE SOME IDEAS FROM FOLKS AT HEI MCMASTER."

INSTITUTIONAL REQUIREMENTS FOR ADVANCEMENT

IDENTIFY AND READ INSTITUTIONAL PROCEDURES FOR ADVANCEMENT

TALK WITH OTHER FACULTY WHO HAVE GONE THROUGH THE PROCESS

TALK WITH FACULTY WHO SIT ON TENURE AND PROMOTION COMMITTEES

CREATE A CHECKLIST OF DOCUMENTS REQUIRED

IDENTIFY AND COLLECT THE INFORMATION REQUIRED TO COMPLETE THE REQUIRED DOCUMENTS

SECURE FUNDING

JOIN MAILING LISTS FOR SOURCES OF FUNDING

INVEST IN GRANT WRITING TRAINING

SEEK INSTITUTIONAL SUPPORT FOR GRANT WRITING (E.G. BUDGET WRITING, INTERNAL PEER REVIEW)

PERSEVERANCE MATTERS

PUBLICATIONS

SET A TARGET NUMBER OF PUBLICATIONS PER YEAR

SET TIME ASIDE FOR WRITING

PUBLISH OTHER FORMS OF RESEARCH (E.G. PILOT STUDIES, CHALLENGES AND OPPORTUNITIES)

PUBLISH ALL STAGES OF RESEARCH (E.G. PROTOCOL, FULL PAPER)

PUBLISH ACADEMIC AND EDUCATIONAL ACTIVITIES (E.G. COURSE DEVELOPMENT, WORKSHOP REPORTS)

TIME MANAGEMENT AND PRIORITY-SETTING

BUILD TIME MANAGEMENT SKILLS

SET TARGETS FOR RESEARCH, TEACHING AND SERVICE AND EVALUATE PROGRESS YEARLY

SET TIME ASIDE TO COMPLETE PROMOTION-RELATED ACTIVITIES AND DOCUMENT THEM

EFFECTIVE TEACHING

- TEACH AS PER AGREED COMMITMENT
- DOCUMENT EVIDENCE OF EFFECTIVE TEACHING AND TEACHING INNOVATION
- INVEST IN ENHANCING TEACHING SKILLS

MENTORSHIP

IDENTIFY A GOOD MENTOR AND SEEK ADVICE

WORK WITH YOUR DEPARTMENT PROMOTION TEAM TO MEET TARGETS

MENTEE

MENTOR

COLLABORATIVE ACTIVITIES

JOIN HIGHLY PRODUCTIVE RESEARCH GROUPS

IDENTIFY OPPORTUNITIES TO CONTRIBUTE AND BENEFIT FROM GROUPS

READ THE FULL ARTICLE HERE: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7002385/>

Strategy #5:

Be a good “citizen”—mentor and collaborate with others



All my graduate students
have a responsibility and the
opportunity to mentor
others

For example, in 2017, I had
4 invited plenary
presentations at different
places and these led to many
opportunities for my
mentees and
8 publications

Invited talk at the Stockholm Conference 2017 on "Intervention Research: Premises, Challenges, and Revisiting positions"

Research Article

Evaluating Completeness of Reporting in Behavioral Interventions Pilot Trials: A Systematic Survey

Research on Social Work Practice
2018, Vol. 28(5) 577-584

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DOI: 10.1177/1049731517720033

journals.sagepub.com/home/rsw



Meha Bhatt^{1,2}, Laura Zielinski², Nitika Sanger², Ieta Shams²,
Candice Luo², Bianca Bantoto², Hamnah Shahid², Guowei Li¹,
Luciana P. F. Abbade³, Ikunna Nwosu¹, Yanling Jin¹, Mei Wang¹,
Yaping Chang¹, Guangwen Sun¹, Lawrence Mbuagbaw^{1,4},
Mitchell A. H. Levine^{1,4,5}, Jonathan D. Adachi^{1,4},
Lehana Thabane^{1,4,5}, and Zainab Samaan^{1,2,6,7}

Invited talk at the National Academy of Sciences 2017 Arthur M Sackler Colloquia on “Reproducibility of Research: Issues and Proposed Remedies” held in Washington DC

Downloaded from <http://bmjopen.bmj.com/> on January 18, 2018 - Published by group.bmj.com

Open Access

Protocol

BMJ Open State of reporting of primary biomedical research: a scoping review protocol

Guowei Li,^{1,2,3} Lawrence Mbuagbaw,^{1,2} Zainab Samaan,^{1,2,4} Yanling Jin,¹ Ikunna Nwosu,¹ Mitchell A H Levine,^{1,2,3,4} Jonathan D Adachi,^{2,4} Lehana Thabane^{1,2}

Li et al. *BMC Medical Research Methodology* (2018) 18:9
DOI: 10.1186/s12874-017-0465-7

BMC Medical Research
Methodology

RESEARCH ARTICLE

Open Access

A systematic review of comparisons between protocols or registrations and full reports in primary biomedical research

Guowei Li^{1,2,3*}, Luciana P. F. Abbade⁴, Ikunna Nwosu¹, Yanling Jin¹, Alvin Leenus⁵, Muhammad Maaz⁵, Mei Wang¹, Meha Bhatt¹, Laura Zielinski⁶, Nitika Sanger⁷, Bianca Bantoto⁸, Candice Luo⁹, Ieta Shams⁹, Hamnah Shahid¹⁰, Yaping Chang¹, Guangwen Sun¹, Lawrence Mbuagbaw^{1,2}, Zainab Samaan^{1,11}, Mitchell A. H. Levine^{1,2,3,11}, Jonathan D. Adachi^{1,2,11} and Lehana Thabane^{1,2,12}



Enhancing primary reports of randomized controlled trials: Three most common challenges and suggested solutions

Guowei Li^{a,b,c}, Meha Bhatt^a, Mei Wang^{a,c}, Lawrence Mbuagbaw^{a,c}, Zainab Samaan^d, and Lehana Thabane^{a,b,c,1}

^aDepartment of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, ON, Canada L8S 4L8; ^bCentre for Evaluation of Medicines, Programs for Assessment of Technology in Health Research Institute, McMaster University, Hamilton, ON, Canada L8N 1Y3; ^cBiostatistics Unit, Research Institute at St. Joseph's Healthcare Hamilton, Hamilton, ON, Canada L8N 4A6; and ^dDepartment of Psychiatry and Behavioral Neurosciences, McMaster University, Hamilton, ON, Canada L8S 4L8

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PNAS

Journal of Multidisciplinary Healthcare

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open access to scientific and medical research

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REVIEW

Does the medical literature remain inadequately described despite having reporting guidelines for 21 years? – A systematic review of reviews: an update

This article was published in the following Dove Press journal:
Journal of Multidisciplinary Healthcare

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Purpose: Reporting guidelines (eg, Consolidated Standards of Reporting Trials [CONSORT] statement) are intended to improve reporting standards and enhance the transparency and reproducibility of research findings. Despite accessibility of such guidelines, researchers are not required to adhere to them. Our goal was to determine the current status of reporting quality in the medical literature and examine whether adherence of reporting guidelines has improved since the inception of reporting guidelines.

Materials and methods: Eight reporting guidelines, such as CONSORT, Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), Strengthening of Reporting of Observational studies in Epidemiology (STROBE), Quality of Reporting of Meta-analysis

Li et al. *BMC Medical Research Methodology* (2017) 17:181
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BMC Medical Research
Methodology

RESEARCH ARTICLE

Open Access

A scoping review of comparisons between abstracts and full reports in primary biomedical research

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COLLOQUIUM
PAPER

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Invited talk at the NIH Panel Discussion on “Development of Comparator Groups in Behavioral and Social Science Clinical Trials” held in Washington DC 2017

Special Section Article

A Systematic Survey of Control Groups in Behavioral and Social Science Trials

Research on Social Work Practice

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Nitika Sanger⁷, Bianca Bantoto⁸, Candice Luo⁹, Ieta Shams^{2,10,11},
Hamnah Shahid¹², Jonathan Adachi¹³, Lawrence Mbuagbaw^{1,2,14},
Mitchell Levine^{1,13}, Zainab Samaan^{1,15}, and Lehana Thabane^{1,11}

Invited talk at the first symposium on "Clinical Research in Brazil: Not for Beginners" held on November 30-December 1, 2017 at UNESP in Botucatu, Sao Paolo

Li et al. *Journal of Venomous Animals and Toxins including Tropical Diseases*
(2018) 24:15
<https://doi.org/10.1186/s40409-018-0152-0>

Journal of Venomous Animals and
Toxins including Tropical Diseases

REVIEW

Open Access



Key factors of clinical research network capacity building

The
Research
Institu
of St. Joe's Har

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What to do when
mentorship gets sour?

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All relationships go through transitions

- ❑ Mentee does not need your help as much
- ❑ Mentee becoming a colleague
- ❑ Cultural issues of age/authority/gender
 - ❑ weight of prior relationship
- ❑ Former mentee becoming source of advice, guidance, counsel



Changing Relationships: warning from Gordon Guyatt

Possible experience of mentor

- ☐ mentee thinks she's smarter than I am
- ☐ mentee is smarter than I am
- ☐ mentee right, I'm wrong
- ☐ mentee isn't listening to me
- ☐ mentee doesn't want my advice
- ☐ lack of appreciation/gratitude

Feelings of mentor

- ☐ threatened
- ☐ competitive
- ☐ hurt
- ☐ angry

Possible experience of mentee

- ☐ I'm doing the work, mentor getting credit
- ☐ mentor not sharing opportunities sufficiently
- ☐ mentor being competitive
- ☐ mentor not appreciating/valuing
- ☐ mentor feeling hurt

Mentee's possible feelings

- ☐ disappointment
- ☐ bewilderment
- ☐ competitiveness
- ☐ hurt



Gordon Guyatt's possible solutions

- ❑ Terminate at transition
- ❑ Alertness to COI
 - ✓ explicit labeling
- ❑ Alertness to emotional traps
 - ✓ opportunity for personal growth
- ❑ **Humility - advice from others**

In short...

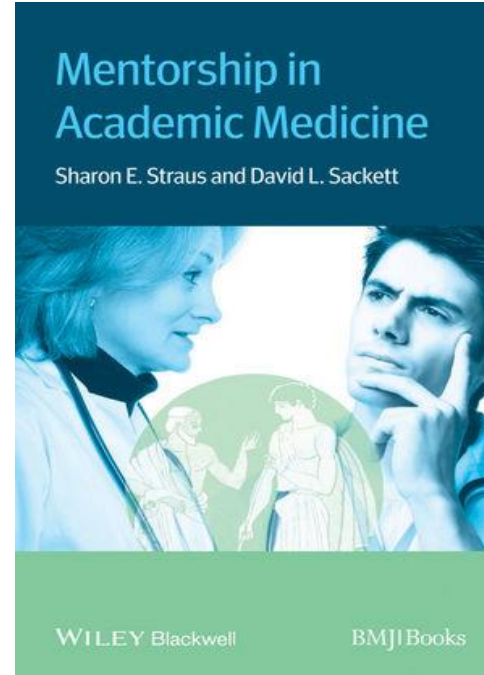
- ❑ Have an **exit or transition** strategy
- ❑ Stay alert to **COI or emotional traps**
- ❑ Stay humble, and **ask for help**

Other Things to Consider

- ☐ Mentoring is about facilitating career growth
- ☐ Have realistic expectations - no one is perfect
- ☐ Draw lessons from own experiences and failures
- ☐ **Multiple mentors can be useful**

Additional resources

- ❑ <http://www.mentorshipacademicmedicine.com>
- ❑ Companion website for



A huge thank you to



[illegible]