NATIONAL ASSOCIATION OF CHRONIC DISEASE DIRECTORS
Promoting Health. Preventing Disease.

Evidence-Based Public Health (EBPH): A Course in Chronic Disease Prevention
State-Based Train-the-Trainer Course Planning Guide

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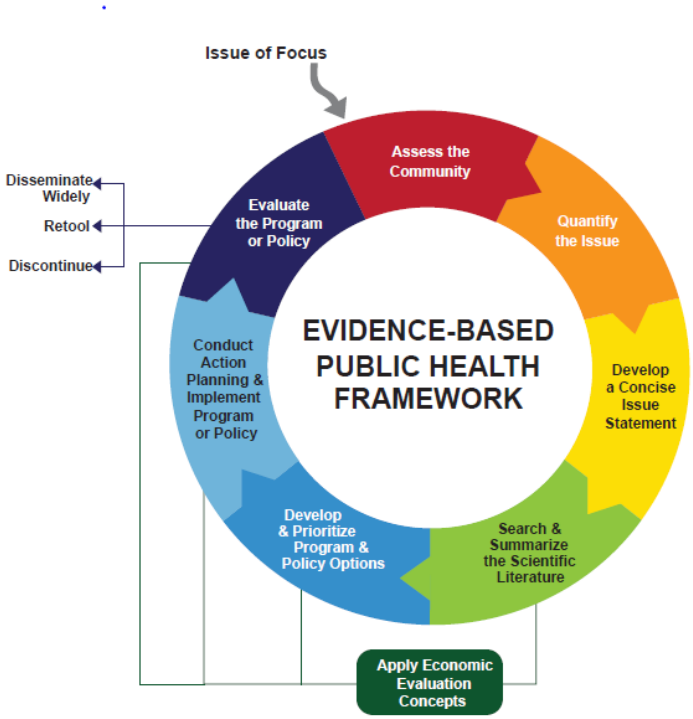
Introduction

We define an evidence-based program or policy as one in which:

- Decisions are made using the best available evidence
- Data and information systems are used systematically
- Program-planning frameworks are applied (often based in behavioral science theory)
- The community is engaged in assessment and decision making
- Sound evaluation is conducted, and
- What is learned is disseminated to key stakeholders and decision makers.

Developing effective programs and policies in chronic disease prevention and control requires specific skills, including the application of principles of scientific reasoning and systematic uses of data and information systems. This process relies on several related disciplines, including epidemiology, biostatistics, behavioral science, health economics, health care management, and health policy development.

The Evidence-Based Public Health (EBPH) course was developed by the Prevention Research Center in Saint Louis in 1997 as a training for the public health workforce. The 3 ½ day course focuses on nine specific skills to improve public health practice (see Figure). These skills act as a framework for the course. The EBPH training addresses many of the core competencies for public health professionals adopted by the Council on Linkages Between Academia and Public Health Practice. The course also addresses Domain 10 of the Public Health Accreditation Board Standards that seeks to "contribute to and apply the evidence base of public health." Through lectures, practice exercises, and case studies, the course takes a "hands-on" approach and emphasizes information that is readily available to busy practitioners.



I. Course Planning

Pre-Planning for Core EBPH Training in the State (by key chronic disease leaders and staff, including people who have previously participated in EBPH training, and Public Health Training Institute staff where available)

- Articulate your goals for holding EBPH – what do you hope to achieve?
- Do preliminary identification of EBPH audience(s) in your state, their learning needs, barriers, competency gaps, etc. (Survey tools are available from the Prevention Research Center in St. Louis).
- Assess existing training opportunities, accreditation requirements, and workforce development efforts in your state to determine areas of synergy/ complementarity,
- Determine resources and budgetary needs for offering (replicating) the course, e.g.,
  - Staff time for planning/ coordination
  - Remuneration for faculty trainers
  - Participant materials (e.g., course binder, books)
  - Space and computers/ IT support
  - Meals, refreshments
  - Travel related costs for faculty (and participants, if provided).
- List potential partners/ stakeholders.
- Develop potential faculty
  - Identify 4-8 people with expertise who will go through the course with the expectation of being on the training team when the course is replicated in your state.
  - Strive for a mix of trainers who can work together and share responsibility for delivering the course modules.
  - You will need people who have expertise in epidemiology, behavioral science, public health statistics, health economics, communications and public health practice.
  - Identify faculty trainers who have academic background/ expertise as well as those who have experience in public health practice. Some people may have both academic and practice backgrounds. They may come from:
    - Universities and colleges
    - Public health agencies
    - Community based organizations
    - Professional/voluntary organizations
    - Private sector organizations.
  - Trainers should have prior teaching/ training experience and be familiar with and able to relate to the practice experiences of the audience. They should be familiar with and be able to employ adult learning principles (section III on Page 9).
  - Trainers should have proficient English language skills.
  - Those identified as potential trainers should plan on attending the course when it is offered by the St. Louis PRC team in your state. **Attendance as a participant in this training is a prerequisite for serving in a faculty trainer role**.

- As opportunity and resources allow, work with NACDD or the St. Louis PRC to conduct core training in your state. See http://www.chronicdisease.org/?page=healthtraining&terms=%2522evidence+and+based+and+public+and+health%2522

Planning for Replication of the EBPH Course in Your State (after core training)[1]

- Designate a lead agency/unit, core planning team, and contact person who will be responsible for coordination of course replication.
- Engage stakeholders/ planning group (including potential trainers) who are invested in building the capacity of the public health workforce in your area.
- Agree on scope of state-based training (e.g., chronic disease/ health promotion only or broader?) Note: this decision may be dictated in part by funders/ leaders.
- Identify and prioritize appropriate participant populations in your state/region, e.g.,
  - Chronic disease prevention/ health promotion directors and key staff (program managers, epidemiologists, biostatisticians, analysts, health educators, planners and evaluators)
  - State public health personnel in related fields or whose buy-in is key
  - Partner groups, e.g., Prevention Research Center or other university partners, state and local health foundations, public health associations, training institutes, etc.
  - Personnel from other state and community based organizations
  - District/ local public health personnel
  - Representatives of underserved or disadvantaged populations.
- Confirm training team and determine process for working with them, individually and as a group, to finalize the course. Clarify roles and responsibilities associated with participating as faculty trainers. See Section III: Teaching Evidence Based Public Health.

  Trainers should be expected to provide information about their availability and willingness to participate in training programs and be willing to work with the NACDD consultant, local course organizers and fellow trainers to plan trainings. Trainers chosen should be asked to provide assurances (formally or informally) that they are committed to offering [a specified number of] trainings over [a specified timeframe]. *Note*: Course organizers may "mix and match" trainers for different trainings based on availability, expertise, audience needs, location and other factors.
- Agree on total time for training and training format; e.g., number of days, hours each day, consecutive or modular, in person or virtual, etc. The course can be offered on formats from 2.5 days to 4.5 days. Timeframe most often used is 3 to 3.5 days. Be sensitive to:
  - annual or seasonal cycles in funding and activity
  - location, travel time/cost, appropriateness of sites, feasible start and end times
  - religious holidays
- Confirm who will be making opening remarks, doing the welcome, introducing speakers

[1] NACDD Consultant provides technical assistance, materials and support for course replication.

II. Course Coordination and Logistical Support

Scheduling the Course (6-12 months prior to course offering)

- Develop a recruitment/ marketing strategy. Look for existing venues (e.g., state public health association meetings, other trainings, etc.) through which to create awareness.
- Plan the logistics for the course, including site selection (see "Space and Amenities"), travel arrangements, program material, food*, evaluation forms, CEUs, etc. Note: CEUs often require months of lead time. Investigate with accrediting organizations early if this is something you plan to offer.
- Establish a registration process. Allow plenty of lead time for registration; advertise the course **at least four months in advance**.
- In addition to name, gather participants' academic degree(s), program area of work, position, workplace, e-mail and phone. This information helps trainers know more about their audience and course developers know who this program reaches.
- **Clarify expectations regarding participation, attendance, follow up activities.** This is not a drop-in course; modules are integrated and build on each other. Encourage participants to register only if they can commit to the entire training. Certificates are provided to those who complete the entire course.

Space and Amenities

- The room matters—try to find a good training facility that also offers break-out space for small group activities, or a training room large enough to separate into small groups as needed. Group sizes generally range from 25-40. The size of the group is determined in part by the training space. If possible, choose a course location off site from the participants' job locations. Consider ease of access, parking, travel distance, etc.
- The ideal room would have:
  - Sufficient space for the number of people such that they don't feel crowded
  - Computers with internet access for all participants and one for the faculty (computers may be shared by two participants if necessary). Note: If participants can provide their own wireless enabled laptops, and the room has wireless capability, you may be able achieve some cost savings and also have more location choices. Make sure your facility has IT support in either case.
  - Adequate ventilation and ability to regulate temperature/ air flow
  - Good lighting, ability to control for AV presentation
  - Sufficient table/ desk space for participants, computers and class materials
  - Room layout that provides unobstructed view of presenters/ screen
  - White board or flip charts with appropriate markers/ erasers
  - Good acoustics such that people can hear trainers and each other without difficulty and/or noise interference. Microphone option if needed, or to accommodate speakers with soft voices
  - Accessible restrooms nearby
  - Space outside classroom for breaks/ lunch*
  - Easy access to places to walk during breaks/ lunch*

Course Materials

- 1 ½" 3-ring **binders** with pockets and cover sleeve for insertion of title page, 10-tab **dividers** (one for each of the 10 modules), **CDs or thumb drives** (for readings and copies of PowerPoint presentations)
- EBPH **textbooks** – one for each participant (*Evidence-Based Public Health*, 3rd Edition, Brownson et al, 2017)
- Pre- and post course evaluation (provided to course organizers). Note: questions of interest to state may be added as appropriate.
- CEU forms as appropriate (CHES, nursing, etc.)
- Course agenda
- Faculty bios
- Reading list
- Sign-up sheet for individual faculty-participant consultations, if offered
- Certificates of participation (template provided; recommend using certificate paper)
- "Training box" to include name tents; markers; dry erase marker for white board; pointer; paper for room signs; tape; sheet with contact information for facility, IT, food vendor, local contact persons, faculty and others as appropriate.

Materials Preparation

- Order all materials with sufficient lead time for assembly and distribution to training sites.
- Ask for presenters' PowerPoints, auxiliary material for class exercises and a short bio so that you have them about **three weeks prior** to the training. Be sure to specify the platform you are using, Mac or PC. Note: slides provided were developed on a PC.
- Standardize the PowerPoint backgrounds, credits, logos, and formatting. Spell check the slides and check any URL links embedded to ensure they still work; make sure that embedded screen shots are current.
- Review presentations and clarify any questions with faculty.
- View/ print one copy of slides (in black and white) and check each slide to make sure everything prints the same as it appears on the screen; make color/ formatting changes as necessary and save as "print copy" without changing the original for the screen. Number slides and print slides six to a page (three to a page if you want to leave space for notes), except for data or screen shot slides, which may be printed two to a page for legibility. Three-hole punch for notebooks.
- Print class exercise sheets. Colored paper makes it easy to find them in the notebook
- Print cover and back sheet for binders (samples provided)
- Burn CDs and label (e.g., EBPH, site and date) or save material on thumb drives
- Print ancillary materials: agenda, pre-course assessment, faculty bios, course evaluation, copies of CEU forms (as appropriate), certificates (sample provided)
- Binder contents will include:
    - Pre-course assessment (provided to course organizers)
    - Course agenda
    - Faculty bios

- PowerPoint presentations and any supplemental materials (handouts, class exercises)
- Reading list
- CD or thumb drive.

- Assemble binders such that each module is in its own tab; other materials can be placed in pockets, e.g., agenda, faculty bios, precourse assessment in front; CD or thumb drive and reading list in back pocket. Assemble enough for participants, faculty, and a few extra for unexpected guests.
- NOTE: Post-course evaluations and certificates are generally not placed in binders, but handed out the end of the last day. (You may elect to hand out thumb drives then too).
- If training is off-site, work with local contact people; consider sending books and binders to training sites ahead of time.

Support for Training Team

- Work with faculty trainers to prepare course materials (as above)
- Facilitate travel arrangement as needed (hotel, flights, cars, etc.). Provide any guidance about stipends (if offered) and covered expenses; be clear about whether expenses can be direct billed or if they must be reimbursed.
- Prepare logistics information for training team that includes:
  - Name and location of the training site
  - Name, location and confirmation numbers for lodging
  - Confirmation information for flights, car rentals, etc. as needed
  - Agenda for training; information about meals/ breaks
  - Contact information for coordinator and fellow trainers
  - Forms, instructions for processing expenses or fees as appropriate.
- A few days before the course: check the internet links that are used in the course to determine if the websites have been modified since last used.
- Day of course: load all PowerPoint presentations onto main computer and provide faculty with a full copy of the training binder.
- After the course: send faculty summaries of course evaluation.

Training Days

Site Coordinator

- Pre-arrange access to facility, and arrive early to set up.
- Connect with on-site staff and caterers. Know how to contact them throughout the day.
- Work with IT support staff to check out the AV and internet connections in the training room before the course begins. (Note: The speed of PowerPoint can be affected by the location of the file as well as its size. Presentation files should be placed on the desktop/ hard drive if possible. That said, presenters should always have a plan B for when the AV equipment doesn't work or internet isn't available).
- Check the sound system if using a microphone.
- Put up signs to direct participants to building/ room as needed.

- Set up a registration area with sign in sheet (with boxes to be initialed each day), any documents needed for CEUs, course binders and books for participants.
- Provide name tents and name tags with names written in large print with marker (or have participants make their own) so that faculty can read names.
- If possible, provide light, healthy refreshments at breaks and provide on-site lunch to facilitate networking and staying on time. Let people know of options for walking/ physical activity.
- Be available throughout to "host," troubleshoot, address participant needs, contact support people as needed, assist faculty, etc.

III. Teaching Evidence Based Public Health

Fidelity

Faculty trainers should be committed to maintaining the integrity of the training program. Implementation fidelity refers to how well a program is implemented in comparison with the original. Poor fidelity can result in a different course with unintended or unknown effects for trainers and participants. In replicating the EBPH program, fidelity requirements include:

- **Use of trainers who have themselves completed the EBPH training as a participant** (state-based or national course). Note: As a refresher, trainers are encouraged to view videotaped modules from a course taught by the PRC team in St. Louis. These are available from the NACDD consultant.
- Use of the framework from Chapter 1 in the EBPH text as the organizing construct for the course
- Maintaining course objectives (see Appendix)
- Maintaining sequence of modules and teaching all ten modules
- Use of course materials provided (may be tailored, as discussed below)
- Collaboration with EBPH faculty and/or NACDD consultant on proposed adaptations
- Attribution to the Prevention Research Center in St. Louis (e.g., on notebook face page or cover)

Implementation fidelity also allows flexibility to meet the needs of your audience. It is important to make the course relevant to and practical for your participants. Learn as much as you can about your audience prior to training: their level of knowledge and experience with the module topics, their information needs, and ways they might apply what they learn. This information and other factors such as current program or policy initiatives, available resources, training requirements, etc., will inform discussions about tailoring the course content.

To meet local needs while maintaining fidelity to the course, adaptations may be made to:

- Alter the format and timeframe for training (e.g., modules in successive weeks, via web-based teleconferencing, etc.)
- Customize the look of the materials
- Incorporate the most up-to-date local and state data in both the presentations and exercises

- Incorporate local program examples (in addition to or in place of those provided in the slides) as appropriate to underscore a key concept
- Adjust the level of complexity of a module(s) based on local assessment data.

Class Exercises

Class exercises and facilitator notes are also provided to the training team to use as is.

- If changes are proposed to the exercises:
  - Be sure the class exercises link well with module content
  - Develop exercises in content areas familiar to presenter
  - Create exercises that are locally relevant
- Have participants work in teams as often as possible to maximize learning from people with other experience and expertise, and to encourage teamwork and networking.

Note: Proposed changes to the content of modules or exercises should be made after discussion and in collaboration with EBPH faculty and/or the NACDD consultant.

For tips on creating effective PowerPoint presentations, see: "Effective Presentations: A Toolkit for Engaging an Audience" developed by the Northwest Center for Public Health Practice in partnership with the Network for Public Health Law: https://www.ag.ndsu.edu/evaluation/documents/effective-presentations-a-toolkit-for-engaging-an-audience

Team Teaching

Your presentation is part of a course, versus a stand-alone lecture. Modules build on each other. Training faculty bring different expertise and experience to the course, and the configuration of the training team may be different from one course to the next. Thus, in order for trainers to complement each other, to avoid duplication or gaps in coverage—and for the participants to perceive the course as "seamless"—communication and planning among the training team is essential.

Training Methods

- Use adult learning principles. In contrast to a series of lectures, this course is designed to be participatory. The goal is to facilitate participants' own learning and skill development. Trainers should be familiar with and comfortable with adult learning principles. Some resources:
  - "Effective Adult Learning: A Toolkit for Teaching Adults" developed by the Northwest Center for Public Health Practice in partnership with the Network for Public Health Law: https://www.ag.ndsu.edu/evaluation/documents/effective-adult-learning-a-toolkit-for-teaching-adults.
  - Global Learning Partners (Dialog Education): http://www.globallearningpartners.com/resources/downloadable-resources
- Never assume that everyone already knows the information that you are presenting.

- Go beyond lecture and PowerPoint to develop learning experiences that enhance participants' critical thinking skills – integrate case studies, interactive methods, self-directed exercises.
- Engage the class; they have a wealth of relevant experience on which to build.
- Don't be afraid to say "I don't know." You may then ask if others in the group can speak to the question or, if not, offer to try to find an answer.
- Focus more on application of the material to program and policy development than on the disciplines of epidemiology, behavioral science, or health economics. Do not engage in debate with participants over the finer points of theory, for example.
- Use real life stories and/or lessons learned in applying evidence based methods. If possible, include presentation of local projects (or portions of projects) that used evidence based methods.
- Find local/ state data sources available to this group—including quantitative and qualitative data—and incorporate those into your modules as appropriate.

<u>Cultural Humility</u>

- Be a role model. Understand your own cultural lenses and biases, show respect and appreciation for others' views, and convey information in a manner that is easily understood by diverse audiences.
- Build in data and program examples from diverse communities.
- Teach awareness. Address issues of how to gather and use data in ways that do not pre-judge or label people or communities.
- Look for opportunities to involve credible members of affected communities as co-trainers or presenters.

<u>Enhancing the Learning Environment</u>

- Make sure people either turn off their cell phones and pagers or put them on silent.
- Create an environment that encourages participants to meet new people and network.
- To avoid distraction, inform participants that they may use the computers for personal use on breaks, and ask them to turn the monitors off or to the side during presentations.

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*** Food/ Lunch**

Plan lunches/ snacks that are consistent with recommendations for healthy eating and that provide some choice. Survey participants ahead of time to find out if anyone has specific dietary restrictions or preferences. Offer non-sweetened drinks and avoid serving sodas. (Some states have policies regarding serving sugary drinks/soft drinks; check to see if your training site/ sponsor does.) Consider serving water in pitchers or from large containers to minimize the use of plastic bottles. Encourage and/or arrange for recycling of any recyclable items.

Appendix 1: Evidence-Based Public Health Course—Learning Objectives by Module

Module 1: Introduction

1. Understand the basic concepts of evidence-based decision making
2. Introduce some sources and types of evidence
3. Describe several applications within public health practice that are based on strong evidence and several that are based on weak evidence
4. Define some barriers to evidence-based decision making in public health settings

Module 2: Community Assessment

1. Understand importance of conducting a community assessment, including the role of coalitions / partnerships
2. Understand the types of data that are appropriate for assessing the needs and assets of the population/community of interest
3. Understand the major steps in the community assessment process

Module 3: Quantifying the Issue

1. To measure and characterize disease frequency in defined populations using principles of descriptive epidemiology and surveillance
2. To find and use various public health data sources for evidence-based decision making

Module 4: Developing a concise statement of the issue

3. Understand the criteria for the components of a sound problem statement
4. Develop a concise written statement of the public health problem, issue or policy under consideration in a measurable manner

Module 5: Searching and summarizing scientific literature

1. To understand the different types of reviews
2. To understand the process used in systematic reviews and become familiar the Community Guide
3. To become familiar with other web resources for public health systematic reviews
4. To develop skills for efficient and effective literature searches
5. To use recommended guidelines for searching the scientific literature

Module 6: Developing and prioritizing options

1. Identify methods for prioritizing program and policy options (Types 1, 2, and 3).
2. Explore the role of creativity and group processes in developing intervention options.
3. Introduce the role of group processes in adaptation of interventions.

Module 7: Economic evaluation

1. Understand the role and significance of EE to PH
2. Become familiar with common EE terms and be able to identify types of EE most often used in PH
3. Understand the steps involved in conducting an EE
    a) be able to choose an EE perspective and type of analysis appropriate for a PH intervention
    b) be able to identify and document relevant costs (direct and indirect) of a PH intervention
    c) be able to identify and document benefits and/or outcomes
    d) be able to incorporate EE results into intervention planning and evaluation
4. Be able to find and use available EE databases to inform policy or program decisions

Module 8: Developing an action plan and building a logic model

1. Identify key characteristics and principles in successful action planning
2. Understand when and how to adapt interventions for different communities, cultures, and settings
3. Identify the steps in action planning
4. Understand the purpose and use of logic models
5. Be able to construct a logic model worksheet

Module 9: Evaluating the program or policy

1. Understand the basic components of program evaluation
2. Understand the various types of evaluation designs useful in program evaluation
3. Understand the concepts of measurement validity and reliability
4. Understand the contributions of both quantitative and qualitative data to the evidence based process
5. Understand some of the methods used in qualitative evaluation
6. Understand ways to report and disseminate results
7. Be aware of organizational issues in evaluation

Module 10: Communicating and disseminating evidence to policy makers

1. Understand and appreciate the importance of effective communication to meet public health challenges.
2. Be aware of the principles of effective communication as applied to different audiences in general, and to policy makers in particular.
3. Acquire tools and resources to create and disseminate messages about evidence-based solutions on different platforms for diverse audiences.

Appendix 2: Background Readings on the Course (available on request)

Baker EA, Brownson RC, Dreisinger M, McIntosh LD, Karamehic-Muratovic A. Examining the role of training in evidence-based public health: a qualitative study. *Health Promot Pract* Jul 2009;10(3):342-348.

Brownson RC, Diem G, Grabauskas V, et al. Training practitioners in evidence-based chronic disease prevention for global health. *Promot Educ* 2007;14(3):159-163.

Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: A fundamental concept for public health practice. *Annu Rev Public Health* Apr 21 2009;30:175-201.

Brownson RC, Gurney JG, Land G. Evidence-based decision making in public health. *Journal of Public Health Management and Practice* 1999;5:86-97.

Brownson RC, Allen P, Duggan K, Stamatakis KA, Erwin PC. Fostering more-effective public health by identifying administrative evidence-based practices: a review of the literature. *Am J Prev Med* Sep 2012;43(3):309-319.

Dodson EA, Baker EA, Brownson RC. Use of evidence-based interventions in state health departments: a qualitative assessment of barriers and solutions. *J Public Health Manag Pract* 2010;16(6):E9-15.

Dreisinger M, Leet TL, Baker EA, Gillespie KN, Haas B, Brownson RC. Improving the public health workforce: evaluation of a training course to enhance evidence-based decision making. *J Public Health Manag Pract* Mar-Apr 2008;14(2):138-143.

Gibbert WS, Keating SM, Jacobs JA, et al. Training the workforce in evidence-based public health: an evaluation of impact among US and international practitioners. *Prev Chronic Dis* 2013;10:E148.

Hardy AK, Nevin-Woods C, Proud S, Brownson RC. Promoting Evidence-Based Decision Making in a Local Health Department, Pueblo City–County, Colorado. *Prev Chronic Dis* 2015;12:140507.

Jacob RR, Baker EA, Allen P, et al. Training needs and supports for evidence-based decision making among the public health workforce in the United States. *BMC Health Serv Res* 2014;14:564.

Jacobs JA, Jones E, Gabella BA, Spring B, Brownson RC. Tools for Implementing an Evidence-Based Approach in Public Health Practice *Prev Chronic Dis* 2012;9:110324.

Kaplan GE, Juhl AL, Gujral IB, Hoaglin-Wagner AL, Gabella BA, McDermott KM. Tools for identifying and prioritizing evidence-based obesity prevention strategies, Colorado. *Prev Chronic Dis* 2013;10:120275.

O'Neall MA, Brownson RC. Teaching evidence-based public health to public health practitioners. *Ann Epidemiol* Aug 2005;15(7):540-544.

Yarber L, Brownson CA, Baker E, Jacob R, Jones E, Baumann C, et al. Evaluating a train-the-trainer approach for improving capacity for evidence-based decision making. *BMC Health Services Research.* 2015;15(1):547.