

Evidence-Based Strategies Benefits and Challenges

NC-IOM Task Force on Implementing Evidence-Based
Strategies in Public Health

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Assisted by many.....



IF AN INTERVENTION WORKS

AND NOBODY CAN USE IT.....

DOES IT STILL MAKE AN IMPACT?



Bench to Bookshelf



A simple definition of evidence-based public health

- “Evidence-based public health is the process of integrating science-based interventions with community preferences to improve the health of populations.”

Evidence Dilemma

High expectations of practitioners to use evidence-based interventions, BUT....

Publication in a
peer review
journal

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Easily
disseminated and
implemented



Ultimate Impact of Magic Diet Pill

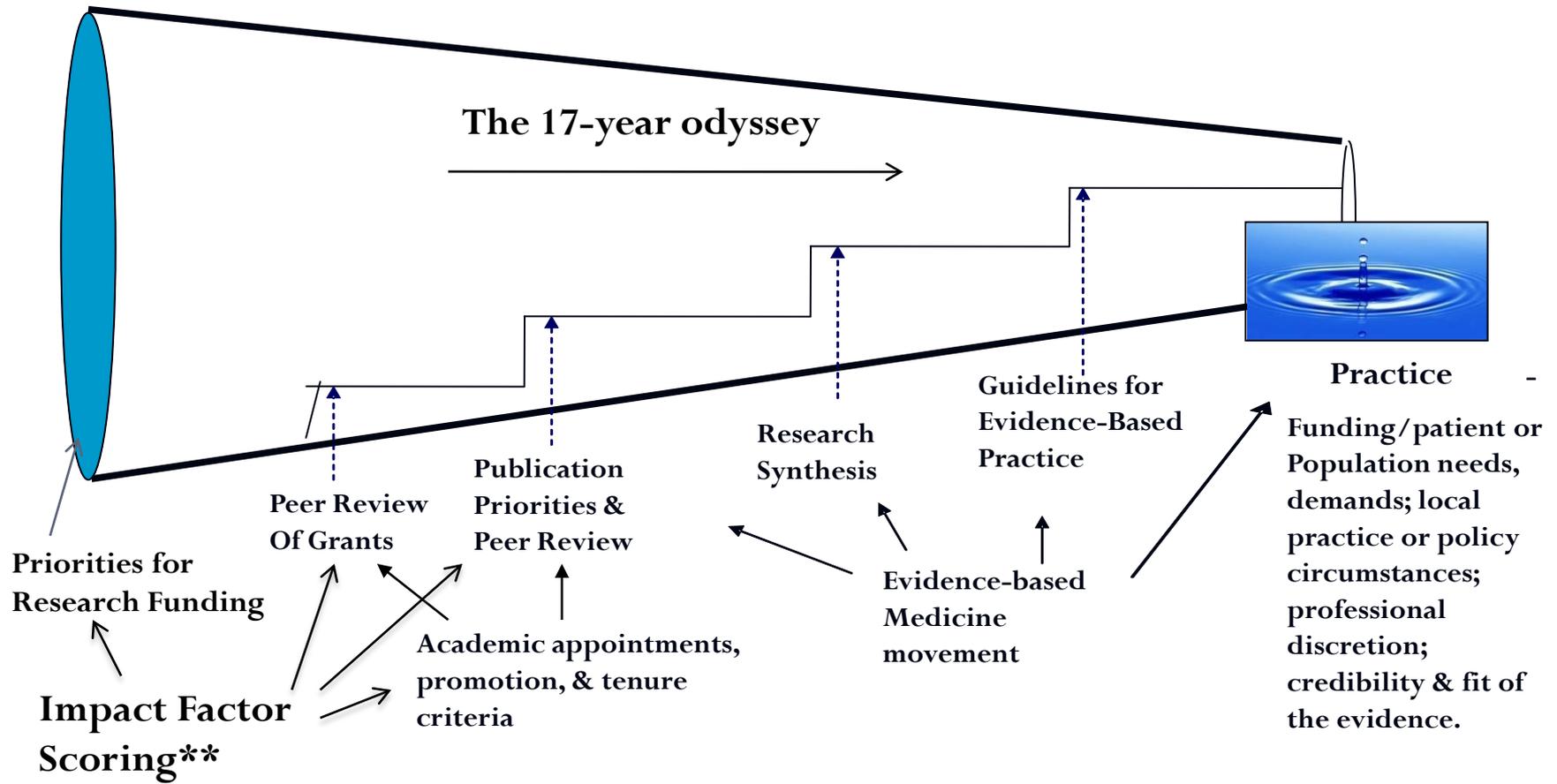
<u>Dissemination Step</u>	<u>Concept</u>	<u>% Impacted</u>
50% of Clinics Use	Adoption	50%
50% of Clinicians Prescribe	Adoption	25%
50% of Patients Accept Medication	Reach	12.5%
50% Follow Regimen Correctly	Implementation	6.2%
50% of Those Taking Correctly Benefit	Effectiveness	3.2%
50% Continue to Benefit After 6 Months	Maintenance	1.6%

Researcher-Practitioner Dilemma

- The Research “establishment” pushes us toward effective, internally valid interventions that may be worthless to practitioners.
- Practitioners, who know their environment and intended users best, don’t have the resources to translate “home grown”/externally valid interventions into EBIs



The Pipeline Fallacy of Producing & Vetting Research to Get Evidence-Based Practice*



*Green LW (2008). If it's an evidence-based practice, where's the practice-based evidence? *J Family Med* 25 ((suppl_1): 20-24; ***J Participatory Med* 2009;1(1).<http://jopm.org/index.php/jpm/article/view/16/31>.

Soooo...if there is MUCH need
but very little in the way of
evidence-based interventions that
are FEASIBLE for implementation
are we stuck??

Do we have to wait for the best
possible evidence?

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Do we ALWAYS need evidence before acting?

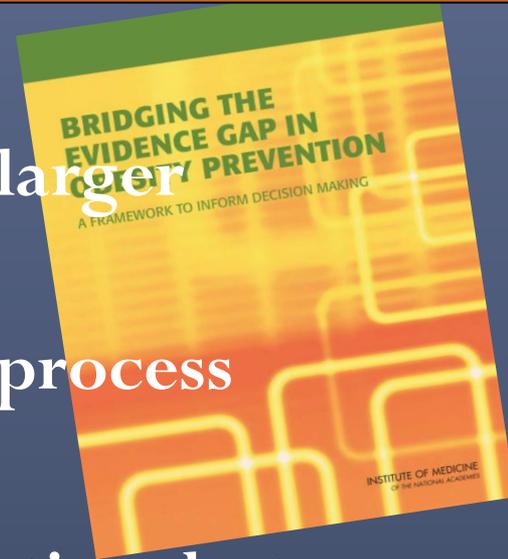
How would you design a randomized controlled trial to test whether parachutes save lives??

Would you use a parachute?



Problems Identified by IOM Report* (www.nap.edu)

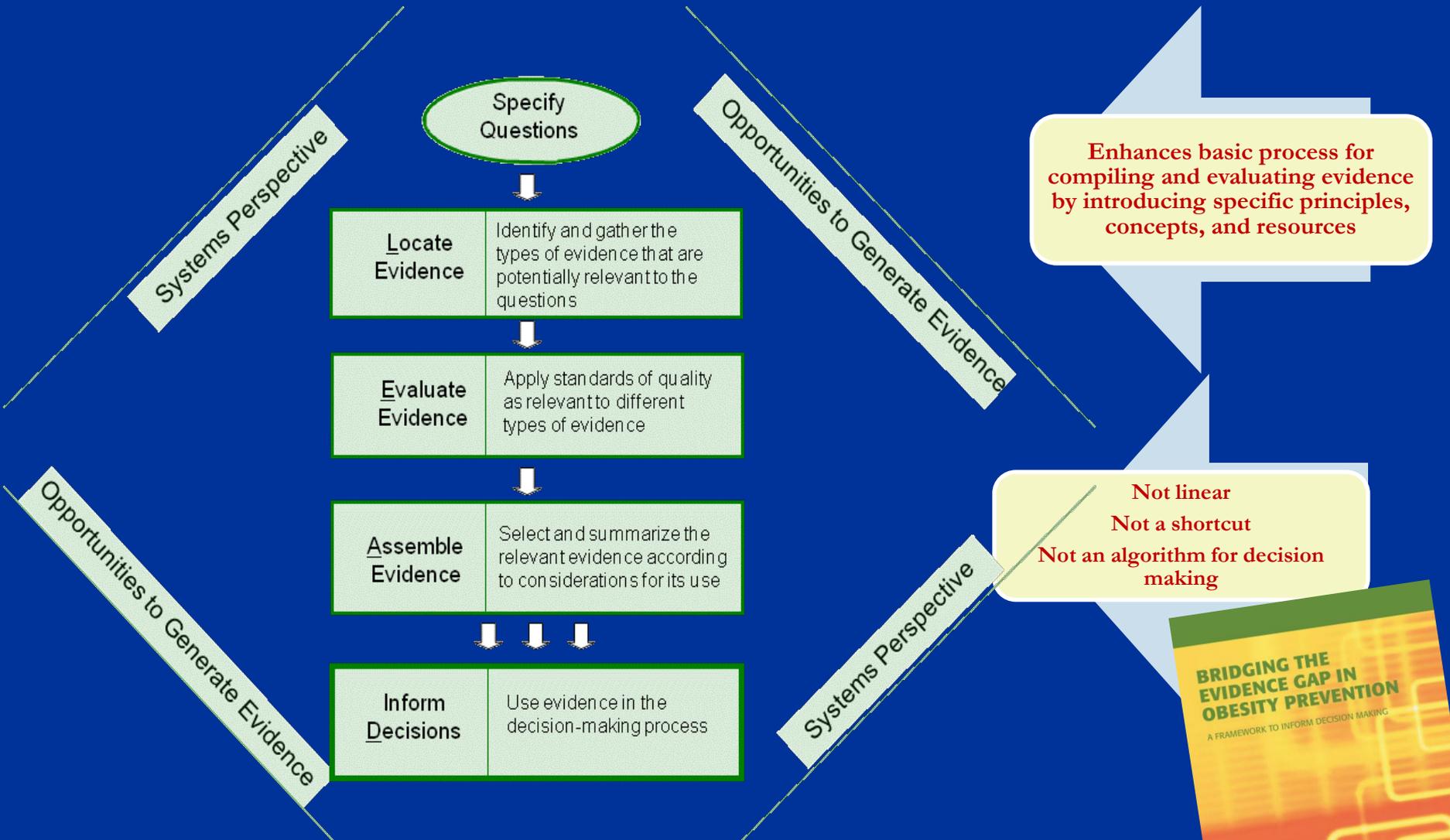
- **Narrow focus: Lack of attention to larger systems context**
- **Lacking details of implementation process**
- **Lack of relevance to real world**
- **Many studies focus on one intervention, but obesity may require a combination of interventions; in fact, some things appear not to work when tested alone, but are essential ingredients in a more comprehensive program**



*Institute of Medicine. *Bridging the Evidence Gap in Obesity Prevention: A Framework to Inform Decision Making*. Washington, DC: The National Academies Press, 2010.



The L.E.A.D. Framework



Institute of Medicine. *Bridging the Evidence Gap in Obesity Prevention*. Washington, DC: The National Academies Press, 2010.

What about terminology



From the NCCPHQ web site

Proven Practices: Successful programs or [processes](#) implemented in a local health agency or Division of Public Health (DPH) section which **have quantitative data** to show their effectiveness across multiple agencies or sections. These practices are highly likely to be effective in your setting if implemented consistently.

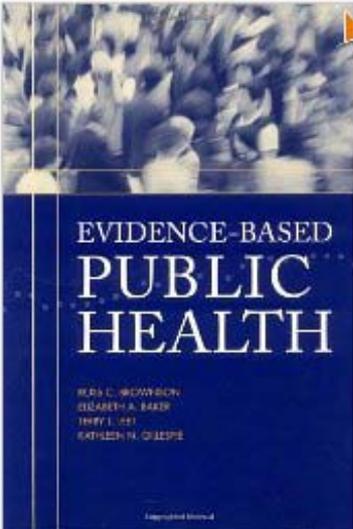
Promising Practices: Successful programs or processes implemented in a local health agency or DPH section which currently **do NOT have quantitative data** to show their effectiveness across multiple agencies or sections. However, they have qualitative or quantitative data suggesting their effectiveness in one local agency or section. These practices could be effective in your setting, but their effectiveness should be evaluated closely before full implementation.

So How about “Best” Practice?

The latest from CDC...

- **Emerging (E):** These practices are supported by field-based summaries or evaluations in progress that have plausible effectiveness, reach, feasibility, sustainability, and transferability.
- **Promising (P):** These practices are supported by intervention evaluations without peer review of practice or publication that have evidence of effectiveness, reach, feasibility, sustainability, and transferability.
- **Leading (L):** These practices are supported by intervention evaluations or studies with peer review of practice that have evidence of effectiveness, reach, feasibility, sustainability, and transferability.
- **Best (B), Proven, or EBP:** These practices are supported by intervention evaluations or studies with rigorous systematic review that have evidence of effectiveness, reach, feasibility, sustainability, and transferability.

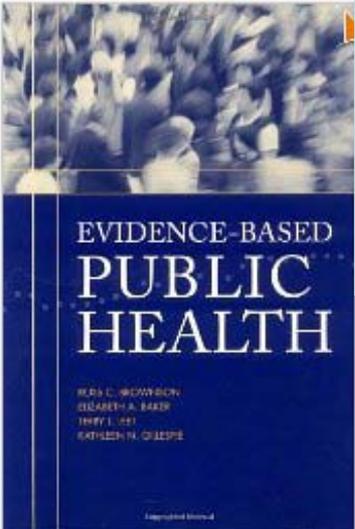
Ross Brownson on EBP



Sequential framework for addressing public health issues:

- Developing an initial statement of the issue,
- Quantifying the issue,
- Searching scientific literature & organizing information,
- Developing and prioritizing program options,
- Developing action plans & implementing interventions
- Evaluating the program or policy.

Ross Brownson on EBP



3 ways in which a public health program or policy may not reach goals for success:

- 1) Choosing an intervention approach whose effectiveness is not established
- 2) Achieving only weak, incomplete implementation or "reach," thereby failing to attain objectives;
- 3) Conducting an inadequate evaluation -> a lack of generalizable knowledge on the effectiveness
- 4) Inadequate attention to adapting an intervention to the population and context of interest

For policy...

“Laws are like sausages.
You should never watch them
being made.”

Honoré Mirabeau, 1918

Elements of evidence-based policy

- | Process
- | Content
- | Outcomes

Domains of Evidence-Based Public Health Policy

<i>Domain</i>	<i>Objective</i>	<i>Data Sources</i>
Process	To understand approaches to enhance the likelihood of policy adoption	<ul style="list-style-type: none">• Key informant interviews• Case studies
Content	To identify specific policy elements that are likely to be effective	<ul style="list-style-type: none">• Systematic reviews• Content analyses
Outcome	To document the potential impact of policy	<ul style="list-style-type: none">• Surveillance systems• Natural experiments tracking policy-related endpoints

What do policy makers want
or need from researchers?

Three Fundamental Questions

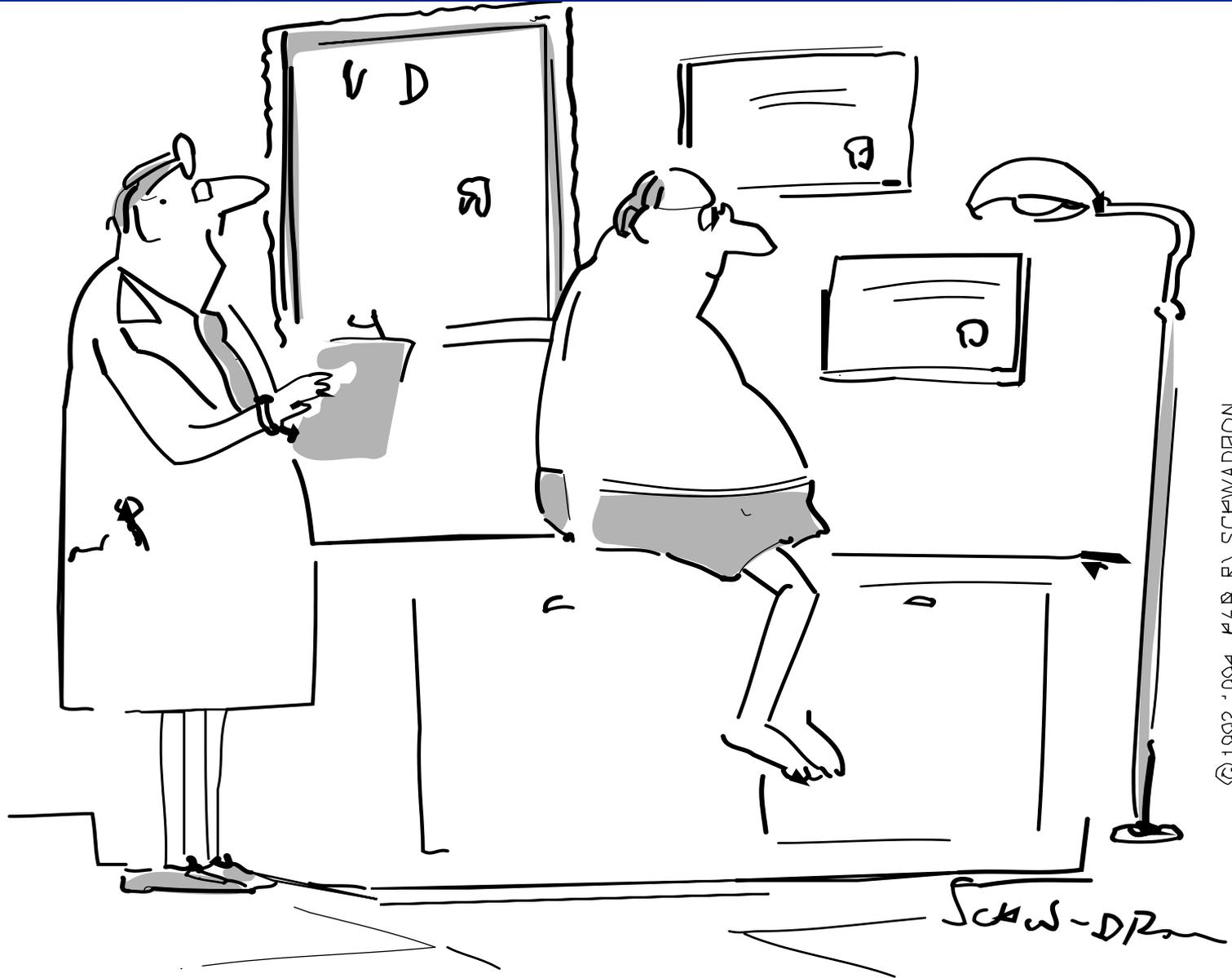
1. Is there a problem (what fuels it)?
 2. Do we know how to fix it (intervention)?
 3. How much will it cost (financially, politically)?
- What do all of these questions mean in the context of where we live and work [and the EVIDENCE]?

In other words –

“If we want more evidence-based practice
we need more practice-based evidence.”

Or.....

(Larry Green)



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Schw-DRon

“I want you to quit smoking and lose 35 pounds. Then I want you to come back and tell me how the hell you did it.”