Evidence-based Training Needs and Incentives Among State Public Health Practitioners

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Background

- Much chronic disease and cancer burden is preventable through effective application of evidence-based programs and policies (EBPPs) using evidence-based decision making (EBDM).
- EBDM is a decision-making process that involves applying best available evidence and requires a graduated skill set from practitioners.
- Despite growing availability of tools and support for EBDM, barriers remain including gaps in the availability of EBDM competencies

Research Questions

What are the gaps between importance and availability of EBDM skills reported by state public health practitioners working in chronic disease prevention?

Have the gaps between perceptions of skill importance and availability changed over time (2008-2013) for state public health practitioners?

What do state public health practitioners report as useful or would encourage them to practice EBDM in daily work?

Methods

Participants:

- Two separate online national surveys were carried out with state public health practitioners working in chronic disease June-August of 2008 (n=469, 65% response) and March-May of 2013 (n=1169, 77% response) from all 50 states and the District of Columbia.
- For both survey years, most participants were female (80%) and mostly program managers or directors (>60%). More than half (>51%) were 50 years of age or older for both survey years. Mean number of years in public health was similar across survey years (~9 years). Slightly higher percentages of participants had a public health background in 2013 (38%) vs. 2008 (30%) (p<.01).

EBDM Training gaps:

- Participants rated both the importance and availability of 10 skills for EBDM (11-point Likert scale). Two items which did not overlap between surveys years were excluded from analyses.
- Gap scores were created by subtracting perceived availability scores from perceived importance. SPSS was used to compare mean gap scores between 2008 and 2013 cohorts of state public health practitioners.
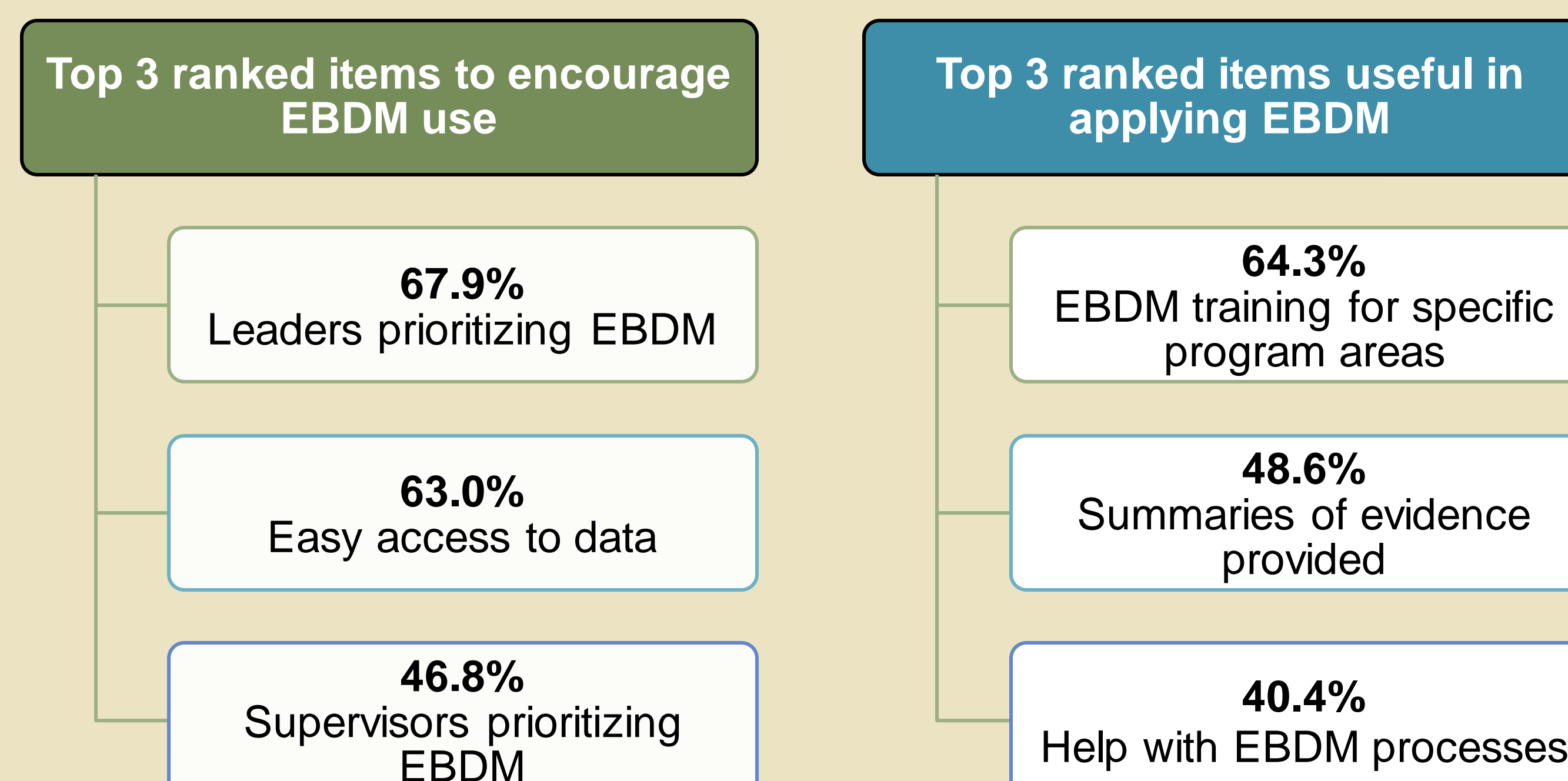
EBDM Incentives:

- Participants from the 2013 cohort ranked items to encourage EBDM use in their work as well as items that would be useful for the application of EBDM.
- The percentage of practitioners ranking each item among their top three for encouragement and usefulness for application of EBDM was calculated.

Table 1. State public health practitioner EBDM skill importance, availability, and gaps five year comparison.

EBDM Skill/Competency	2008 survey (n=441) Mean Gap (rank)[I]	2013 survey (n=904) Mean Gap (rank)
Economic evaluation: Understand how to use economic data in the decision making process.	4.18 **(1)**	4.02 **(1)**
Communicating research to policy makers: Understand how to define the health issue according to the needs and assets of the population/community of interest.	3.76 **(2)**	3.07 **(2)*** *
Adapting Interventions: Understand how to modify programs and policies for different communities and settings.	2.92 **(3)**	2.79 **(3)**
Evaluation designs: Understand the different designs that are useful in program or policy evaluation.	2.53 **(4)**	2.34 **(4)**
Qualitative evaluation: Understand the value of qualitative evaluation approaches (e.g. focus groups) including the steps involved in conducting qualitative evaluations.	2.38 **(5)**	2.13 **(6)**
Prioritization: Understand how to prioritize program and policy options	2.24 **(6)**	2.28 **(5)**
Quantitative evaluation: Understand the uses of quantitative evaluation approaches (e.g. surveillance and/or surveys).	2.15 **(7)**	1.60 **(7)*** *
Action planning: Understand the importance of developing an action plan for how to achieve goals and objectives.	1.76 **(8)**	1.27 **(8)*** *
Total Overall Gap	2.74	2.44*

[I]**(rank)** 1=largest gap
*p<.01, **p<.001

Figure 1. Items most often ranked among top 3 for encouragement of EBDM use and usefulness for application . *Percentages equal the % of participants who ranked item in top 3 and do not sum to 100%.*

Top 3 ranked items to encourage EBDM use

- **67.9%** Leaders prioritizing EBDM
- **63.0%** Easy access to data
- **46.8%** Supervisors prioritizing EBDM

Top 3 ranked items useful in applying EBDM

- **64.3%** EBDM training for specific program areas
- **48.6%** Summaries of evidence provided
- **40.4%** Help with EBDM processes

Results

- Largest 4 skill gaps were identical for both survey years (Table 1).
- The overall reported mean gap was significantly smaller for the 2013 cohort.
- Significantly smaller gaps were found in communicating research to policy makers, quantitative evaluation, and action planning among the 2013 cohort.
- The highest percentage of participants ranked EBDM training for specific program areas, summaries of evidence provided, and help with EBDM processes among their top 3 most useful for applying EBDM (Figure 1.)
- Participants ranked leaders prioritizing EBDM, easy access to data, and supervisors prioritizing EBDM most often in their top three for encouragement of EBDM use.

Discussion

- Findings suggest an overall narrowing of EBDM skill gaps within the past five years.
- Largest areas for skill gaps remain consistent (economic evaluation, communicating research to policy makers, adapting interventions) suggesting special focus of EBDM skill training efforts among these areas.
- Limitations to this study include self-report and use of different survey samples.
- More exploration into potential factors which may influence EBDM skill gaps is needed to understand larger trends in narrowing skill gaps as well as examining how best to address remaining skill gaps.

Public Health Impact

- Recommend increased EBDM training specific to program areas as a federal fund grantee requirement as well as improved approaches for leaders' prioritization of EBDM as means to potentially increase EBDM utilization by state health department workforce.
- Future efforts to increase capacity for and the use of EBDM can utilize these findings to guide training foci and/or curricula.
- State health departments can use these findings to address remaining challenges to EBDM use through organizational efforts (e.g. leader/ supervisor prioritization of EBDM, making data and summaries of evidence more readily available for staff, and providing program specific EBDM training to staff)
- Findings can also be used by a broader group (beyond state health departments) interested in EBDM guided prevention efforts to inform future research and strategies to prepare the public health workforce.

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