Background
Organizations have called for a focus on implementing evidence-based interventions (EBIs); however, there is a gap between the dissemination of EBIs and their implementation into public health practice. Local health department (LHD) practitioners can use evidence-based decision making (EBDM), the process by which organizations choose and implement an EBI, to enhance EBI delivery.

Methods
Study Design
• Cross-sectional study using random sampling to invite one individual from US LHDs that implemented diabetes, BMI screening, nutrition, or physical activity efforts

Measures
• Self-report survey detailing LHD characteristics, organizational supports, and EBI delivery
• Organizational supports for EBDM were grouped into 6 factors and 22 items: (1) awareness of EBDM (4 items), use of EBDM (7 items), resources available for maintaining EBDM (3 items), EBDM climate (4 items), evaluation capacity (5 items), partnerships to support EBDM (4 items)

Data Analyses
• Confirmatory factor analysis was conducted to confirm the validity of the six factors (MPlus version 8)
• Items were dropped and inter-item covariance terms were added based on modification indices

Logistic regressions quantified associations between EBDM factors and delivery of EBIs (SAS version 9.4)

Results
1. Respondents and LHDs represented a wide variety of backgrounds and organization types.

2. The final factor structure had good fit and was made up of 6 factors and 22 items. (χ²/df=0.569, RMSEA=0.073, CFI=0.965)

3. Organizational supports were positively associated with delivery of EBIs, adjusted for PHAB accreditation.

Limitations
• Self-reported information
• Response bias

Strengths
• Theory-based development and empirical testing
• Representation of a variety of LHDs across the country

Discussion and Conclusions
• Measures with sound psychometric properties are critical to:
  • understanding how public health departments support EBDM
  • evaluating interventions aimed at improving the capacity of LHDs to support EBDM
  • guiding the development of evidence-based policies to support EBDM within LHDs

Promoting EBDM can enhance the translation of research into public health practice, the overall performance of LHDs, and eventually the health of the populations they serve

Acknowledgements
• Leaders and members from the 376 LHDs who participated in the survey
• National Association of County & County Health Officials (NACCHO)
• Missouri Association of Local Public Health Agencies (MoALPHA)
• This study is funded by the National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health under award numbers 5R01DK109913, 1P30DK092950, and P30DK020579.
• Informational resources (e.g. academic journals, guidelines, and toolkits) are available to my work group/division to promote the use of EBDM.
• My work group/division engages a diverse external network of partners that share resources to facilitate EBDM.
• Stable funding is available for EBDM.
• My work group/division plans for evaluation of interventions prior to implementation.
• My work group/division uses evaluation data to monitor and improve interventions.
• My work group/division distributes intervention evaluation findings to other organizations that can use our findings.

• I use EBDM in my work.
• My direct supervisor expects me to use EBDM.
• My performance is partially evaluated on how well I use EBDM in my work.
• My work group/division currently has the resources (e.g. staff, facilities, partners) to support application of EBDM.
• The staff in my work group/division has the necessary skills to carry out EBDM.
• The majority of my work group/division’s external partners support use of EBDM.
• Top leadership in my agency encourages use of EBDM.
• I am provided the time to identify evidence-based programs and practices.
• My direct supervisor recognizes the value of management practices that facilitate EBDM.
• My work group/division offers employees opportunities to attend evidence-based-decision making trainings.

Organizational Supports for EBDM

Awareness of culture supportive of EBDM

Capacity and expectations for EBDM

Evaluation Capacity

Resource Availability
• My work group/division has access to evidence-based decision making information that is relevant to community needs.
• When decisions are made within my work group/division, program staff members are asked for input.
• Information is widely shared in my work group/division so that everyone who makes decisions has access to all available knowledge.
• My agency is committed to hiring people with relevant training or experience in public health core disciplines (e.g. epidemiology, health education, environmental health).
• My agency has a culture that supports the processes necessary for EBDM.

• Our collaborative partnerships have missions that align with my agency.
• It is important to my agency to have partners who share resources (money, staff time, space, materials).
• It is important to my agency to have partners in healthcare to address population health issues.
• It is important to my agency to have partners in other sectors (outside of health) to address population health issues.

• My work group/division supports community needs assessments to ensure that evidence-based decision making approaches continue to meet community needs.
• My work group/division plans for evaluation of interventions prior to implementation
• My work group/division uses evaluation data to monitor and improve interventions.
• My work group/division distributes intervention evaluation findings to other organizations that can use our findings.

• Informational resources (e.g. academic journals, guidelines, and toolkits) are available to my work group/division to promote the use of EBDM.
• My work group/division engages a diverse external network of partners that share resources to facilitate EBDM.
• Stable funding is available for EBDM.

• I am provided the time to identify evidence-based programs and practices.
• My direct supervisor recognizes the value of management practices that facilitate EBDM.
• My work group/division offers employees opportunities to attend evidence-based-decision making trainings.
• Top leadership in my agency (e.g., director, assistant directors) recognizes the value of evidence-based decision-making.

• I use EBDM in my work.
• My direct supervisor expects me to use EBDM.
• My performance is partially evaluated on how well I use EBDM in my work.
• My work group/division currently has the resources (e.g. staff, facilities, partners) to support application of EBDM.
• The staff in my work group/division has the necessary skills to carry out EBDM.
• The majority of my work group/division's external partners support use of EBDM.
• Top leadership in my agency encourages use of EBDM.
Factor 1: Awareness of culture supportive of EBDM

Item 1: I am provided the time to identify evidence-based programs and practices.
Item 2: My direct supervisor recognizes the value of management practices that facilitate EBDM.
Item 3: My work group/division offers employees opportunities to attend evidence-based-decision making trainings.
*Item 4: Top leadership in my agency (e.g., director, assistant directors) recognizes the value of evidence-based decision-making.

Factor 2: Capacity and expectations for EBDM

Item 5: I use EBDM in my work.
Item 6: My direct supervisor expects me to use EBDM.
Item 7: My performance is partially evaluated on how well I use EBDM in my work.
Item 8: My work group/division currently has the resources (e.g. staff, facilities, partners) to support application of EBDM.
Item 9: The staff in my work group/division has the necessary skills to carry out EBDM.
Item 10: The majority of my work group/division’s external partners support use of EBDM.
Item 11: Top leadership in my agency encourages use of EBDM.

Factor 3: Resource Availability

Item 12: Informational resources (e.g. academic journals, guidelines, and toolkits) are available to my work group/division to promote the use of EBDM.
Item 13: My work group/division engages a diverse external network of partners that share resources to facilitate EBDM.
Item 14: Stable funding is available for EBDM.

Factor 4: Evaluation Capacity

*Item 15: My work group/division supports community needs assessments to ensure that evidence-based decision making approaches continue to meet community needs.
Item 16: My work group/division plans for evaluation of interventions prior to implementation.
Item 17: My work group/division uses evaluation data to monitor and improve interventions.
Item 18: My work group/division distributes intervention evaluation findings to other organizations that can use our findings.

Factor 5: EBDM Climate Cultivation

*Item 19: My work group/division has access to evidence-based decision making information that is relevant to community needs.
*Item 20: When decisions are made within my work group/division, program staff members are asked for input.
Item 21: Information is widely shared in my work group/division so that everyone who makes decisions has access to all available knowledge.
Item 22: My agency is committed to hiring people with relevant training or experience in public health core disciplines (e.g. epidemiology, health education, environmental health).
Item 23: My agency has a culture that supports the processes necessary for EBDM.

Factor 6: Partnerships to Support EBDM

*Item 24: Our collaborative partnerships have missions that align with my agency.
Item 25: It is important to my agency to have partners who share resources (money, staff time, space, materials).
Item 26: It is important to my agency to have partners in healthcare to address population health issues.
Item 27: It is important to my agency to have partners in other sectors (outside of health) to address population health issues.
Background

The purpose of this study was to: 1. Describe self-reported Local Health Department frequency of and reasons for mis-implementation among a national sample of LHD chronic disease directors. 2. Explore associations between perceived organizational supports for evidence-based processes and mis-implementation.

Methods

Study Design
- Cross-sectional study using random sampling to invite one individual from each included U.S. LHD
- Preliminary survey to stepped-wedge intervention to train LHD leaders on EBPH/EBDM
- Sample was recruited based on jurisdiction population size

Measures
- Online survey administered August-September, 2017 among 579 LHDs across the United States to assess their use of evidence-based practices in Chronic Disease Prevention
- Organizational Supports for Evidence-Based Decision Making (EBDM) were categorized into a conceptual framework of 6 factors using M-Plus.

Data Analyses
- Multivariate logistic regression was used to identify predictors of mis-implementation among a national sample of LHD chronic disease directors.

Results

1. Insert summary statement about participant/LHD characteristics

   - Participant Characteristics
   - Most respondents were female (83.2%)
   - 46.4% were in leadership positions
   - 58.2% had graduate degrees in any field whereas 31.8% had a public health graduate degree
   - 39.8% have worked in public health for ≥20 years

2. Insert summary statement about reasons for mis-implementing

   - Figure to show both types of MI

3. Insert summary statement about organizational supports

Discussion

- Organizational supports for EBPH may help LHDs avoid continuing programs that should end.
- D&I researchers can:
  - Help LHDs evaluate programs
  - Find more effective alternatives
  - Help identify supports for de-implementation of ineffective programs
  - Inform decision-makers on how resources can be better directed towards scaling of evidence-based programs.

Limitations

- Self-reported information.
- Cross-sectional design

Implications for D&I Research

- Leaders and members from the 376 LHDs who participated in the survey
- National Association of County & County Health Officials (NACCHO)
- Missouri Association of Local Public Health Agencies (MoALPHA)
- This work was supported by the National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health (NIH) (5R01DK109913, 2P30DK092949, P30DK092950

Acknowledgements

- Contact: Mackenzie Robinson, m.robinson@wustl.edu — Renee Parks, renee.parks@wustl.edu — Ross Brownson, rbrownson@wustl.edu
Predictors of Mis-implementation: A U.S. National Survey of Local Health Department Chronic Disease Directors

Mackenzie Robinson, BA1; Peg Allen, PhD1; Renee G. Parks, MS, MPH1; Rebekah Jacob, MSW/MPH1; Stephanie Mazzucca, PhD1; Margaret Padek, MSW/MPH1; Ross C. Brownson, PhD 1,2

1Prevention Research Center, Brown School, Washington University in St. Louis; 2Division of Public Health Sciences, Washington University School of Medicine

Discussion

Contact: Mackenzie Robinson, m.robinson@wustl.edu — Renee Parks, renee.parks@wustl.edu — Ross Brownson, rbrownson@wustl.edu

- Organizational supports for EBPH may help LHDs avoid continuing programs that should end.
- D&I researchers can:
  - help LHDs evaluate programs
  - find more effective alternatives
  - help identify supports for de-implementation of ineffective programs,
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Limitations

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Background

The purpose of this study was to:
1. Describe self-reported Local Health Department frequency of and reasons for mis-implementation among a national sample of LHD chronic disease directors
2. Explore associations between perceived organizational supports for evidence-based processes and mis-implementation
- With Local Health Departments (LHDs) being at the forefront of public health efforts in most communities, they are key in the prevention of chronic diseases.
- Public health programs, policies, and services are the subject of mis-implementation, defined as:
  1. Ending effective programs that should continue (inappropriate termination), or
  2. Continuing ineffective programs that should end (inappropriate continuation)
- Funding of chronic disease prevention programs, policies, and services is in constant flux and is highly dependent on “flow-through” funds from federal and state agencies and private foundations.

Methods

Study Design
- Cross-sectional study using random sampling to invite one individual from each included U.S. LHD
- Preliminary survey to stepped-wedge intervention to train LHD leaders on EBPH/EBDM
- Sample was recruited based on jurisdiction population size

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- Online survey administered August—September, 2017 among 579 LHDs across the United States to assess their use of evidence-based practices in Chronic Disease Prevention
- Organizational Supports for Evidence-Based Decision Making (EBDM) were categorized into a conceptual framework of 6 factors using M-Plus.

Data Analyses
- Multivariate logistic regression was used to identify

Results

1. <Insert summary statement about participant/LHD characteristics>

  Participant Characteristics
  - Most respondents were female (83.2%)
  - 46.4% were in leadership positions
  - 58.2% had graduate degrees in any field whereas 31.8% had a public health graduate degree
  - 39.8% have worked in public health for ≥ 20 years

2. <Insert summary statement about reasons for mis-implementing>

3. <Insert summary statement about organizational supports>

Figure to show both types of MI

Figure to show LHD characteristics

Contact: Mackenzie Robinson, m.robinson@wustl.edu — Renee Parks, renee.parks@wustl.edu — Ross Brownson, rbrownson@wustl.edu
Purpose
1. Describe self-reported Local Health Department frequency and reasons for mis-implementation among a national sample of LHD chronic disease directors
2. Explore associations between perceived organizational supports for evidence-based processes and mis-implementation

Methods
• An online survey was administered from August-September, 2017 among employees from 579 LHDs across the United States to assess their use of evidence-based practices in Chronic Disease Prevention.
• Organizational Supports for Evidence-Based Decision Making (EBDM) were categorized into a conceptual framework of 6 factors using M-Plus.

Results: Participant and LHD Characteristics
• Response rate was 64.9%, n=376

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Inappropriate termination</th>
<th>P-value</th>
<th>Inappropriate continuation</th>
<th>P value</th>
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</thead>
<tbody>
<tr>
<td>State health department</td>
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<td></td>
<td>47.7%</td>
<td>&lt;.001</td>
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<td>Female</td>
<td>84.4%</td>
<td></td>
<td>79.3%</td>
<td>.74</td>
</tr>
<tr>
<td>Master’s degree or doctorate in any field</td>
<td>64.9%</td>
<td></td>
<td>64.1%</td>
<td>.86</td>
</tr>
<tr>
<td>Age ≥ 50 years</td>
<td>42.4%</td>
<td></td>
<td>50.1%</td>
<td>.02</td>
</tr>
<tr>
<td>Program manager position</td>
<td>50.0%</td>
<td></td>
<td>47.6%</td>
<td>.74</td>
</tr>
</tbody>
</table>

Results: Reasons for Mis-implementing
• More than a third of the LHDs were not accredited/unsure of accreditation status (Figure 1).
• After controlling for size of population served, governance category, and US Region, PHAB accreditation proved to be a significant predictor of LHDs that continued programs which should have ended (Table 1).

Background
• With Local Health Departments (LHDs) being at the forefront of public health efforts in most communities, they are key in the prevention of chronic diseases.
• Public health programs, policies, and services are the subject of mis-implementation, defined as:
  1. Ending effective programs that should continue (inappropriate termination), or
  2. Continuing ineffective programs that should end (inappropriate continuation)
• Funding of chronic disease prevention programs, policies, and services is in constant flux and is highly dependent on “flow-through” funds from federal and state agencies and private foundations.

Study Design
• Cross-sectional study using random sampling to invite one individual from each included U.S. LHD
• Inclusion Criteria: "Person responsible for making decisions about chronic disease prevention and control" from LHDs that screened for diabetes/body mass index, or conducted/contracted for population-based nutrition and physical activity efforts

Results: Organizational Supports
• More than a third of the LHDs were not accredited/unsure of accreditation status (Figure 1).
• After controlling for size of population served, governance category, and US Region, PHAB accreditation proved to be a significant predictor of LHDs that continued programs which should have ended (Table 1).
**Purpose**
1. Describe self-reported Local Health Department frequency of and reasons for mis-implementation among a national sample of LHD chronic disease directors
2. Explore associations between perceived organizational supports for evidence-based processes and mis-implementation

**Background**
- With Local Health Departments (LHDs) being at the forefront of public health efforts in most communities, they are key players in the fight against many public health concerns, including the prevention of chronic diseases.
- LHDs are encouraged to practice Evidence-Based Public Health in order to reduce poor health outcomes among the population they serve.
- The Public Health Accreditation Board (PHAB) outlines 10 domains of responsibilities for LHDs to operate by that require them to continually assess their programs and use existing evidence to implement appropriate programs for their communities.
- However, due to various reasons, many programs are the subject of mis-implementation, defined by Brownson et al. (2015) as the continuation of ineffective programs and the discontinuation of effective programs.

**Methods**
- An online survey was administered from August-September, 2017 among employees from 376 LHDs across the United States answered questions that assessed their use of evidence-based practices in Chronic Disease Prevention.
- LHDs were dichotomized into high and low mis-implementing groups:
  - "High mis-implementers" were classified as LHDs that answered "sometimes/often/always" to the questions: How often do programs end that should have been continued & How often do programs continue that should have ended?
  - "Low mis-implementers" were classified as LHDs that answered "never/rarely" to the questions: How often do programs end that should have been continued & How often do programs continue that should have ended?
- Logistic regression was used to identify if PHAB Accreditation is a significant predictor of "high mis-implementers."

**Results**
- More than a third of the LHDs were not accredited/unsure of accreditation status (Figure 1).
- After controlling for size of population served, governance category, and US Region, PHAB accreditation proved to be a significant predictor of LHDs that continued programs which should have ended (Table 1).
- However, this model did not produce significant results for LHDs that ended programs when they should have continued (Table 1).

**Discussion**
- We found that respondents from LHDs that were PHAB accredited were 2 times more likely to say that programs continued when they should have ended.
- The findings imply that employees from accredited LHDs are more in-tune with program assessment and evaluation and are therefore more likely to report on mis-implementation.
- Limitations of the model include the nature of self-reported information, cross-sectional designs, and the ability to generalize results to the larger LHD population.
- Further research is needed to:
  A) Identify and control for other factors that may contribute to program mis-implementation.
  B) Define specific attributes of program mis-implementation in chronic disease prevention.

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**Table 1 – Participant and Local Health Department (LHD) characteristics by perceived mis-implementation**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>OR</th>
<th>95% CI</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
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<td>Jurisdiction</td>
<td>1.00</td>
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<td>1.00</td>
<td>1.00 – 1.00</td>
</tr>
<tr>
<td>Population</td>
<td>1.93</td>
<td>*</td>
<td>1.29</td>
<td>**</td>
</tr>
<tr>
<td>Governance Category</td>
<td>0.43</td>
<td>0.20 – 0.82</td>
<td>0.78</td>
<td>0.47 – 1.39</td>
</tr>
<tr>
<td>US Region</td>
<td>1.19</td>
<td>0.79 – 1.78</td>
<td>0.92</td>
<td>0.70 – 1.20</td>
</tr>
<tr>
<td>PHAB Accreditation</td>
<td>1.67</td>
<td>0.56 – 3.19</td>
<td>2.08**</td>
<td>1.19 – 3.63</td>
</tr>
</tbody>
</table>

* χ² df
5.59 1
11.00

**Contact Information**
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Renee Parks: renee.parks@wustl.edu