

# A Logic Model for Evaluating the Academic Health Department Julie H. Grubaugh, MPH, CHES<sup>1</sup>; Paul C. Erwin, MD, DrPH<sup>2</sup>; Clea A. McNeely, DrPH<sup>2</sup>; Jennifer L. Valentine, MSN, RN<sup>3</sup>; Mark D. Miller, MS<sup>3</sup>; Martha L. Buchanan, MD<sup>3</sup> 1 Joint Appointment: University of Tennessee, Knoxville and Knox County Health Department of Public Health, Knoxville; 3 Knox County Health Department, Knoxville, Tennessee

## Background

Academic Health Departments (AHDs) are collaborative partnerships between academic programs (i.e.-MPH program) and practice settings (i.e.-health department)

### What we know

 Case studies tell us how AHDs are developed and describe common activities

### What we don't know

- How do you evaluate AHDs?
- Do these relationships matter?

## **Research Objective**

- Describe general theory of change logic model for how AHDs impact public health at the community level
- Identify potential research questions
- Provide specific AHD logic model for our AHD, located in Knoxville, TN





## Methods

- Used generalized logic model as a foundation
- Created **specific logic model** for our AHD
- Developed evaluation tool
  - Identified metrics and frequency of data collection for items on logic model
  - Used iterative, participatory process led by faculty member with evaluation expertise carried out through AHD steering committee
  - Evaluated specific AHD using the evaluation tool

## Findings

AHDs may facilitate administrative evidence-based practices recently identified in public health practice, including:

- Workforce development
- Leadership support of evidence-based decision making
- A learning orientation of public health practice staff
- Enhancing organizational relationships

# **Generalized Logic Model**



# **Specific Logic Model**

#### **Academic Health Department Logic Model** partment and University of Tennessee. Department of Public Health

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES
Shared internship coordinator Memorandum of understanding Joint appts for KCHD and UT leadership Joint membership on committees in both organizations	<ul> <li>Centralized intern and volunteer coordination:</li> <li>Volunteer facilitation</li> <li>Intern placements</li> <li>Contracts</li> <li>Monitoring and evaluation</li> <li>Good match between interns and placement</li> <li>Detailed planning for how interns can help KCHD reach goals</li> <li>High satisfaction with internship by UT students and KCHD preceptors</li> <li>KCHD staff intern requests are filled</li> <li>Volunteers facilitated for regular KCHD events</li> </ul>	<ul> <li>Undergraduate interns enroll in MPH program (inspired by exp. at KCHD)</li> <li>KCHD program capacity enhanced by student contributions</li> <li>KCHD recruits new employees who have been interns, volunteers or MPH alumni</li> </ul>	
Explicit expectations from leadership for collaboration among all levels of employees at both organizations		Administrative support results in time savings for KCHD staff	<ul> <li>Students have appropriate skills to enter public health work force</li> </ul>
Support for innovation and an orientation toward learning	<ul> <li>KCHD staff teach at UTK:</li> <li>Lectures</li> <li>Courses</li> <li>KCHD is locus of service learning</li> <li>MCHD staff teach at UTK:</li> <li>Lectures</li> <li>Courses</li> <li>KCHD is locus of service learning</li> <li>MPH students understand p.h. practice</li> <li>KCHD staff understand academic program</li> <li>MPH students satisfied with exposure to public health practice</li> <li>Strong relationships between faculty and KCHD staff</li> <li>Conduct joint practice-based research</li> <li>Identify practice-based evidence</li> <li>Publish research</li> </ul>	AHD-related teaching, research and service by faculty support tenure and promotion	
		Apply practice-based evidence at KCHD	
	Workforce development trainings/technical consulting — for KCHD staff by DPH faculty	<ul> <li>Disseminate research at conferences</li> <li>PH faculty understand of p.h. challenges</li> </ul>	<ul> <li>UT satisfies CEPH accreditation (WFD)</li> <li>KCHD becomes accredited by PHAB</li> <li>Implementation of</li> </ul>
	DPH funds KCHD staff travel to conferences and consultants to KCHD	<ul> <li>KCHD staff trained in QI, performance management and other areas</li> </ul>	<ul> <li>Performance Management System</li> <li>Increase enrollment opportunities of KCHD staff in PH courses/certificates/ degree programs</li> </ul>
	<ul> <li>Provide information to others interested in establishing an AHD</li> </ul>		Increase number and quality of AHDs
	KCHD facilitates and DPH participates in community	KCHD facilitates and DPH participates in community strategic planning process	



We used our specific logic model to evaluate our AHD.

To the right are a few examples of what we found.

## **Example Specific AHD Evaluation**

### Inputs:

• A shared internship coordinator within the context of a formal, written MOU

### **Activities:**

- Centralization of student and volunteer involvement
- KCHD staff serving as both guest lecturers as well as teaching full courses at the UT/DPH
- Joint practice-based research
- UT/DPH support for workforce development at KCHD

### **Outputs:**

- Estimated value of student contributions (from 12 academic disciplines) at KCHD was \$130,549
- Four peer-reviewed publications in the past two years

### **Outcomes:**

- Undergraduates who completed internships at the KCHD have enrolled in the UT/DPH MPH program
- Graduates of the MPH program have been hired into full-time positions at the KCHD
- One of the senior staff at KCHD was recently hired into a full-time faculty position at the UT/DPH
- The increased application of evidencebased public health is discernible through stronger workforce development, leadership, organizational climate and culture, relationships and partnerships, and use of resources

# **Example Research Q's**

Logic Model Element	Research questions		
Inputs	1. What models and theories of education and training are most effective in creating the conditions to establish an AHD?		
	2. How do practitioners and academicians in AHDs differ from practitioners and academicians in settings without AHDs, in terms of background, training, expertise?		
	3. What are the critical resources for establishing an AHD? What is the variability across AHDs in resource inputs, and how does such variability matter?		
	4. What is the value of shared personnel, and which ones contribute most to the AHD?		
	5. What are the types of formal agreements that have been established, and what are the critical elements of such agreements?		
Activities	1. What value does the AHD add to service-learning courses?		
	2. What is the impact of the AHD on the development and delivery of academic curriculum?		
	3. Does involvement of practitioners in the classroom impact their practice? Does it impact student achievement of competencies?		
	4. What are the mechanisms by which academicians contribute to program development, implementation, and evaluation in the practice setting?		
	5. What are the ways in which the AHD can facilitate practice-based research?		
Outputs	1. Do students in settings with AHDs achieve public health competencies at a higher level than students in settings without AHDs?		
	2. Does the presence of academicians impact the development of evidence-based practices in ways that are more effective and efficient in the AHD vs. non-AHD practice settings?		
	3. Are students in AHDs more capable of civic engagement?		
	4. Does the AHD enhance the potential for translating research into practice?		
	5. How can the AHD otherwise inform the field of dissemination and implementation science?		
Outcomes	1. Do health departments in AHDs implement Evidence-Based Public Health to a greater degree than health departments in non-AHD settings?		
	2. Do the AHD partners publish their work in peer-reviewed journals?		
	3. Are students in AHD settings more successful in obtaining desired employment?		
	4. What are the experiences of health departments which hire students from AHD settings?		
	5. Do health departments in AHDs achieve accreditation through PHAB more efficiently that health departments in non-AHD settings?		
	6. Do academic programs achieve accreditation through CEPH more efficiently than academic programs in non-AHD settings?		
	7. Will AHDs that involve medical students and residents serve as models for patient- centered primary care?		
	8. What are the roles that AHDs have in Accountable Care Organizations?		
	9. What are the roles that AHDs have in addressing the social determinants of health?		
	10. What is the return on investment for the AHD?		

## Implications

- Logic models are important tools for designing, implementing, and evaluating the impact of complex initiatives such as the AHD
- Theory-approach logic models are useful for considering the "big picture" and for clarifying underlying assumptions
- A specific logic model for the AHD provides a comprehensive framework for assessing the value and ultimate impact of the AHD
- These logic models become useful starting points for formulating research questions, aimed at ultimately answering the question, does the AHD matter?