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Value and Cost-Effectivess of Community Health Worker Programs: Implications for Home Care Workers

Glen P. Mays, *University of Kentucky*

Value and Cost-effectiveness of CHW Programs: Implications for Home Care Workers

Glen Mays, PhD, MPH
University of Kentucky

glen.mays@uky.edu

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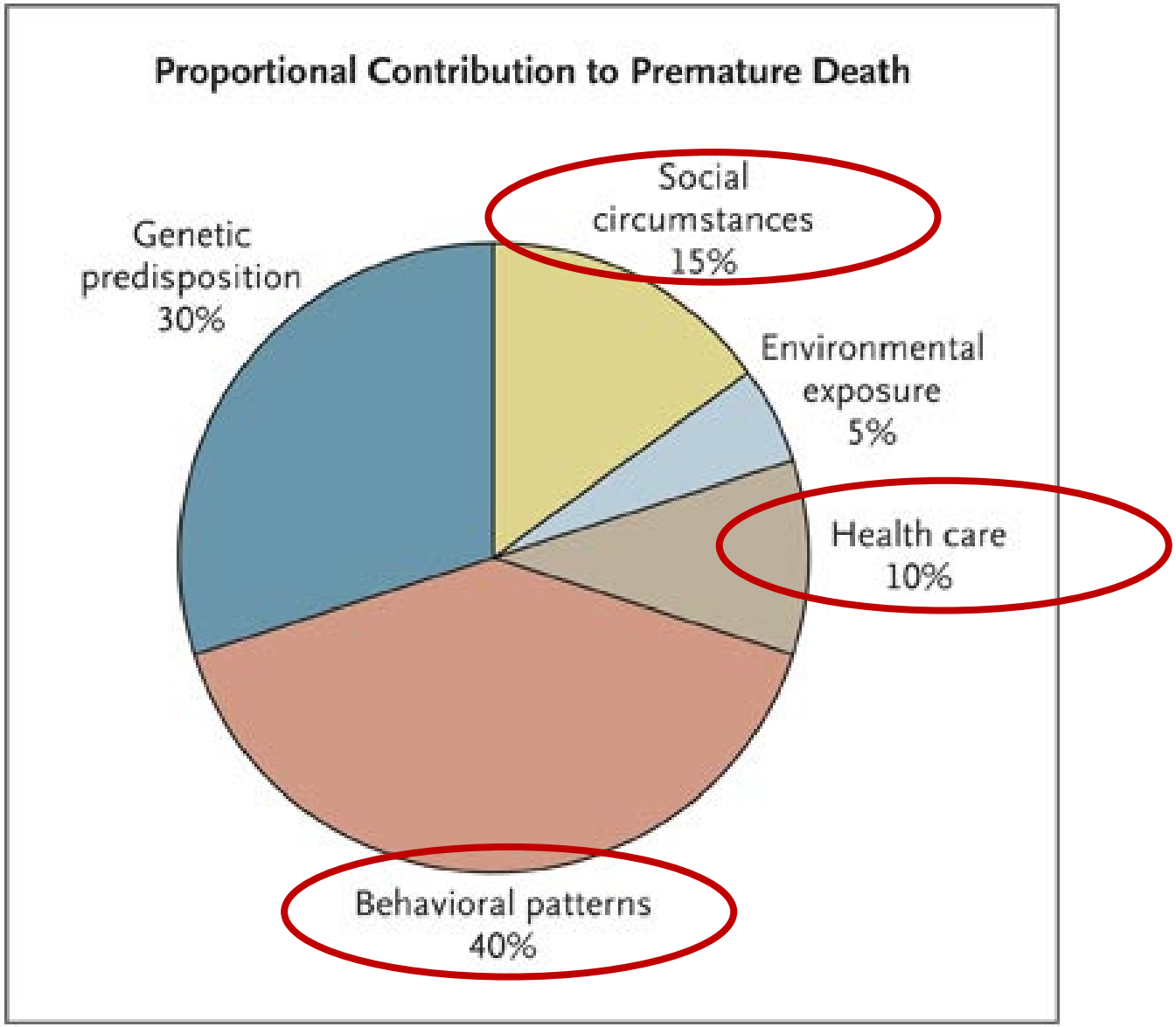
Key Questions

- Where are the opportunities for CHWs to add value in health and social service delivery?
- What do we know about the economic value of CHW programs?
- Implications for home care aides in Washington state

Failures in population health



Schroeder SA. N Engl J Med 2007;357:1221-1228

Costly failures in population health

EXHIBIT 1

Estimates of Waste in US Health Care Spending in 2011, by Category

	Cost to Medicare and Medicaid[a]			Total cost to US health care[b]		
	Low	Midpoint	High	Low	Midpoint	High
Failures of care delivery	$26	$36	$45	$102	$128	$154
Failures of care coordination	21	30	39	25	35	45
Overtreatment	67	77	87	158	192	226
Administrative complexity	16	36	56	107	248	389
Pricing failures	36	56	77	84	131	178
Subtotal (excluding fraud and abuse)	166	235	304	476	734	992
Percentage of total health care spending	6%	9%	11%	18%	27%	37%

""Health Policy Brief: Reducing Waste in Health Care," *Health Affairs*, December 13, 2012. http://www.healthaffairs.org/healthpolicybriefs/

Drivers of population health failures

>75% of US health spending is attributable to conditions that are largely preventable

- Cardiovascular disease
- Diabetes
- Lung diseases
- Cancer
- Injuries
- Vaccine-preventable diseases and sexually transmitted infections

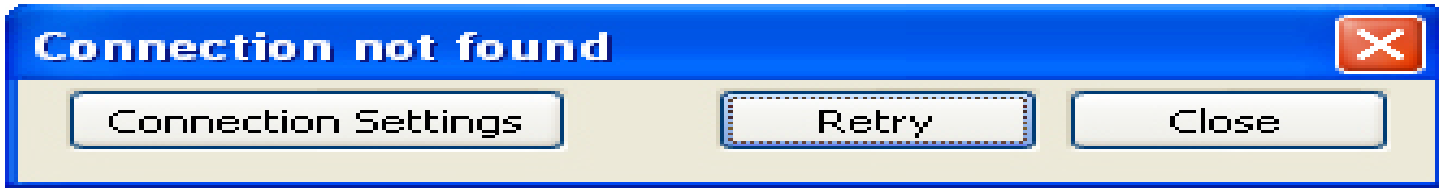
<5% of US health spending is allocated to prevention and public health

CDC 2008 and CMS 2011

Missed opportunities in prevention

Evidence-based public health strategies reach less than two-thirds of U.S. populations at risk:

- Smoking cessation
- Influenza vaccination
- Hypertension control
- Nutrition & physical activity programs
- HIV prevention
- Family planning
- Substance abuse prevention
- Interpersonal violence prevention
- Maternal and infant home visiting for high-risk populations



Medical Care

- Fragmentation
- Duplication
- Variability in practice
- Limited accessibility
- Episodic and reactive care
- Insensitivity to consumer values & preferences
- Limited targeting of resources to community needs

Social Supports

Public Health

- Fragmentation
- Variability in practice
- Resource constrained
- Limited reach
- Insufficient scale
- Limited public visibility & understanding
- Limited evidence base
- Slow to innovate & adapt

Waste and inefficiency

Inequitable outcomes

Limited population health impact

The connection between social needs and medical outcomes

- Unmet social needs have large effects on medical resource use and health outcomes
- Most primary care physicians lack confidence in their capacity to address unmet social needs
- Linking people to needed health and social support services is a core public health function that can add health and economic value

Where Can CHWs Add Value

- ***Targeting***: identifying individuals with unmet health and social needs
  - Reaching hard to reach (urban & rural settings)
  - Mitigating “woodwork” effects
- ***Tailoring***: matching services and supports to consumer needs, preferences, values
  - Education & self-management support
  - Direct service provision
  - Referral
  - Care coordination & navigation

Key components of leading models

	VBH	SCO	COP	Mercy	GRACE	CMP	EDPP
INTERVENTION PROCESS							
Baseline health assessment	•	•	•	•	•	•	•
Social assessment	•	•	•	•	•	•	•
Individualized care plan	•	•	•	•	•	•	•
Interdisciplinary care team	•	•	•	•	•	•	•
Specialized intervention protocols	•				•	•	•
Specialized training for service providers	•	•	•	•	•		
Ongoing monitoring	•	•	•	•	•	•	
Coaching in self-management	•		•	•	•	•	•
Link to or communication with primary care physician or practice	•	•	•	•	•	•	•
Use of electronic health records	•	•	•	•	•	•	•

Shier et al. *Health Affairs* 2013

Key components of leading models

	VBH	SCO	CCP	Mercy	GRACE	CMP	EDPP
SERVICE							
Case management	•	•	•	•	•	•	•
Medication management	•	•	•	•	•	•	•
Mental health services	•	•			•		•
Referral to or arrangement for social or supportive services	•	•	•	•	•	•	•
Referral to or arrangement for medical services	•	•	•	•	•	•	•
Caregiver support					•		•

Shier et al. *Health Affairs* 2013

Some Promising Examples

Arkansas Community Connector Program

- Use community health workers & public health infrastructure to identify people with unmet social support needs
- Connect people to home and community-based services & supports
- Link to hospitals and nursing homes for transition planning
- Use Medicaid and SIM financing, savings reinvestment
- ROI $2.92

www.visionproject.org

Source: Felix, Mays et al. *Health Affairs* 2011

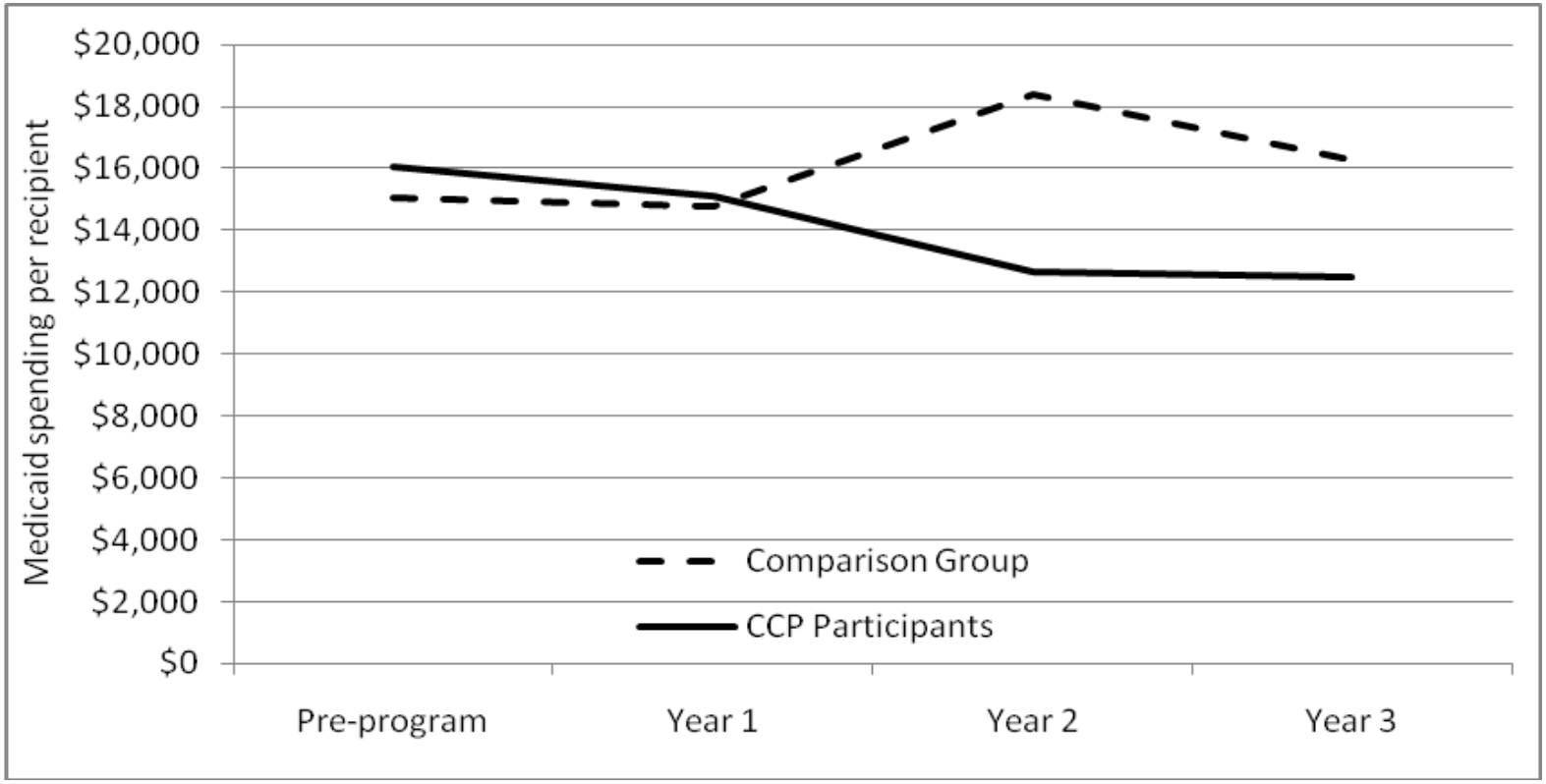
Economic impact of Arkansas CCP

By Holly C. Felix, Glen P. Mays, M. Kathryn Stewart, Naomi Cottoms, and Mary Olson

THE CARE SPAN

Medicaid Savings Resulted When Community Health Workers Matched Those With Needs To Home And Community Care

HealthAffairs



Service Use and Spending in Arkansas CCP

	CCP Participants		Comparison Group		
Per Recipient Medicaid Use/Spending	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	
Any inpatient utilization	8.6%		9.7%		
Annual inpatient spending | use	$23,186	$127,105	$16,722	$161,557	
Any outpatient medical utilization	78.6%		77.6%		
Annual outpatient spending | use	$12,442	$27,744	$12,341	$17,790	
Any nursing home utilization	**1.1%**		**2.8%**		**
Annual nursing home spending | use	**$25,882**	**$74,854**	**$86,045**	**$109,776**	**
Any HCBS utilization	**55.1%**		**39.8%**		**
Annual HCBS spending | use	**$6,107**	**$12,042**	**$4,037**	**$8,078**	**

**p<0.05

Cost Neutrality Estimates in Arkansas CCP

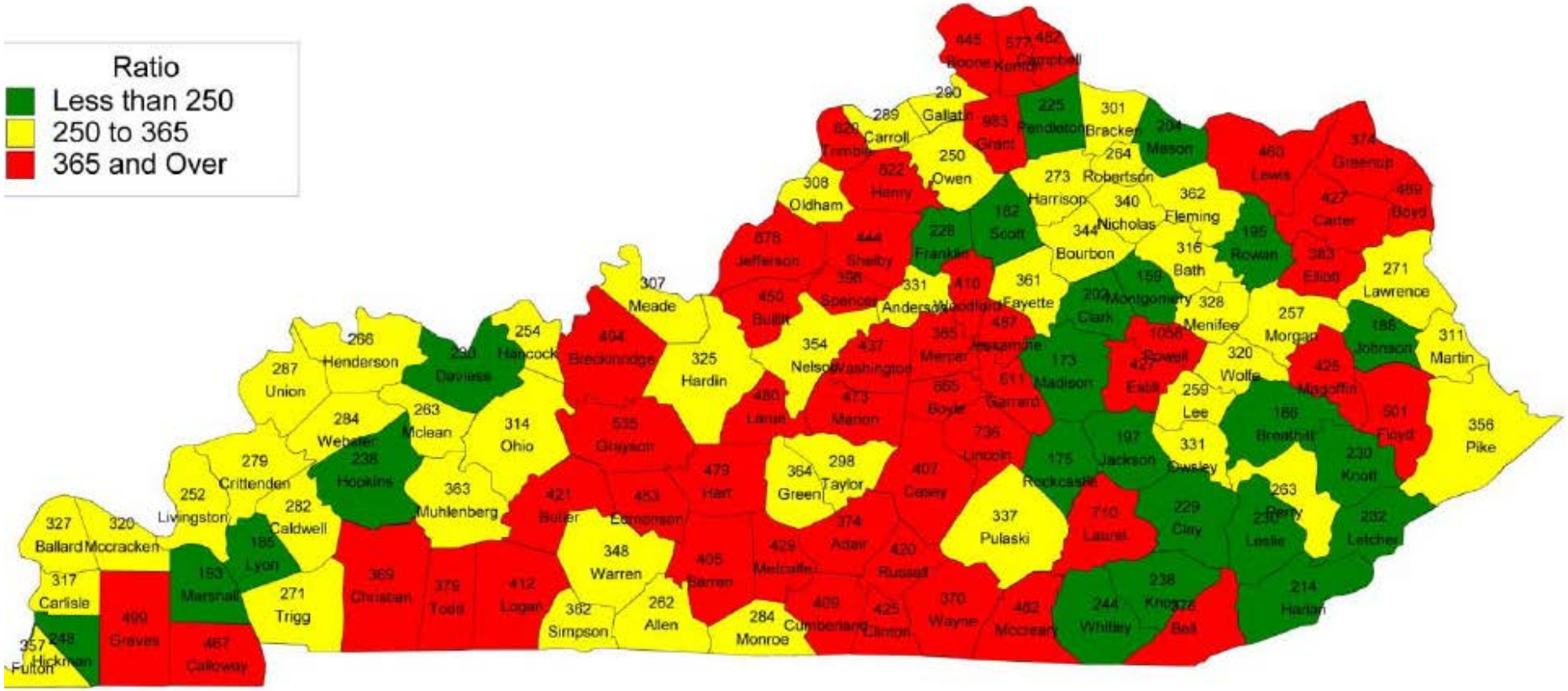
Three Year Aggregate Estimates

- Combined Medicaid spending reductions: $3.515 M
- Program operational expenses: $0.896 M
- Net savings: $2.629 M
- ROI: $2.92

Some Promising Models

Kentucky's Homeplace Program

Ratio of CHWs to Populations at Risk

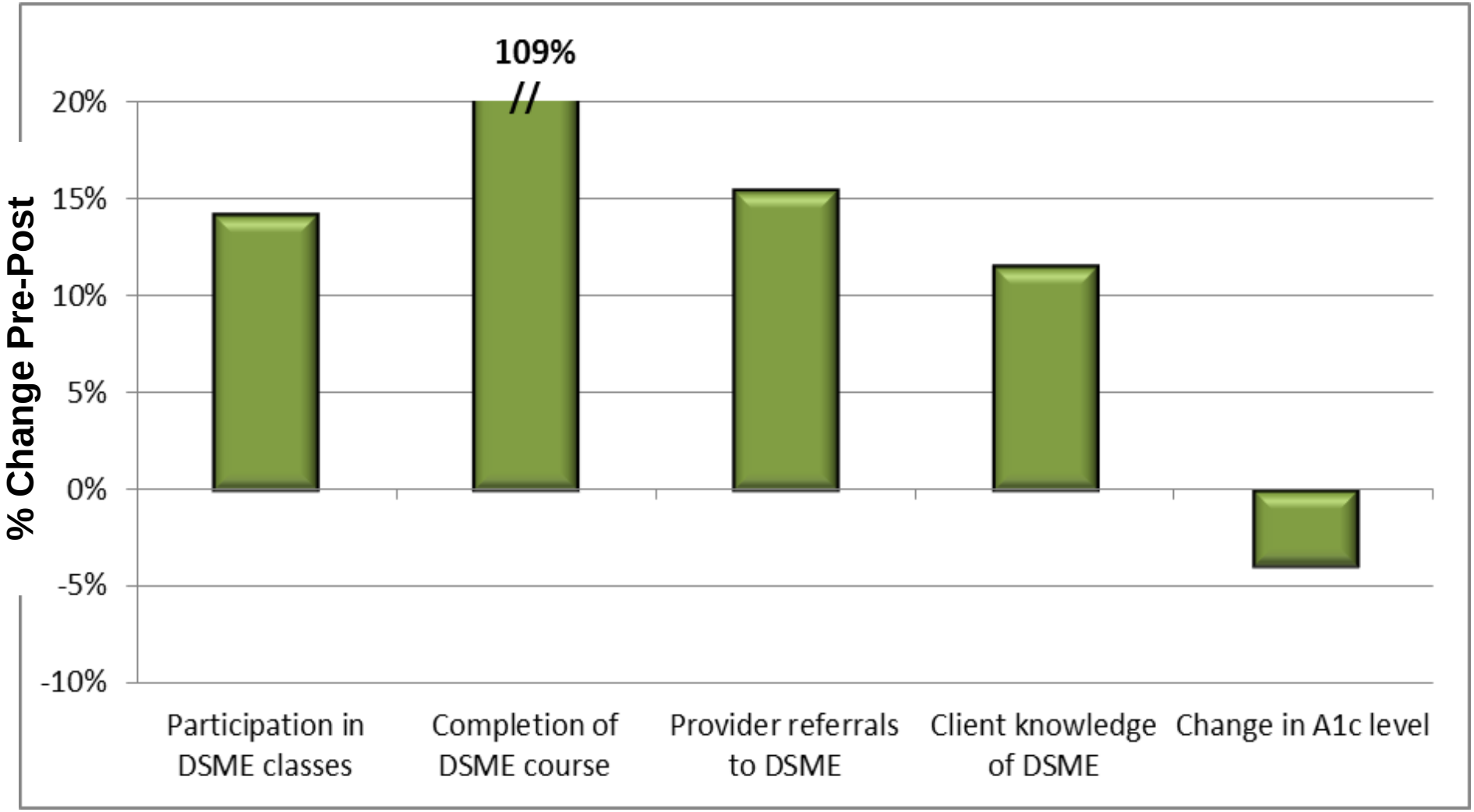


Childress MT. 2013. http://uknowledge.uky.edu/cber_researchreports/1/

Some Promising Models

Kentucky's Homeplace Program and COACH4DM

Results: Delivery of Diabetes Self Management



Dearinger et al 2013; Kegley et al. 2013

Some Promising Examples

Hennepin Health ACO

- Partnership of county health department, community hospital, and FQHC
- Accepts full risk payment for all medical care, public health, and social service needs for Medicaid enrollees
- Fully integrated electronic health information exchange
- Heavy investment in care coordinators and community health workers
- Savings from avoided medical care reinvested in prevention initiatives
  - Nutrition/food environment
  - Physical activity

Complex Resource Use Patterns Are Common in CHW Programs

- Lower inpatient care and readmissions
- Lower emergency care
- Lower skilled nursing/institutional LTC
- Higher or stable outpatient care
- Higher use of home and community-based services/supports
- Higher use of social services

Felix and Mays 2011; Dearinger et al 2013; Kegley et al. 2013; Shier et al. 2013

Comprehensive models use CHWs as part of larger care teams

- ***Established teams***: use same core members for a defined geographic area
  - Vermont Blueprint
  - Geriatric Resources for Assessment and Care of Elders (GRACE)
  - Hennepin Health ACO
- ***Ad hoc teams***: tailor teams to individual consumer based on needed services/supports
  - Arkansas CCP
  - Kentucky Homeplace

Special implications & considerations for home care workers as CHWs

- Efficiencies in worker training
- Efficiencies in providing direct services & linkage/referral roles together
- Skills in identifying unmet needs (targeting function)
- Direct service provision may require more intensive staffing and lower client to staff ratios
- Positive spillover benefits on caregivers
- Positive effects on CHW employment and career development
- Advantages in working as part of interdisciplinary teams
- Advantages in embedding in defined health care/public health delivery systems

For More Information

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Supported by The Robert Wood Johnson Foundation

111 Washington Avenue, Suite201
Lexington, KY 40536
859-218-0113

UK UNIVERSITY OF KENTUCKY

Email: publichealthPBRN@uky.edu
Web: www.publichealthsystems.org
Journal: www.FrontiersinPHSSR.org
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