

# The Impact of Community Health Workers on Cardiovascular Risk Reduction : Findings from the Clinical Community Health Worker Initiative



Mississippi Delta Health Collaborative  
Mississippi State Department of Health

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# MS Delta Health Collaborative

The Mississippi State Department of Health received funding from the CDC Division for Heart Disease and Stroke Prevention in 2010 to implement evidenced-based heart disease and stroke prevention interventions to reduce morbidity, mortality, and related health disparities in the 18 county MS Delta region (*MS Delta Health Collaborative*<sup>1</sup>)

- Clinical Community Health Worker Initiative (August 2012)
  - Serve as a liaison/linkage between the patient and the healthcare provider to facilitate continued care and management of the ABCS of heart disease and stroke.
  - Serve as a capacity builder to increase the community's health awareness through outreach activities related to advocacy, health promotion, and prevention, and to provide informal ABCS self management health education.

<sup>1</sup> MSDH: [http://msdh.ms.gov/msdhsite/\\_static/44,0,372.html](http://msdh.ms.gov/msdhsite/_static/44,0,372.html)

# Population(s) Served

- Non-institutionalized adults 18 years older residing in the 18 county Mississippi Delta region
- Patients with on ICD-9 Code listed below: Diagnosis/ICD-9 Codes: (uncontrolled)
  - Hypertension (HTN): 401.0 – 404.9
  - Diabetes Mellitus (DM): 250.0 – 250.99 with HbA1c  $\geq 7$
  - Dyslipidemia: 272.0 – 272.9
- Patients who has had at least one (1) visit in the past 12 months
- Referred by participating healthcare system

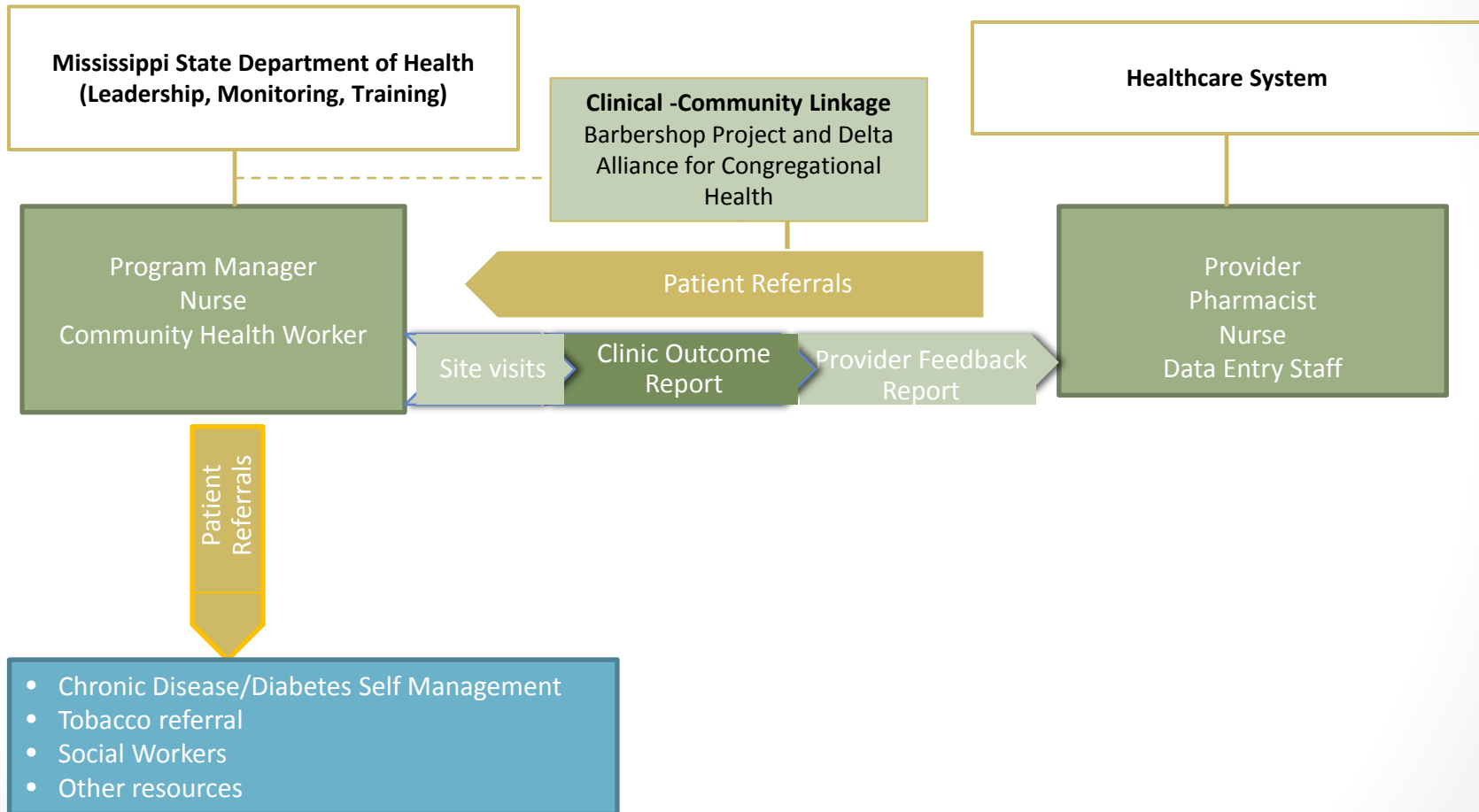
## **Exclusion Criteria**

- Homeless persons
- Persons with acute mental illness
- Persons who cannot legally sign a consent

# Methods/approach

- **CHW Training**
  - Initial training : 160 hours - Texas Core Training Model
  - Follow up training: 56 hours - Global Community Health Worker Training Curriculum (Basics for Cardiovascular Risk Reduction)
  - Delta Health Collaborative Training (Clinical Nurse & Nurse Consultant): 32 hours – material from CDC Community Health Worker’s Sourcebook, ABCD Community Health Worker Train the Trainer Program
- **Provider Recruitment**
  - MDHC recruited eleven clinic sites from the MS Delta
  - Currently, five healthcare systems are referring patients
  - Sign Memorandum of Agreement and/or Business User Agreement
  - Obtain informed consent and authorization to release medical information from patients willing to participate in the Initiative.
- **Patient Recruitment**
  - Data Entry Clerk recruits patients by utilizing the following methods:
    - Chart review
    - EHR registry
    - Provider or Pharmacist recommendation
    - Word of mouth
    - Recruits patients from community events (screenings, door to door, etc.)

# MS Delta Health Collaborative Clinical Community Health Worker Initiative Framework



# Clinical Sites, August 2012 – April 2015

Mean changes in clinical outcomes from baseline to most recent value, August 2012 – April 2015, N=407

Characteristic	N	Initial mean	Most Recent mean	Change	p-value**	% Relative reduction
Hemoglobin A1c (%)	186	9.1	8.8	-0.3	0.1209	3.4
Systolic blood pressure, mm Hg	350	138.5	136.6	-1.9	0.1096	1.4
Diastolic blood pressure, mm Hg	350	79.5	77.4	-2.1	0.0166	2.7
Total cholesterol, mg/dL	140	207.6	193.1	-14.5	0.0020	7.5
High-density lipoprotein (HDL), mg/dL	136	49.5	50.6	+1.5	0.1937	-
Low-density lipoprotein (LDL), mg/dL	129	120.6	111.3	-9.3	0.0277	8.4
Triglyceride, mg/dL	137	186.7	166.9	-19.8	0.0753	11.9

\*statistically significant mean changes (baseline vs most recent value) was observed for diastolic blood pressure, total cholesterol, Low-density lipoprotein

\*\* Paired t-tests

# Lessons Learned

- **Successes**

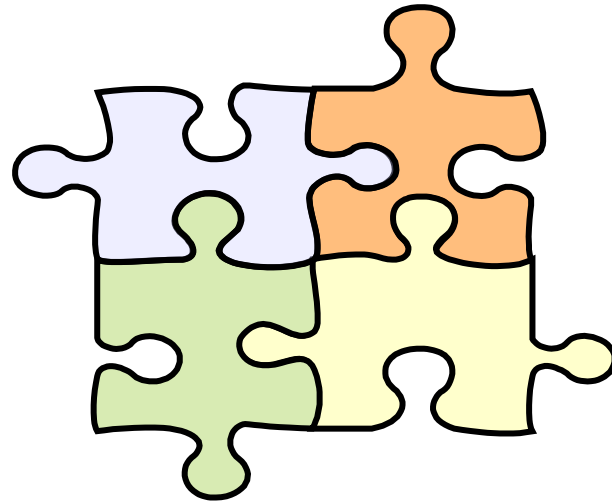
- Collaborative relationships established with providers in rural areas
- Progress toward integration of CHW into clinical teams
- Preliminary improvement in clinical outcomes

- **Barriers/Challenges**

- Incomplete data of lipid profiles
  - Low referrals from clinical sites
  - Some clinics have not adopted CHW model
  - Contact information/loss to follow up
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- The community health worker must reside in and/or be knowledgeable about the community they serve.
  - Patient participation and retention in the program was higher, when clinic providers played an active role in program recruitment, referral and monitoring.
  - Immediate notification from the nurse and community health worker to healthcare providers of patients with elevated values during home visits fosters a positive linkage between health care systems and the patient.
  - Regular attendance of community health workers in healthcare systems staff meetings promoted integration of community health worker to clinical team.
  - Using MDHC CCHW model, CHWI activities must be the primary duty of the clinic DEC

# Community Health Worker : A Member of the Clinical Healthcare Team

- Building Knowledge and Awareness about CHWs
- Traditional Approach vs. Multidisciplinary Approach
- Interdisciplinary Teams
  - Primary Care Physician
  - Nurse Practitioner
  - Care Manager (Social Worker)
  - **Community Health Worker**
  - Peer Specialist
  - Pharmacist
  - Mental Health Provider  
(e.g., Social Worker, Psychologist, Psychiatrist)
  - Addictions Professional







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