Community Clinical Linkages:
Resources and a Story from the Field
August 30, 2017
1:00 – 2:00pm ET

NATIONAL FORUM FOR HEART DISEASE & STROKE PREVENTION
Million Hearts
CDC
American Heart Association. life is why

Welcome and Panelist Introduction

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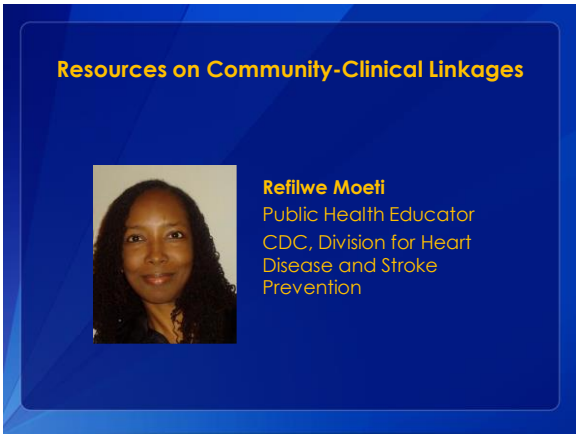
Program Initiatives Manager
American Heart Association
Million Hearts® Collaboration

Before We Begin

- Download today's handouts by going to the File menu in the upper left hand corner of the screen. Select "Save Document."
- We encourage you to submit written questions at any time during the presentation, using the Q& A Panel located at the bottom right of your screen.
- Today's session is being recorded.

Agenda

- **Welcome, Introduction to the Webinar and Speakers**
  April D. Wallace, MHA, Million Hearts Collaboration
- **Community-Clinical Linkages: Resources and a Story from the Field**
  - Refilwe Moeti, MA,
    Centers for Disease Control and Prevention
  - Nicole Flowers, MD, MPH
    Centers for Disease Control and Prevention
  - Leigh Ann Ross, PharmD, BCPS, FASHP, FCCP, FAPhA
    The University of Mississippi School of Pharmacy
- **Q&A**
- **Closing Remarks**



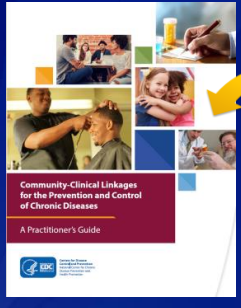
Disclaimer:

The information presented here is for training purposes and reflects the views of the presenters. It does not necessarily represent the official position of the Centers for Disease Control and Prevention.

- **Discuss community-clinical linkages (CCLs):**
  - Centers for Disease Control and Prevention's resources
  - Effective CCL implementation strategies
  - Story from the field

Why was the Guide Developed?

- **Fills gaps in the field**
  - How-to information
  - Public health's explicit role
- **Serves as a resource**



What's inside?

What are Community-Clinical Linkages?

Connections between community and clinical sectors to improve population health (CDC, 2016)

What is the Evidence of Effectiveness of Community-Clinical Linkages?

- **Clinical conditions**
  - Blood pressure
  - Prediabetes
  - Diabetes
- **Behavioral changes**
  - Nutrition
  - Physical activity
  - Diabetes self-management behaviors

[1] Porterfield DS, Hinnant LW, Kane H, et al. Linkages between clinical practices and community organizations for prevention: a literature review and environmental scan. *American Journal of Preventive Medicine*. 2012;42(6, Supplement 2):S163-S171.

Why Implement Community–Clinical Linkage Approaches?

- Increase access to community and clinical resources and support
- Engage both the clinical and community stakeholders in population health
- Enhance capacity of both sectors to carry out their missions
- Maximize the collective impact of multiple clinical and community stakeholders who can contribute to population health

What is Public Health's Role in Community-Clinical Linkages?

Community Sector
Composed of organizations that provide services, programs, and/or resources to community members in non-healthcare settings.

Public Health Sector
Composed of public health organizations that can lead efforts to build and improve linkages between community and clinical sectors

Clinical Sector
Composed of organizations that provide services, programs, and/or resources directly related to medical diagnoses and/or treatment of community members by healthcare workers in healthcare settings.

7 Strategies for Implementing Community-Clinical Linkages

- **L** earn about community and clinical sectors.
- **I** dentify and engage key stakeholders from community and clinical sectors.
- **N** egotiate and agree on goals and objectives of the linkage.
- **K** now which operational structure to implement.
- **A** im to coordinate and manage the linkage.
- **G** row the linkage with sustainability in mind.
- **E** valuate the linkage.

Components of Strategies

Negotiate and Agree on Goals and Objectives of the Linkage

Rationale

Linkages between community and clinical sectors have been shown to be more effective when the mission, goals, objectives, and activities are jointly determined and systematically communicated to stakeholders at all levels. Thus, the process of developing a shared understanding of the goals and objectives of the linkage is critical.

Key Considerations

- Negotiating and agreeing on what the linkage will accomplish may prove challenging as this often involves resolving differences and finding ways to compromise with different stakeholders from two different sectors.
- A critical element in agreeing on goals and objectives is to develop trust, which takes time. Trust is an essential element that ensures that strengths and weaknesses are identified, differing views are heard, and decisions are made openly and transparently.
- To ensure that goals and objectives identified are relevant and appropriate at the local level, local tailoring is essential to get buy-in and acceptance from local stakeholders.

Potential Action Steps for Public Health Practitioners

- Ensure that patients, clients, consumers, or representatives of these groups are present to discuss the goals and objectives of the community-clinical linkage. As part of this process, think about yourself and your family members' experiences as patients in primary care to help identify the patient perspective. Be prepared to observe procedures from the providers' perspective.

Learn About the Community and Clinical Sectors

Before implementing a community-clinical linkage between pharmacists and physicians, the first step is to identify the unmet health care services needs of the community, including existing resources, organizations, health issues, policy, and existing services provided by pharmacists and physicians. Comprehensive gathering of information will ensure that the community-clinical linkages have a strong purpose, leverage existing community strengths and resources, and meet the needs of patients, pharmacists, and physicians.

Action Steps for Pharmacists:

- Identify pharmacy services that can meet areas of unmet need in the community.
- Review the pharmacy practice act within your state and determine whether pharmacists are permitted to enter into collaborative practice agreements with physicians. If so:
  - Learn which types of physicians can enter into agreements and in which settings.
  - Learn the types of patient care services pharmacists are allowed to provide.
  - Learn for which health conditions an agreement is allowed.
- Contact your state and national pharmacy associations to:
  - Identify other pharmacists who have successfully established community linkages or practice agreements with physicians to learn how that has been achieved.
  - Learn about ongoing pharmacist-physician linkage initiatives currently taking place in your state.
- Take the time to learn about physicians' clinical processes and understand where a pharmacist may fit in.

Action Steps for Physicians:

- Seek examples from your local medical associations on how physicians have created linkages with pharmacists and the community to address unmet health service needs.
- Seek to understand the scope of services pharmacists can provide for your patients (e.g., medication therapy management, medication adherence counseling, lifestyle modification counseling, chronic disease management, identification of drug-related problems, smoking cessation guidance, and patient self-management education for hypertension, diabetes, and other chronic conditions).

Collaborative Action Steps for Pharmacists and Physicians:

- Host a collaborative meeting between the pharmacist and physician to share information and learn about each other's priorities.
- Contact your state or local health department or nonprofit health-systems organizations that conduct needs assessments to understand the incidence and prevalence of disease within your community and identify unmet needs.
- Consult with state and local health departments to learn about important ongoing national and state health priorities and strategies to improve care, patient outcomes, health care use, and health information technology. Consider how a community-clinical linkage between community pharmacists and physicians can support these efforts.
- Take the time to understand how physicians and pharmacists operate in their respective practice environments.

Considerations and Action Steps

Effective Strategies for Implementing Community-Clinical Linkages

CAPT Nicole Flowers, MD, MPH
Senior Medical Officer
CDC, Division of Nutrition, Physical Activity and Obesity.

Early Stages of Forming CC Linkages

- ❑ **Learn about the community and clinical sectors**
  - Systematically gather quantitative and qualitative data from sources such as focus groups, BRFSS, U.S. census , GIS data, environmental scan , interviews.
  - Use a checklist to assess organizational readiness
- ❑ **Identify and engage key partners**
  - Develop consensus and support among a diverse group on community members, implementers and decision-makers.
  - Work with a champion within each partner organization
- ❑ **Negotiate and agree upon goals and objectives**
  - Use a logic model to clearly describe inputs and outcomes
  - Identify responsibilities of stakeholders and how they will contribute to goals and objectives.

Operational Structure

Operational Structure of the Pharmacist-Physician Linkage

- Define how referrals, communication and documentation will be operationalized
- Facilitate bidirectional communication between pharmacists and physicians through electronic health records or other electronic systems.
- Consider establishing a formal agreement between pharmacists and providers that clearly describes structure

Coordination

- Have a designated coordinating entity
- Establish a chain of communication with multiple modalities, if necessary
- Provide frequent opportunities to meet, review data, discuss challenges and develop solutions
- Continually refine the coordination and management efforts based on lessons learned

Coordinating the Pharmacist-Physician Linkage

- Having a designated coordinating entity may be essential to free up physicians and pharmacists to focus on providing patient care
- Coordinate training for pharmacists, physicians and other staff on the referral process, patient care protocols and communication protocols
- Provide regular opportunities for pharmacists and physicians to meet, discuss and refine processes; this also builds trust and relationships

Sustainability

- Achieving and communicating 'small wins' can set the stage for expanding and sustaining efforts.
- Periodically reassess the community assets and reach out to organizations that were not initially involved.
- Develop a sustainability plan that addresses how the contributing organizations can maintain efforts

Sustaining the Pharmacist-Physician Linkage

- Work with payers, employers and other stakeholders to build scalable, sustainable and financially viable business models
- Incentivize pharmacists through payment system changes to ensure reimbursement and compensation for services rendered.
- Provide incentives for patients to participate in collaborations, such as eliminating copays for medications, gift cards, transportation vouchers.

Evaluation

- Evaluation of CCLs may require both process and outcome evaluation
- Community and clinical sectors may have different perspectives on evaluation methods and uses for the evaluation results
- The evaluation may require a data sharing agreement that clarifies how the information may be used and shared
- Have an evaluation plan that details key evaluation questions, data needs, data sources, analysis and dissemination.

Evaluating the Pharmacist-Physician Linkage

- Determine outcomes, measures, and data sources using the initial goals and objectives
- Document what the partnership has provided for the community as an aid to strengthening support
- Consider disseminating results of evaluation to peer pharmacists and physicians in professional settings in order to expand the efforts

Putting the Guides into Action

A Story from the Field: Pharmacy Cardiovascular Risk Reduction Project

Leigh Ann Ross, PharmD, BCPS, FNAP, FCCP, FASHP, FAPhA

Associate Dean for Clinical Affairs at the University of Mississippi School of Pharmacy

Professor in the Department of Pharmacy Practice

Research Professor in the Research Institute of Pharmaceutical Sciences

Director of the UM SOP Center for Clinical and Translational Science

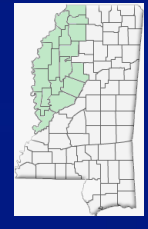
University of Mississippi School of Pharmacy Community-Based Research Program

Important State Public Health Concerns

- Physical Activity
- Nutrition
- Environmental Health
- Obesity
- Diabetes
- Teen Pregnancy
- Infant Mortality
- Tobacco

Mississippi Facts

- Mississippi Delta among the poorest areas in the United States
- 18-county Delta region has 31.5% of residents living below poverty level, compared to the 21.2% residents in state.
- 60% of the Delta population are African Americans, compared to 37% of total Mississippi population are African Americans
- Delta population vulnerable to health disparities
- If the Delta were removed from Mississippi, most of the state's health statistics would move close to the national average



Reference: U.S. Census Bureau, 2010

University of Mississippi School of Pharmacy Community-Based Research Program

- Increase access to care
- Improve patient outcomes
- Evaluate the impact of services

University of Mississippi School of Pharmacy Community-Based Research Program

Completed Projects

- Delta Pharmacy Patient Care Management Project – HRSA/DHA
- Worksite Wellness – HRSA/DHA
- Active Surveillance Attitudes and Perceptions in Prostate Cancer – NRHA/Emory
- Delta Pharmacy Obesity Management Project – HRSA/DHA
- Million Hearts Initiative: Team Up, Pressure Down – CDC/NACDS Foundation
- Project IMPACT: Diabetes – APhA Foundation
- Southern U.S. Diabetes Coalition Project – CMS Innovation Award/MSPHI
- Beacon Community Cooperative Agreement – DHHS/ONC/DHA
- Million Hearts Initiative: Team Up, Pressure Down Pioneer Challenge – AACP/Pharmacy Network Foundation
- Rapid HIV Testing in Pharmacies and Retail Clinics Demonstration Project – CDC
- Patient Safety and Clinical Pharmacy Services Collaborative – HRSA/PSPC

Ongoing Projects

- Pharmacy Cardiovascular Risk Reduction/Delta Health Collaborative – CDC/MSDH
- Pharmacist Linkage in Care Transitions– NACDS Foundation
- Together on Diabetes
- Community Pharmacy Residency Expansion Project (PREP) – NACDS Foundation
- Telehealth Medication Therapy Management – UMMC
- G.A. Carmichael Family Health Center Clinical Pharmacy Services
- Jackson-Hinds Comprehensive Health Center Clinical Pharmacy Services
- Diabetes Care Group™ Clinical Pharmacy Services

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Additional Collaborations

Educational Programs

- Interprofessional Provider Education:
  - Patient Care Summit: 2014
  - Hypertension Summits: 2015, 2016, 2017
  - Community and Clinical Linkages Summit: 2017
- Pharmacy Provider Education:
  - Medication Therapy Management Training Programs: 2014, 2015, 2016, 2017
- Patient Education:
  - Patient and Caregiver Summit: 2016, 2017

University of Mississippi School of Pharmacy

Mississippi State Department of Health

Delta Health Collaborative

Provides leadership in the Delta region to implement heart disease and stroke prevention interventions to reduce morbidity, mortality, and related health disparities

Clinical Initiatives
Community Health Workers Initiative
Community Health Worker Certification
Medication Therapy Management

Community Initiatives
Mayor's Health Councils
County Planning & Development Councils
Delta Alliance for Congregational Health
ABCS Screening Program

Community Pharmacy Model

Provider Clinic Model

JACKSON-HINDS
COMPREHENSIVE HEALTH CENTER

Delta Health Collaborative
Pharmacy

- Clinical Initiative – 2011-present
- Medication Therapy Management
- Areas of focus: Diabetes, Hypertension, and Lipid Management
- Services provided in 4 Federally qualified health centers in the Mississippi Delta
- Pharmacy Cardiovascular Risk Reduction Project

Medication Therapy Management

"A distinct service or group of services that optimize therapeutic outcomes for individual patients… [that] are independent of, but can occur in conjunction with, the provision of a medication product."

MTM encompasses a broad range of professional activities and responsibilities within the licensed pharmacist's or other qualified health care provider's scope of practice

Bluml BM. *J Am Pharm Assoc* 2005:566-72.
Pellegrinto AN. *Drugs* 2009:393-406.

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Comprehensive Medication Management

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Target Population

Patients who may benefit from MTM services include those who have:

- Experienced transitions of care
- Changed medication regimens
- Multiple conditions/chronic medications
- A history of non-adherence
- Limited health literacy
- A need to reduce healthcare costs

Core Elements of MTM Services

- Medication Therapy Review (MTR)
- Personal Medication Record (PMR)
- Patient Medication-Related Action Plan (MAP)
- Intervention and/or Referral
- Documentation and Follow-up

Reference: Medication Therapy Management in Pharmacy Practice: Core Elements of an MTM Service Model Version 2.0. A joint initiative of American Pharmacists Association (APhA) and the National Association of Chain Drug Stores Foundation. March 2008.

MTM Training

American Pharmacists Association (APhA) Certificate Training Program: *"Delivering MTM Services in the Community"*

Pharmacy Faculty "Train the Trainer" Program

Community Pharmacist Training
- Self-study activity and pre-seminar exercise
- Live interactive training seminar
- Post-seminar exercise

MTM Visit

- Patient interview
- Intervention
  - Initiate or modify medication therapy through collaborative practice agreement
  - Initiate or modify medication through recommendations to providers
- Provide patient education
- Document encounter in EHR
- Follow-up

Pharmacists' Patient Care Process

Reference: Pharmacists' Patient Care Process, May 29, 2014.
http://www.pharmacist.com/sites/default/files/JCPP_Pharmacists_Patient_Care_Process.pdf

Quality Measures

Clinical Outcomes
- Drug therapy problems (DTPs) identified and resolved
- Disease parameters: A1c, SBP, DBP, TC, TG, LDL, HDL, BMI

Humanistic Outcomes
- Health status, health-related quality of life, diabetes knowledge, asthma knowledge, self-reported medication-taking behaviors, global assessment of treatment benefit, satisfaction with treatment, willingness to continue treatment

Economic Outcomes
- Cost avoidance

Pharmacy Cardiovascular Risk Reduction Project
Demographics

Number of patients	663
Number of encounters	2947
% Female	63.7%
% Male	36.3%
Mean age (yrs)	54.9
Mean number of medical conditions	6.7 (range 1-18)
Mean number of medications (prescription & OTC)	8.5 (range 1-32)

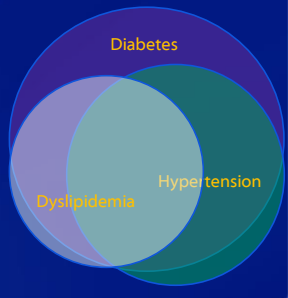
Pharmacy Cardiovascular Risk Reduction Project
Drug Therapy Problems

Number of DTPs identified/resolved	7076	
Average number of DTPs per patient	10.7	
Number of patients with ≥ 1 DTPs	657	99.1%
Number of patients with ≥ 3 DTPs	590	89.0%
Number of patients with ≥ 5 DTPs	466	70.3%

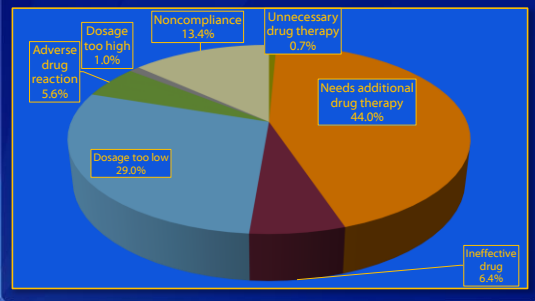
DTP = Drug therapy problem
Number of patients = 663

Pharmacy Cardiovascular Risk Reduction Project
Population

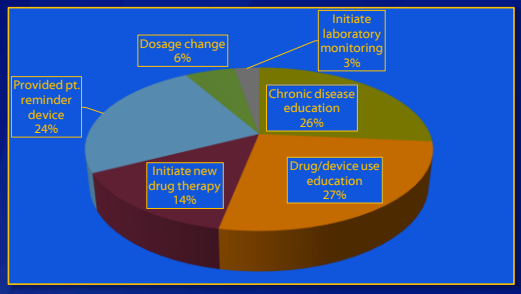
Diabetes	616	89.9%
Hypertension	607	88.6%
Dyslipidemia	554	80.9%
Total patients	685	



Pharmacy Cardiovascular Risk Reduction Project
Types of Drug Therapy Problems Identified and Addressed



Pharmacy Cardiovascular Risk Reduction Project
Most Common Interventions



Pharmacy Cardiovascular Risk Reduction Project
Clinical Outcomes

All Patients Combined	Number of patients	First recorded value (mean)	Most recent recorded value (mean)	Change	p-value*	Relative reduction
Hemoglobin A1c (%)	461	10.5	9.2	(1.3)	**<0.001**	12.4%
Systolic blood pressure (mmHg)	487	136.3	136.1	(0.2)	0.835	0.1%
Diastolic blood pressure (mmHg)	487	81.9	80.1	(1.8)	**<0.005**	2.2%
Total cholesterol (mg/dL)	357	204.1	184.0	(20.1)	**<0.001**	9.8%
High-density lipoprotein (mg/dL)	355	49.0	49.5	0.5	0.312	-1.0%
Low-density lipoprotein (mg/dL)	355	119.9	104.7	(15.2)	**<0.001**	12.7%
Triglycerides (mg/dL)	357	196.3	158.6	(37.7)	**<0.005**	19.2%
BMI (kg/m2)	357	35.8	35.5	(0.3)	**<0.05**	0.8%
Weight (lbs)	428	221.5	219.6	(1.9)	**<0.05**	0.9%

• Intention to treat analysis (data from patients lost-to-follow-up included)
• Statistically significant improvements (baseline vs most recent value) were demonstrated for hemoglobin A1C, diastolic BP, total cholesterol,
LDL-cholesterol, triglycerides, BMI and weight
* Student's t-test for paired data, two-tailed; significance level of 0.05

Pharmacy Cardiovascular Risk Reduction Project
Clinical Outcomes

Subsets of Patients with Abnormal Values at Baseline (High Risk)

Subset of patients with initial:	Number of patients	First recorded value (mean)	Most recent recorded value (mean)	Change	p-value*	Relative reduction
A1C ≥ 9%	366	11.1	9.5	(1.6)	<0.001	14.4%
SBP ≥ 130 mmHg	297	148.1	140.7	(7.4)	<0.001	5.0%
DBP ≥ 80 mmHg	287	88.9	82.3	(6.6)	<0.001	7.4%
Tot Chol ≥ 200 mg/dL	167	243.4	206.1	(37.3)	<0.001	15.3%
LDL ≥ 100 mg/dL	233	140.5	115.3	(25.2)	<0.001	17.9%
Trig ≥ 150 mg/dL	153	311.8	219.8	(92.0)	<0.005	29.5%

• Intention to treat analysis (data from patients lost-to-follow-up included)
• In these subsets of high risk patients, statistically significant improvements (baseline vs most recent value) were demonstrated for hemoglobin A1C,
systolic and diastolic BP, total cholesterol, LDL-cholesterol and triglycerides
* Student's t-test for paired data, two-tailed; significance level of 0.05

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Acknowledgements

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Q & A

- We encourage you to submit written questions using the Q&A Panel located at the bottom right of your screen.
- After typing your questions in the space at the bottom, hit the Send button.
- YOUR questions will not be seen by other members of the audience and will be addressed, time permitting.

Closing and Contact Information

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