KPHReN

Kentucky
Public Health
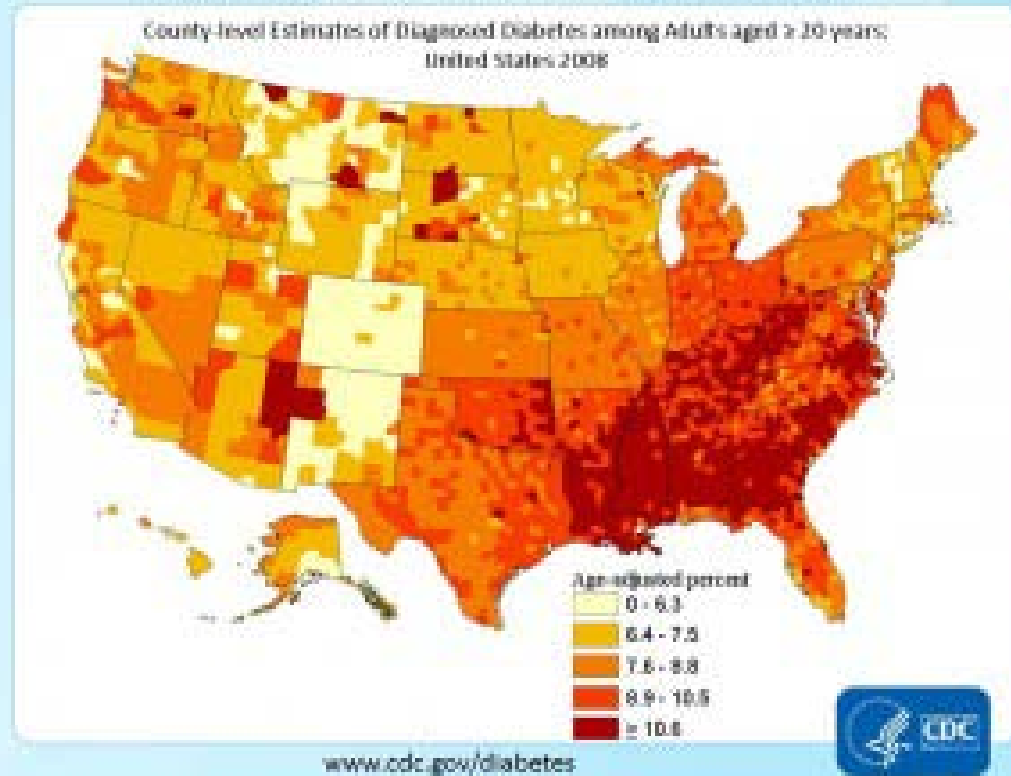## Research Network

Community Outreach and Change for Diabetes Management
COACH 4 DM

Kentucky Public Health Research Network

Type II Diabetes in Kentucky

- 11% of KY adults have Diabetes
  - 9th in the nation
- 6th leading cause of death in KY
- 40% of KY adults have pre-diabetes
- Estimated costs
  - $2.9 billion

County-level Estimates of Diagnosed Diabetes among Adults aged ≥ 20 years: United States 2008

Age-adjusted percent
- 0 - 6.3
- 6.4 - 7.5
- 7.6 - 8.8
- 8.9 - 10.5
- ≥ 10.6

www.cdc.gov/diabetes

CDC

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Project Aim

- Evaluate the extent to which organizational QI strategies influence the adoption and implementation of evidence- based interventions identified in the Community Guide to Preventive Services

  - **Sufficient evidence to recommend that Diabetes Self- Management Education (DSME) be provided to adult diabetics in community gathering places**

KY Diabetes Center of Excellence (DCOE)

- Six LHD
  - 2 single county LHDs
  - 4 district LHDs (6-10 counties)
- Adults with Type II Diabetes
- Goals
  - DMSE
  - Behavior change support

COACH 4 DM Goals

- **Overall Purpose**: Test whether evidence-based strategies lead to systems changes and process improvements within health departments

- Method: Facilitate DCOE in design and implementation of a QI project to improve the delivery of existing DSME services

COACH 4 DM Goals cont'd

- Utilize methods for systems change including:
  - Assess readiness for systems level change
  - Assess current practice
  - Establish process for improved service delivery
  - Evaluation of new system for service delivery

Study Participants

- LHD designated as a DCOE (6)
- QI Champion
  - Contact person
  - Coordinate team meetings
  - Provide pre/post intervention data
- QI Team
  - DCOE staff/ DSME provider
  - 4-6 members per site

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Change Facilitation

- UK Center for Rural Health/ UK CCTS
- Previous training in QI facilitation
  - AHRQ Putting Prevention into Practice
  - IHI QI Collaborative
  - Embracing Quality in Local Public Health: Michigan's QI Guidebook
  - Applied quantitative methodology
  - Regulatory compliance in QI research
- Previous Experience
  - Primary Care Practices (KY Ambulatory Network)

Study Protocol

- Enrollment visit
  - Consent
  - Project overview
- Three ½ day facilitation sessions
- Weekly communication with QI teams
- Individual project periods
  - 9 months
- Data collection and evaluation

Facilitation

Session One

- Readiness for change

- Assessment of current practice

- Overview of QI methods/ tools
  - Specific focus on PDSA
  - Specific focus on evaluation
  - Also introduce: RCA, fishbone diagram, logic model, flow mapping, brainstorming

- Tailor training to QI team needs

Facilitation

- Sessions 2 & 3
  - Facilitate PDSA
  - Guide modifications to QI project plan
  - Provide additional QI training as needed

- Between sessions
  - Weekly contact
    - Phone
    - Email

Logic Model

Inputs

- DCOE staff (QI team)
- DSME providers (QI team)
- Change Facilitators
- Time
- Money
- Knowledge
- Community Partners

Processes

- QI tools
- QI training
- Participation in facilitation sessions
- Collaborative conferences
- Social networking

Outputs

- QI activities
- Readiness for change
- Cycles of PDSA
- Data collection
- Program satisfaction

Outcomes

- Change in diabetes outreach: # enrolled in DCOE, # receiving DSME, # completing DSME, # referrals and referral sources, care coordination with PCP, communication with DCOEs, communication with community partners, advertising/ marketing
- Change in DSME delivery: method, location, content, timing, duration, frequency, Spanish availability
- Efficacy
- DM rates
- DM related factors rates (physical activity, food intake)
- Adoption/ Implementation of QI activities
- Increased knowledge of QI methods
- Behavior change/organizational climate change

External Factors-Previous QI experience, organizational climate

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Outcomes

- ## <u>Assess effectiveness of systems- based QI methods</u>

  - Process improvement
    - Adoption/ Implementation of QI activities
  - Systems level change
    - Organizational climate
    - Behavior change
  - Knowledge of and comfort with QI
  - Utilization of pre/post surveys, post- session evaluations, direct observation, interviews

Outcomes

- **<u>Assess impact on DCOE capacity</u>**
  - # enrolled in DCOE
  - # receiving DSME
  - # completing DSME
  - # referrals and referral sources
  - Care Coordination efforts with PCP
  - Service delivery changes:
    - Method, location, content, timing, duration, frequency, language translation availability
  - DM rates
  - Rates of DM related factors (physical activity, diet)

Preliminary Findings

- High levels of knowledge and comfort of QI methods in general

- Specific tools: PDSA, Flow map, RCA, Fishbone diagramming, logic model, Gantt chart, Forcefield, Brainstorming, Affinity, Matrix

  - Likert scale

    - 1 (no knowledge)
    - 5 (high knowledge)

Knowledge of Specific QI Tools

QI tool	1 No Knowledge	2	3	4	5 High Knowledge
PDSA	41%	21%	21%	10%	7%
Flow Map	24%	10%	45%	17%	3%
RCA	44%	21%	28%	7%	0%
Fishbone	51%	7%	35%	7%	0%
Logic model	35%	35%	10%	20%	0%

Comfort Using Specific QI Tools

QI tool	1 No Comfort	2	3	4	5 High Comfort
PDSA	52%	7%	20%	10%	0%
Flow Map	31%	7%	38%	24%	0%
RCA	58%	14%	21%	7%	0%
Fishbone	51%	14%	28%	7%	0%
Logic model	52%	17%	17%	14%	0%

How engaged is your HD in QI initiatives?

- 1-No engagement-0%
- 2-11%
- 3-24%
- 4-**38%**
- 5-Heavily engaged-24%

How effective do you feel QI is in improving the performance of your HD?

- 1-Not effective-3%
- 2-10%
- 3-17%
- 4-**49%**
- 5-Highly effective-21%

Summary

- High levels of knowledge and comfort of QI in general

- Discrepancies in knowledge of and comfort using **specific** QI tools

- Knowledge and comfort of using PDSA lower than expected

- Perceived LHD engagement of QI high

- Perceived effectiveness of QI in HD performance improvement less than expected

Next Steps

- July 27, 2011
  - Video-conference call
    - Project summaries
    - Lessons learned
- August/September
  - Post-test surveys

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Post- test surveys

- Knowledge/ Comfort level using QI
- Measured outcomes
  - # enrolled in DCOE
  - # receiving/ completing DSME
  - # referrals and referral sources
  - Care Coordination efforts with PCP
  - Service delivery changes:
  - DM Rates

Future Directions

- Provide QI training/ facilitation to all KY LHDs
- Foster culture of continuous quality improvement
- Accreditation