THE ROBERT WOOD JOHNSON FOUNDATION

Washington University in St. Louis SCHOOL OF MEDICINE

UNC SCHOOL OF PUBLIC HEALTH

DIABETES INITIATIVE
A National Program of The Robert Wood Johnson Foundation

Diabetes Self Management in Rural Communities

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Rural Health Journalism Workshop 2008

http://www.diabetesinitiative.org/

"Well how is this different than just good clinical care?" J. Shapiro, NPR

8,766 = 24 X 365.25

6 hours a year in the doctor's office or with dietitian or other health professional.

8,760 hours on your own

- **Healthy diet**
- **Physical activity**
- **Monitor blood sugar**
- **Take medications, insulin**
- **Manage sick days**
- **Manage stress – Healthy Coping**

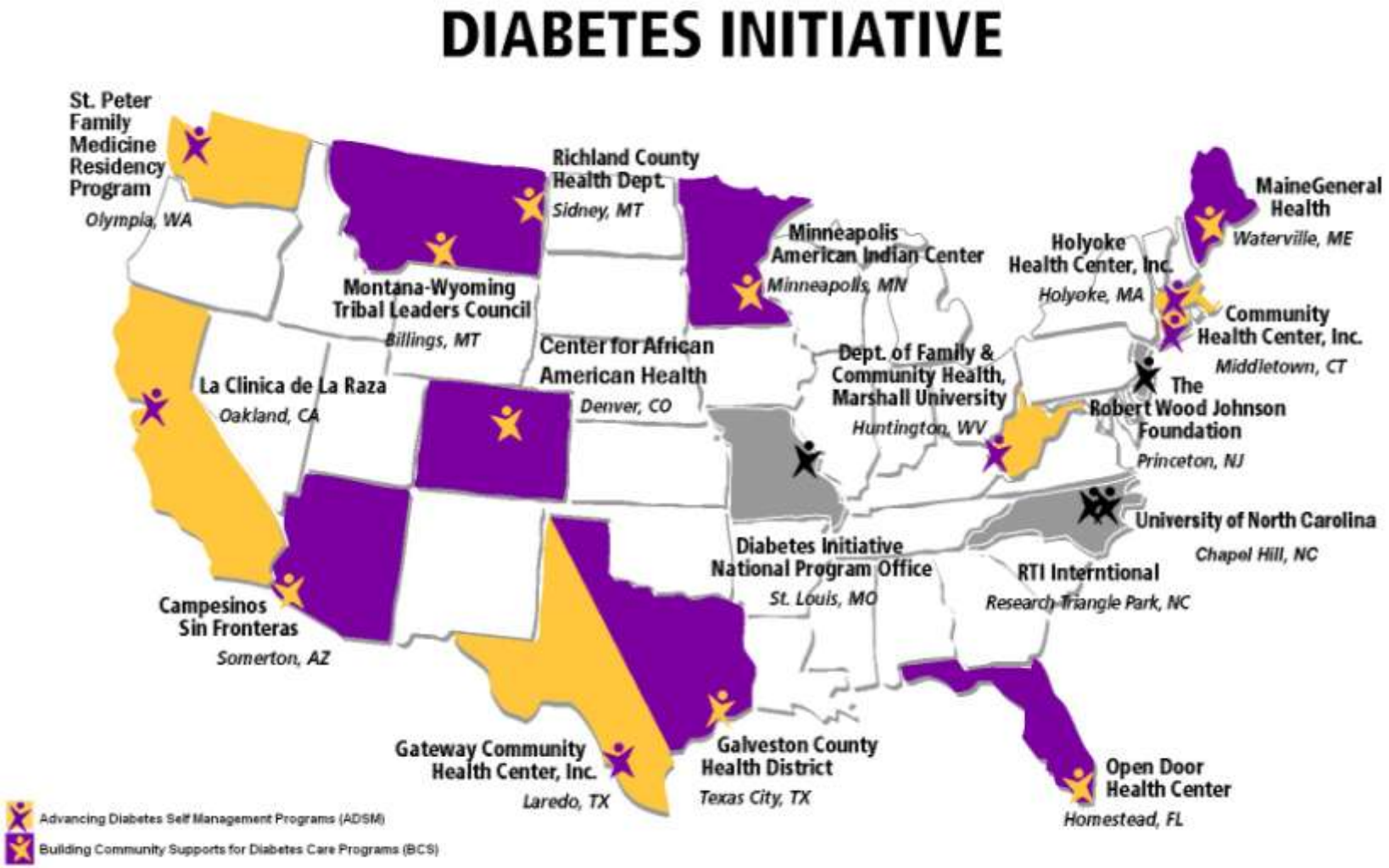
What the individual needs

- **Help figuring out what might work in her/his daily life**
- **Skills to do it**
- **Ongoing encouragement and support – it's for the rest of your life (and help when things change)**
- **Community resources**
- **Tying it all together with good clinical care**

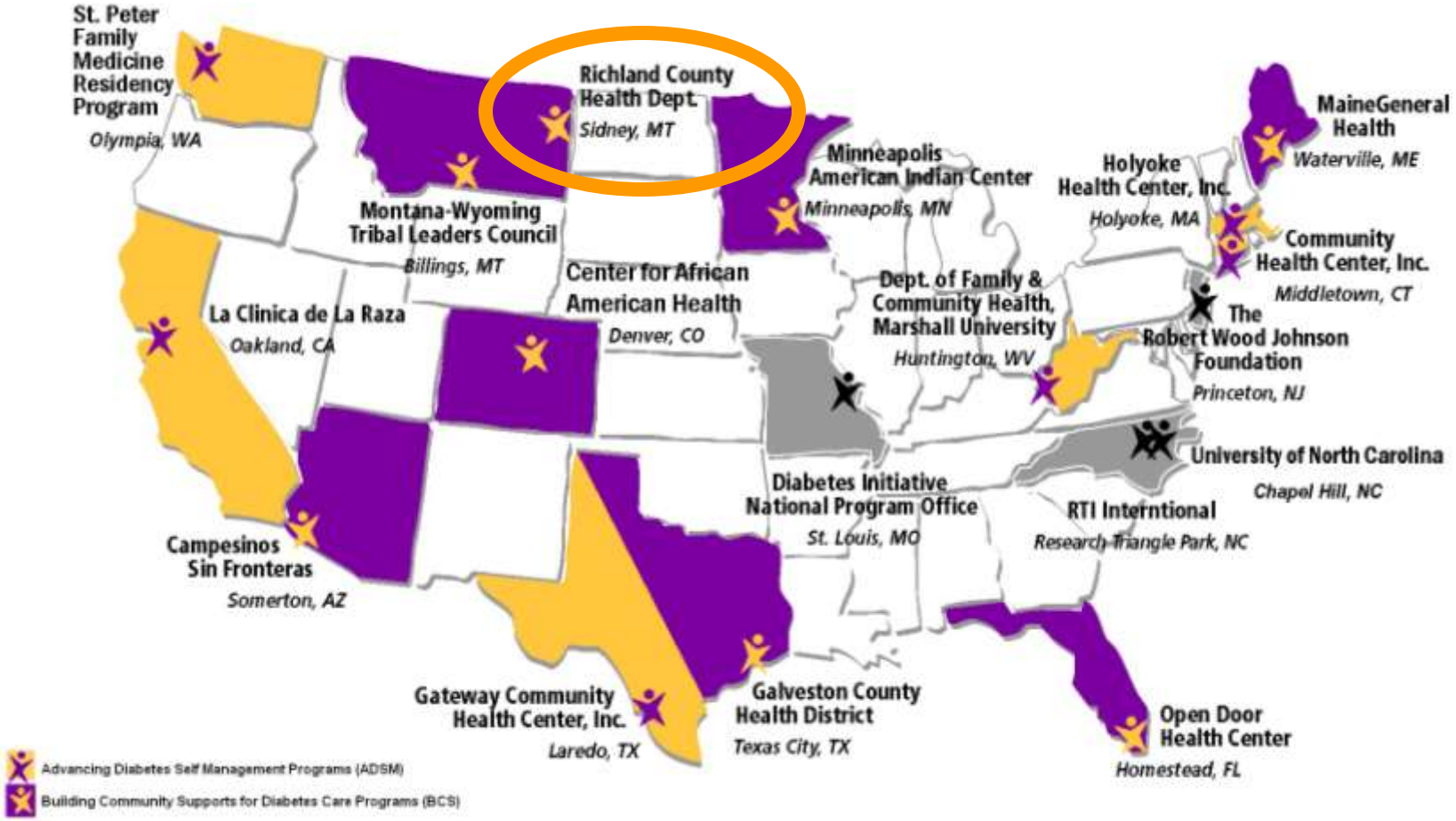
Diabetes Initiative of the Robert Wood Johnson Foundation

Demonstrating feasible, sustainable self management programs as part of high quality diabetes care in primary care and community settings

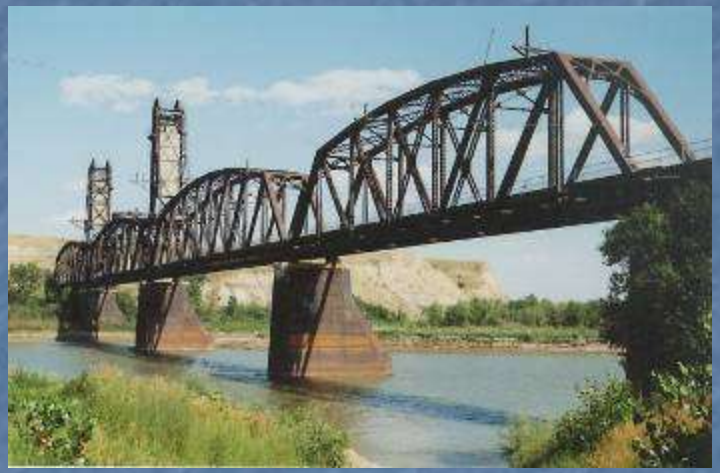
The 14 Sites of the Diabetes Initiative



Richland County Health Department, Sydney, Montana



"An Unlikely Recipe for Success: hospital and local public health partnership supports diabetes self-management"

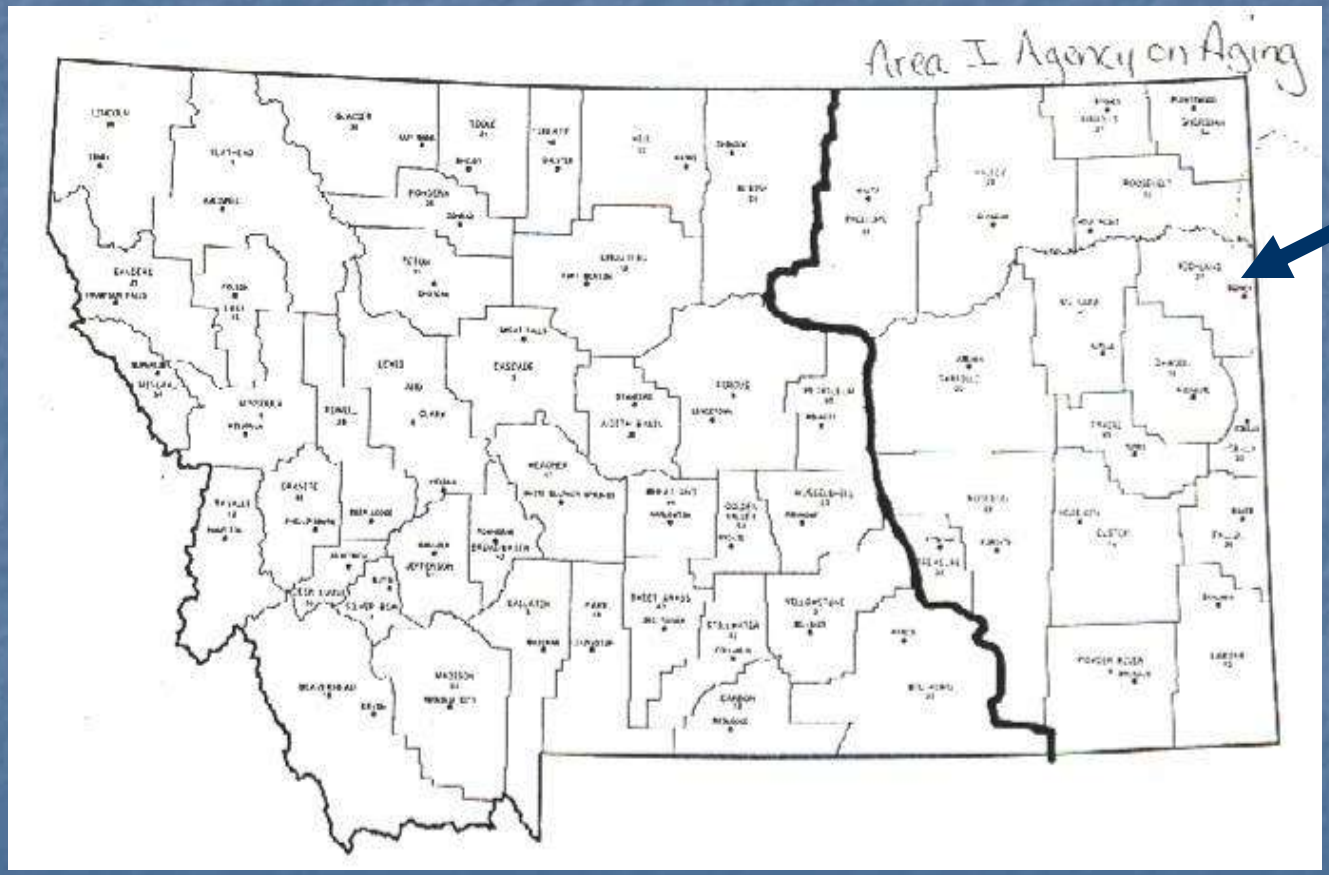


The Richland County Community Diabetes Project

Richland County, Montana

Lisa Aisenbrey, RD, Diabetes Project Director

Richland County, Montana



Community Profile

- Frontier, aging community on the border between North Dakota & Montana
- Sidney, Fairview, Savage, Lambert, Crane
- Population: 9,155 (4.6 persons per sq. mile)
- Farming (beets), ranching, oil, small business
- 1/3 older adults
- Median household income (1999) is 32K

Culture

- Scandinavian, German homesteaders, ranchers
- Seasonal migrant farmworkers (Hispanic, Native American)
- Near 2 Native American Reservations, one Indian Service area
- Small percentage Native American, Hispanic, Black American, Asian.
- Hardy, independent, stoic, resistant to change, wary of outsiders, private, loyal to neighbors and friends.

Richland Health Network

- Richland County Commission On Aging
- Richland County Health Department
- Sidney Health Center (hospital, clinic, pharmacy, extended care, fitness center, assisted living)

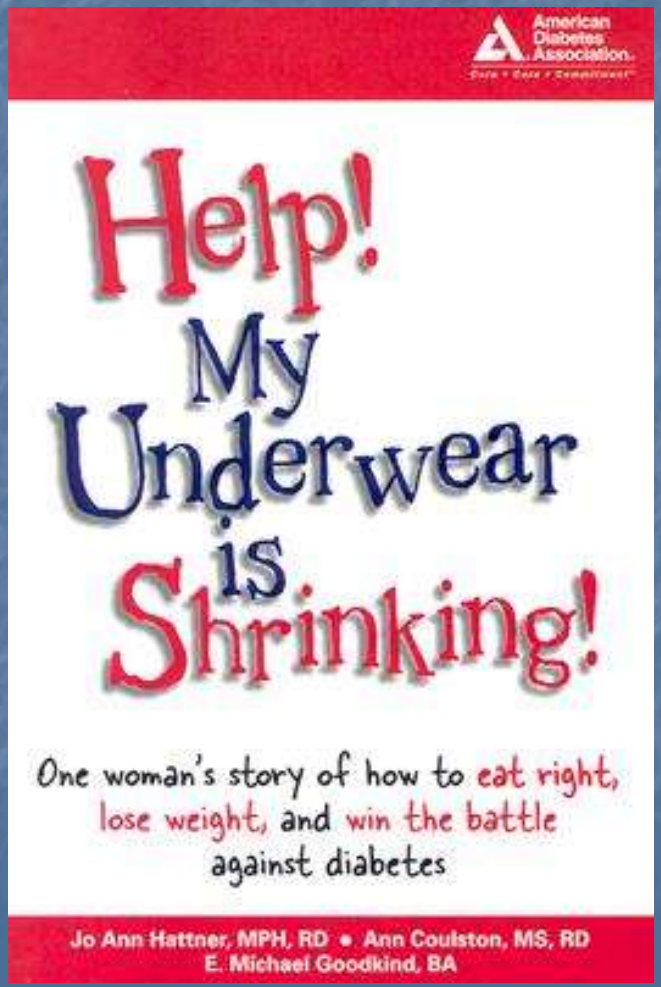
Community Collaboration

- Communities in Action
- WIC, At-Risk home visiting
- Richland County Nutrition Coalition
- Sidney Health Center Community Health Improvement Committee
- Parish Nursing
- RSVP
- Literacy Volunteers of America
- LIONS Club
- American Diabetes Association – Montana
- Montana Migrant Council (on Advisory Board)
- McCone County Senior Center
- Montana Diabetes Project
- Sidney Public Library
- Eastern Montana Mental Health
- Health Fair Planning Committee at hospital
- Media
- And more…

Project Components

- **Addressing the whole person with diabetes**
  - **Physical activity**
  - **Healthy eating**
  - **Social support**
  - **Diabetes education**

Social support & Continuing Education



- Diabetes Education Group
- Goal Setting
- Newsletter
- Resources at Public Library
- Community Resource Book
- Chronic Disease Self-Management Class
- Ambassadors (lay health workers)

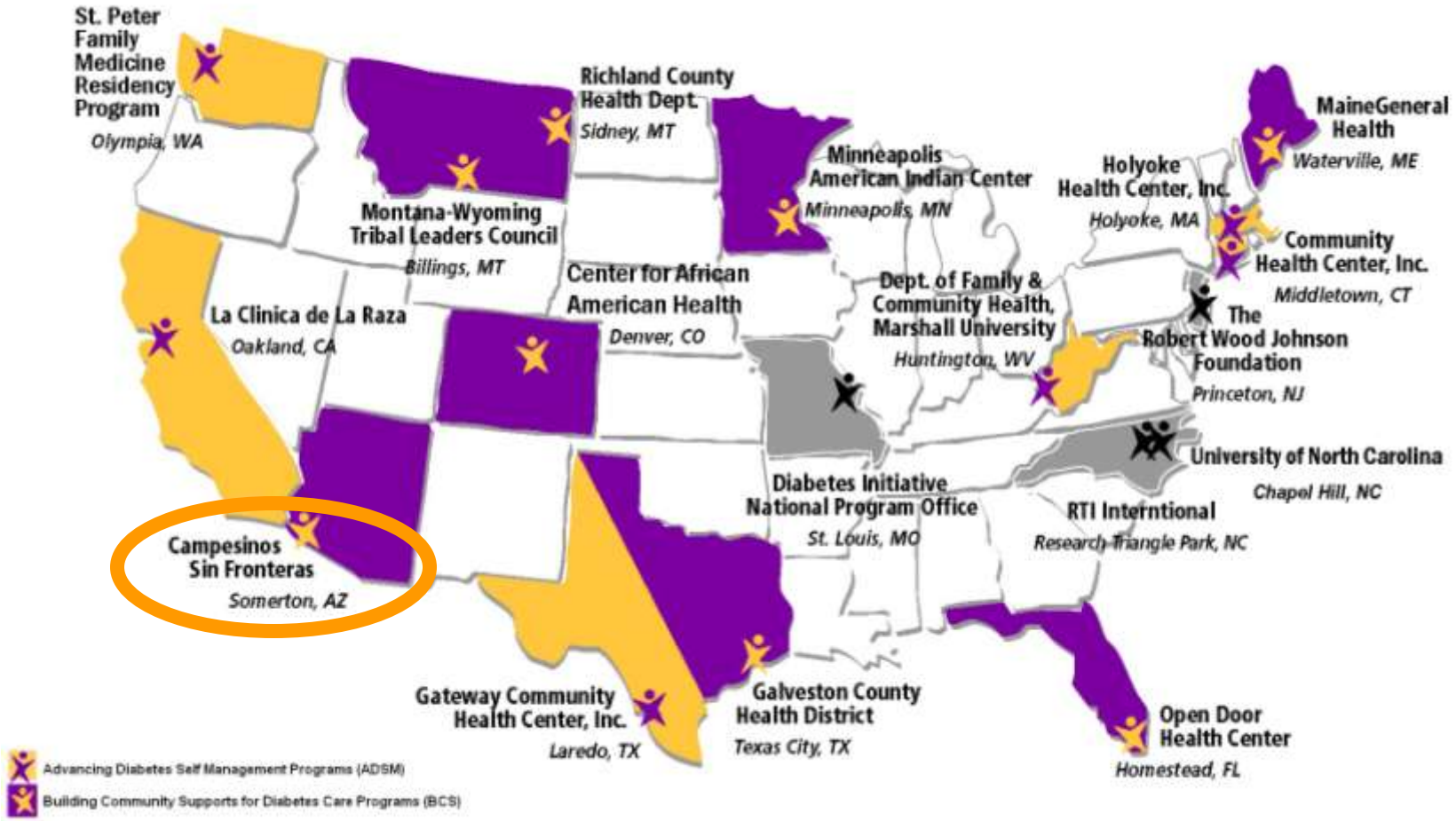
Diabetes Education Center

- Formal group and individual diabetes self management education in medical setting
  - Housed at Sidney Health Center
  - Staff: RD, RN, Coordinator
- Physician referral required
- Coordinated by Public Health
  - Linked with community projects
  - Strong source of referrals
- Diabetes Quality Care Monitoring System
- Achieved ADA recognition!!

Other Activities

- Health literacy training
- Motivational interviewing training
- Provider education
- Local Worksite Wellness Programs

Campesinos Sin Fronteras, Somerton, Arizona



"Campesinos Diabetes Management Program" (CDMP)

A collaborative between
Campesinos Sin Fronteras, Sunset Community Health Center,
University of Arizona College of Public Health
and Yuma County Cooperative Extension

By

Floribella Redondo, Program Manager

Maria Retiz, Promotora de Salud

Project Funded by The Robert Wood Johnson, Building Community Support for Diabetes Care

Selecting CDMP's Target Population

Farmworkers and their Families

Needs of Target Population

Hispanic/Mexican farmworkers are greatly affected by diabetes due to:

- Limited access to health care services
- Working poor
- Lack of health insurance
- Lack of transportation
- Lack of knowledge and education on disease

Promotora Model

- Effective to reach minority and underserved populations
- Have trust and respect from their community members
- Have gained medical providers' appreciation for their contribution to improving the health of their families and community members
- Represent the cultural, linguistic, socio/economic and educational characteristics of the population they serve
- Most Promotores are members of a farmworker family or are ex - farmworkers

CDMP Promotoras Outreach and Education

Promotoras reach the targeted population at their work site, their homes, churches and community

Promotora Diabetes Class

Community Support Services Offered by CDMP

- Diabetes Self-Management Education Classes
- Promotora Advocacy and Referral
- Home Visits
- Diabetes Support Groups
- Family and couple support
- Physical Activity

Community Support Services Offered by Promotoras

- *Patient Diabetes Education*
  Through educational sessions participants learn about diabetes and how to manage it
- *Family Diabetes Prevention*
  Through home visits, participant and family members are provided the tools to control and prevent diabetes.
- *Healthy Cooking Classes*
  Through classes and home visits participants and family members learn about proper food portions and healthy food

Physical Activity

Low Impact Aerobics

- 75% of participants reported this being their first time in their lives performing this kind of activity

Services Offered by CDMP Collaborator

Sunset Community Health Center

- Patient's Medical Care
- Patient Case Management
- Monitor Patient's Medical Compliance
- Patient Diabetes Education Program
- Monitor Patient Medicine Intake
- Patient & Physician Communication

Participant follow-up

- Patient Support

  Promotoras help the participants to monitor and control their diabetes through advocacy, home visits and phone calls

- Diabetes Portable Record

  Participants use this document to keep a record of their doctor's office visits in the U.S and Mexico

Glycated Hemoglobin

(or glycosolated/glycosylated Hemoglobin or Hemoglobin A1c or HbA1c)

- The extent to which circulating hemoglobin cells in the blood have glucose bound to them
- The more sugar in the blood, the more hemoglobin cells are glycated
- Half life of hemoglobin cell is about 8 weeks, so glycated hemoglobin estimates average blood sugar levels over several months
- ≤ 7% considered good control
- Change of ½ to 1 percentage point considered appreciable

Results

- Over 12 months, mean decrease of glycated hemoglobin of 0.58 percentage point
- Among those who began ≥ 7%, mean decrease of 1.0 percentage point
- Decreases in glycated hemoglobin correlated with
  - Attendance at support groups
    r = -.343 (p = .004)
  - Instrumental support or advocacy
    r = -.410 (p = .001)

Ingram et al. ***The Diab Educator*** 2007: Suppl 6, 172S-178S.

Law of Halves and Need for Choices

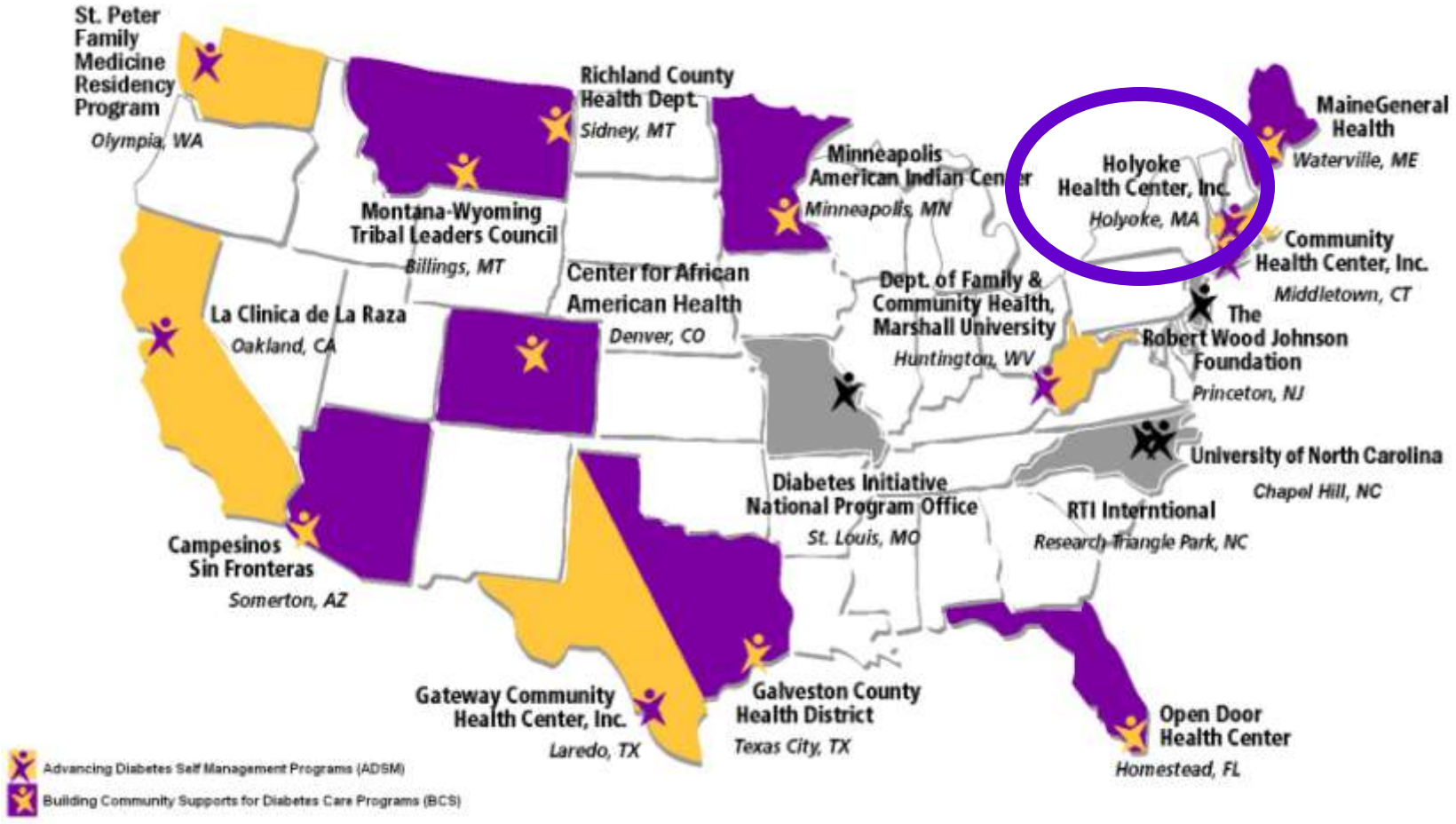
- Only about half of those for whom an intervention is appropriate will accept it
  - Only about half of those will follow it
  - Only about half of those will benefit -- 1/8 of those with whom started
- 60% to 70% of patients with diabetes have not received self-management interventions
  (Austin *Endocrinology Practice.* 2006 12(Suppl 1):138-141)
- Thus, diabetes self management needs to include choices for participants among channels and emphases of interventions.

To reach audiences and counter law of halves, we need:

- Many Good Practices
- Not Few Best Practices

Planning resources much better spent identifying several programs to try than trying to identify the best *one*

Rural in Metropolitan?
Holyoke Health Center, Holyoke, Mass.



Holyoke Health Center

Federally Qualified CHC

Western Massachusetts

17,277 medical patients

6,722 dental patients

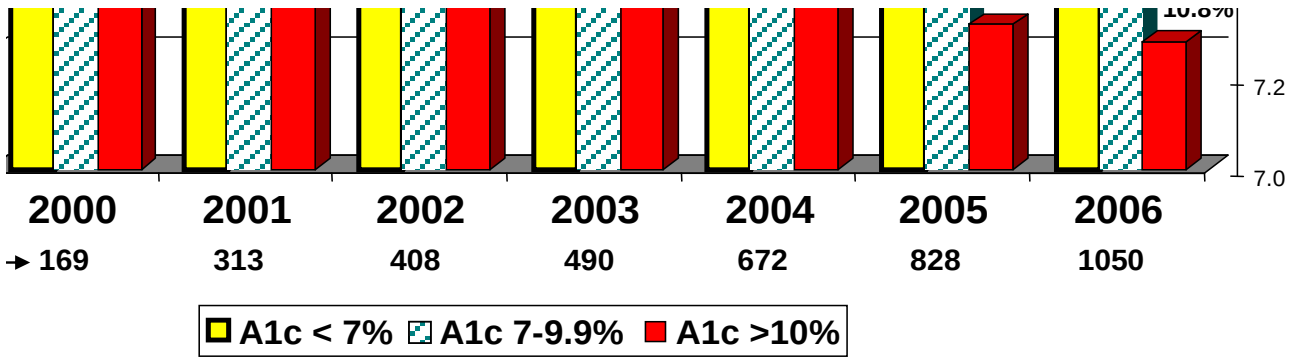
One of the highest diabetes mortality rates in Massachusetts

- **≈ 100% of patients live at or below poverty level**

Multiple Interventions provides ample opportunity for ongoing follow up and support

- Chronic Disease Self-Management Classes
- Community Health Workers
- Diabetes Education Classes
- Exercise Classes
- Individual Appointments with the diabetes educator and the nutritionist
- Breakfast Club
- Snack Club

Holyoke Health Center, Holyoke Massachusettes
Changes in HbA1c — 2000 - 2006



Core Concept: Resources & Supports for Self Management

- **Individualized assessment**
  - **Including consideration of individual's perspectives, cultural factors**
- **Collaborative goal setting**
- **Enhancing skills**

  Diabetes specific skills

  Self-management and problem-solving skills

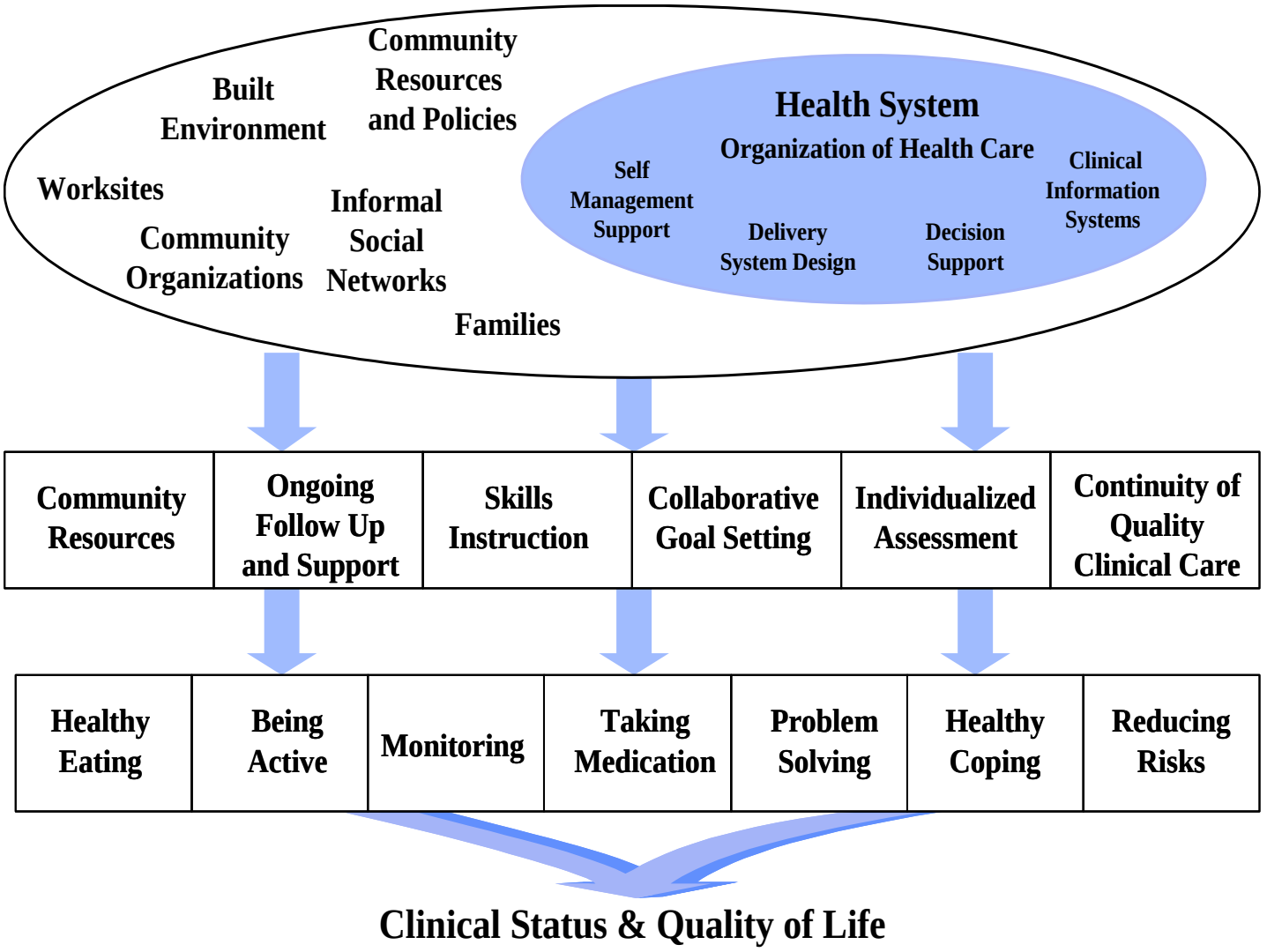
  Includes skills for "Healthy Coping" and dealing with negative emotions
- **Ongoing follow-up and support**
- **Community resources**
- **Continuity of quality clinical care**

Tri-Level Model of Self Management and Chronic Care

Organization & System
e.g., Chronic Care Model

Implementation
e.g, Resources & Supports for Self Management

Impacts
e.g., AADE 7 Self-Care Behaviors



The Evidence **IS** *There!!*

Anderson, R. M., Funnell, M. M., Butler, P. M., Arnold, M. S., Fitzgerald, J. T., & Feste, C. C. (1995). Patient empowerment. Results of a randomized controlled trial. *Diabetes Care, 18*, 943-949.

Clement, S. (1995). Diabetes self-management education. *Diabetes Care, 18*, 1204-1214.

Diabetes Prevention Program Research Group. (2002). Reduction of the incidence of type 2 diabetes with lifestyle intervention or metformin. *New England Journal of Medicine, 346*, 393-403.

Glasgow, R. E., Fisher, E. B., Anderson, B. J., La Greca, A., Marrero, D., Johnson, S. B., et al. (1999). Behavioral science in diabetes: Contributions and opportunities. *Diabetes Care, 22*, 832-843.

Glasgow, R. E., Boles, S. M., McKay, H. G., Feil, E. G., & Barrera, M., Jr. (2003). The D-Net diabetes self-management program: long-term implementation, outcomes, and generalization results. *Prev Med, 36*(4), 410-419.

Greenfield, S., Kaplan, S. H., Ware, J. E., Yano, E. M., & Frank, H. (1988). Patients' participation in medical care: Effects on blood sugar control and quality of life in diabetes. *Journal of General Internal Medicine, 3*, 448-457.

Norris, S. L., Engelgau, M. M., & Narayan, K. M. (2001). Effectiveness of self-management training in type 2 diabetes: a systematic review of randomized controlled trials. *Diabetes Care, 24*, 561-587.

Norris, S. L., Lau, J., Smith, S. J., Schmid, C. H., & Engelgau, M. M. (2002). Self-management education for adults with Type 2 Diabetes: A meta-analysis of the effect on glycemic control. *Diabetes Care, 25*, 1159-1171.

Pieber, T. R., Brunner, G. A., Schnedl, W. J., Schattenberg, S., Kaufmann, P., & Krejs, G. J. (1995). Evaluation of a structured outpatient group education program for intensive insulin therapy. *Diabetes Care, 18*, 625-630.

Piette, J. D., Weinberger, M., Kraemer, F. B., & McPhee, S. J. (2001). Impact of automated calls with nurse follow-up on diabetes treatment outcomes in a Department of Veterans Affairs Health Care System: a randomized controlled trial. *Diabetes Care, 24*(2), 202-208.

Rubin, R. R., Peyrot, M., & Saudek, C. D. (1989). Effect of diabetes education on self-care, metabolic control, and emotional well-being. *Diabetes Care, 12*, 673-679.

Rubin, R. R., Peyrot, M., & Saudek, C. D. (1993). The effect of a comprehensive diabetes education program incorporating coping skills training on emotional wellbeing and diabetes self-efficacy. *The Diabetes Educator, 19*, 210-214.

The Diabetes Control and Complications Trial Research Group. (1993). The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *The New England Journal of Medicine, 329*, 977-986.

The Critical Piece??

- **Policy change** and changes in guidelines/practices rest on **political processes** at least as much as rational processes and evidence
- **Have data** on **clinical outcomes**
- Need a **change in perspective**, expectations about what health care should entail, at least as much as we need better data

Needed Shift in Public Understanding

High Quality Diabetes Care:

- Elite internist or endocrinologist
- 15 minutes, quarterly
- Rx adjustments
- Exhortation to lose weight; diet plan
- Pat on back and good luck

High Quality Diabetes Care:

- 15 minutes, quarterly w/ pt-centered clinician
- Self management classes, support groups
- Activities, classes for healthy eating, physical activity
- Bimonthly calls from/prn access to Comm Hlth Wrkr (linked to nurse, pcp)
- Healthy community

World Views that Frame Journalism and Reporting on Self Management

Newtonian Physics – Quantum Physics

Linear Systems – Integrative Systems

Positivism – Post Modernism

"Just Say 'No'!" – "It Takes a Village"

PC – Macintosh

Narrative
Protagonist/Antagonist/Solution – *No Country for Old Men*
Fargo, Cohn Brothers

Magic Bullets – Multicausality

Cute Child/Sick/Heroic Doctor – Self Management

Challenge to Journalism

- No magic cures, breakthroughs
- Skills and influences are subtle and diffuse, not dramatic and tangible
- How to cover diabetes self management and make it appreciable, more than "just good medical care"

The Story

For folks with diabetes

- 6 hours a year with the doctor, 8,760 "on your own"
- "Different strokes for different folks," but need
  - Help to figure out how you want to manage your diabetes
  - Help learning the skills to do it
  - The encouragement and community resources to stay with it
- It can be done with real people in real places

Contact

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