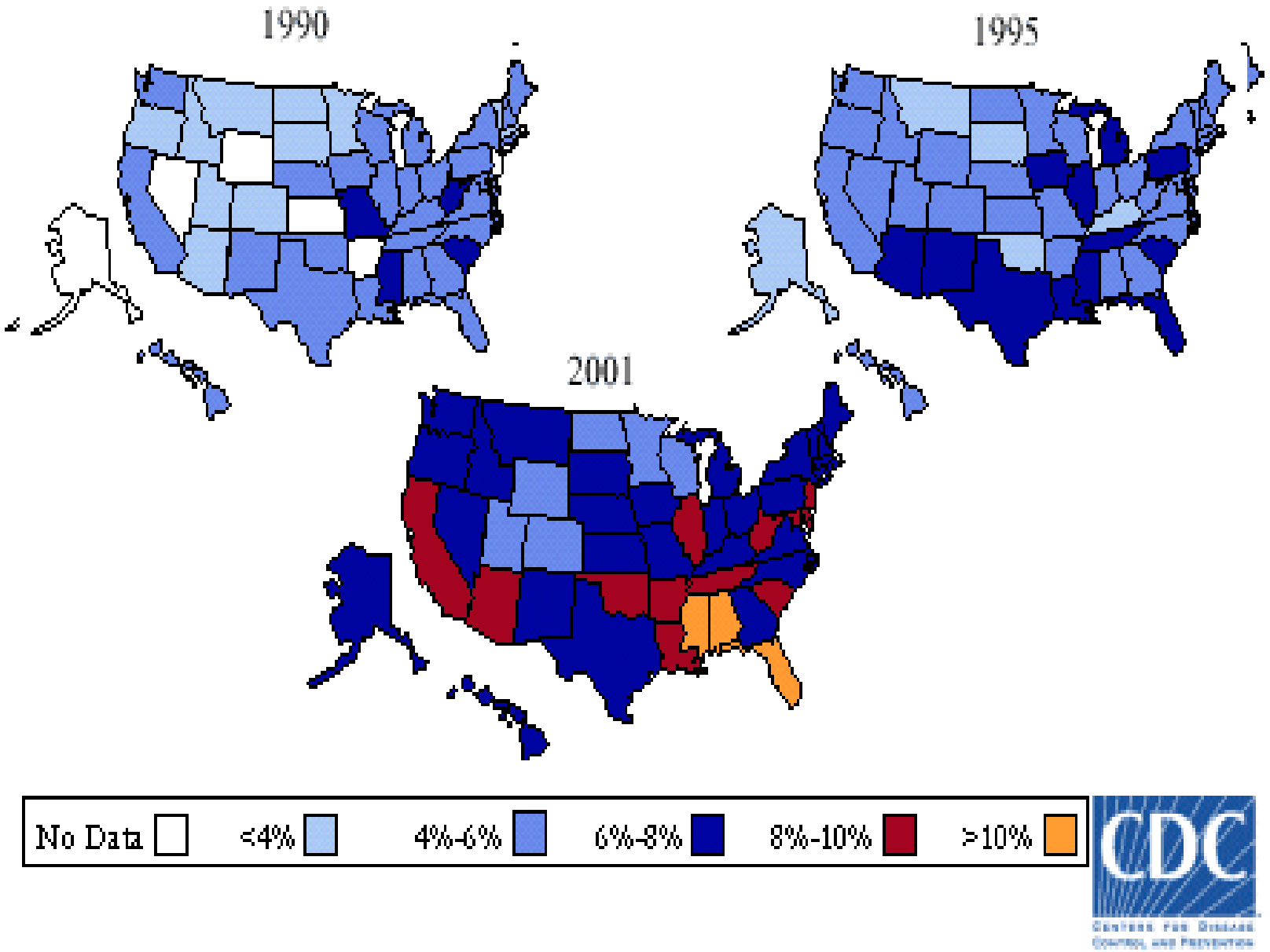
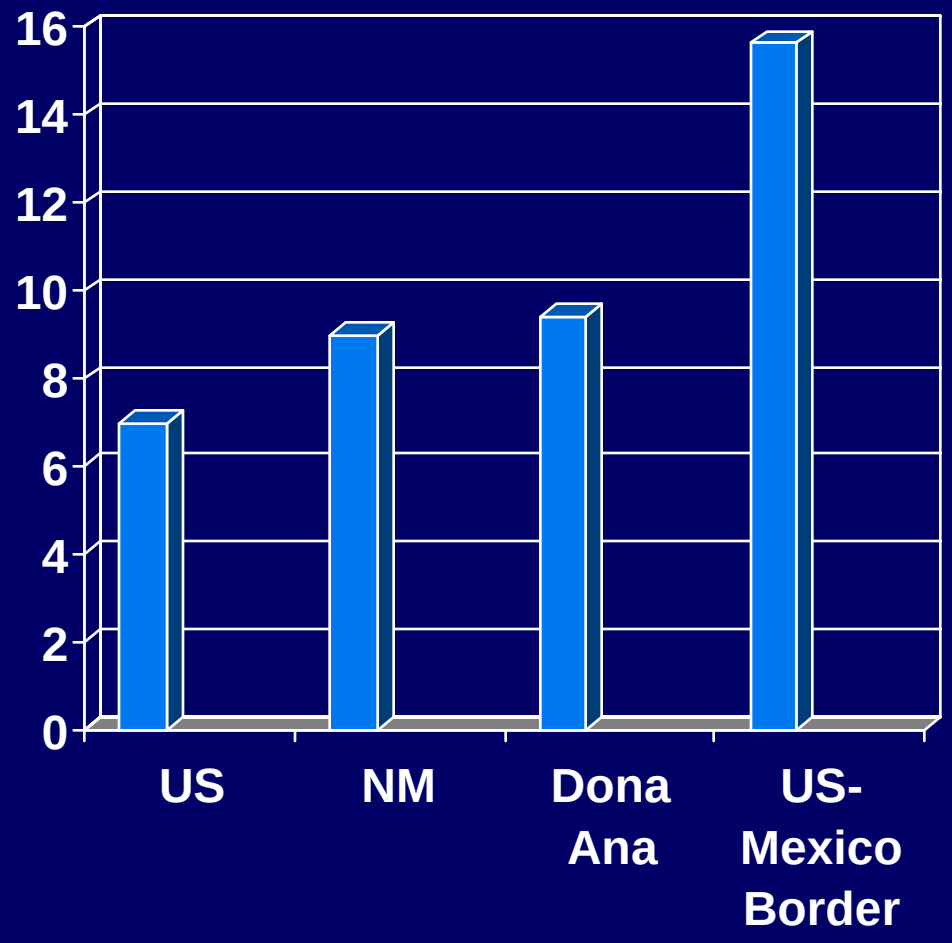
Tailoring Diabetes Education Services to Optimize Outcomes

- Wanda J. Borges, DSN, RN-BC, CNS



Diabetes Prevalence Rates Compared



Border Health

- Hispanics - 40% of border population
  - 3 times the national average
- 19% at or below poverty
  - National average 13%
- 80% of border counties designated as Health Professions Shortage Areas
  - National average – 63%

Diabetes Education

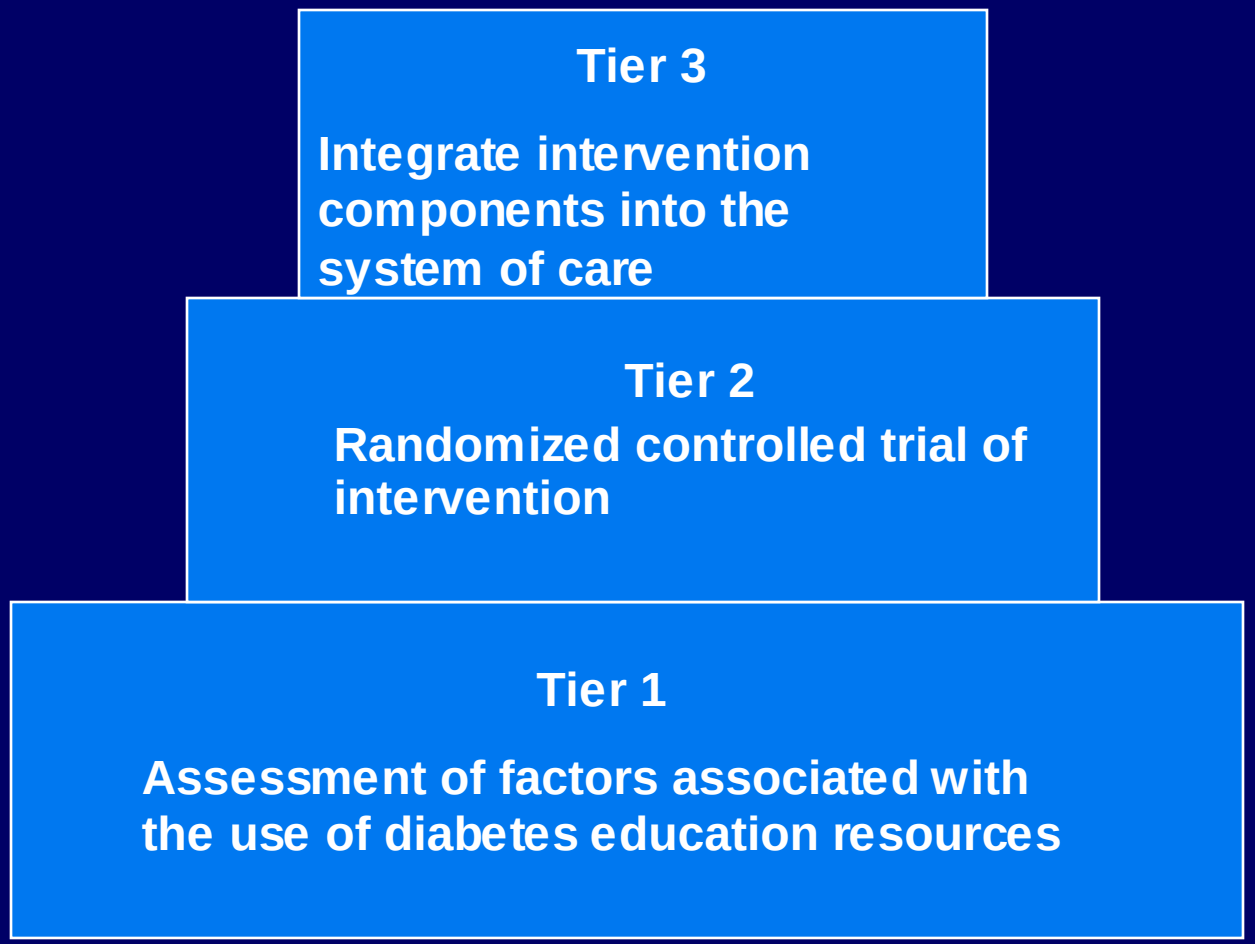
- Primarily developed for Caucasian populations
- Diabetes education attendance statistics are low
- Hispanics less likely to receive patient education (Cowie & Harris, 1997)
- Barriers include language, transportation, lack of education, and discomfort in formal educational settings

Research Problem

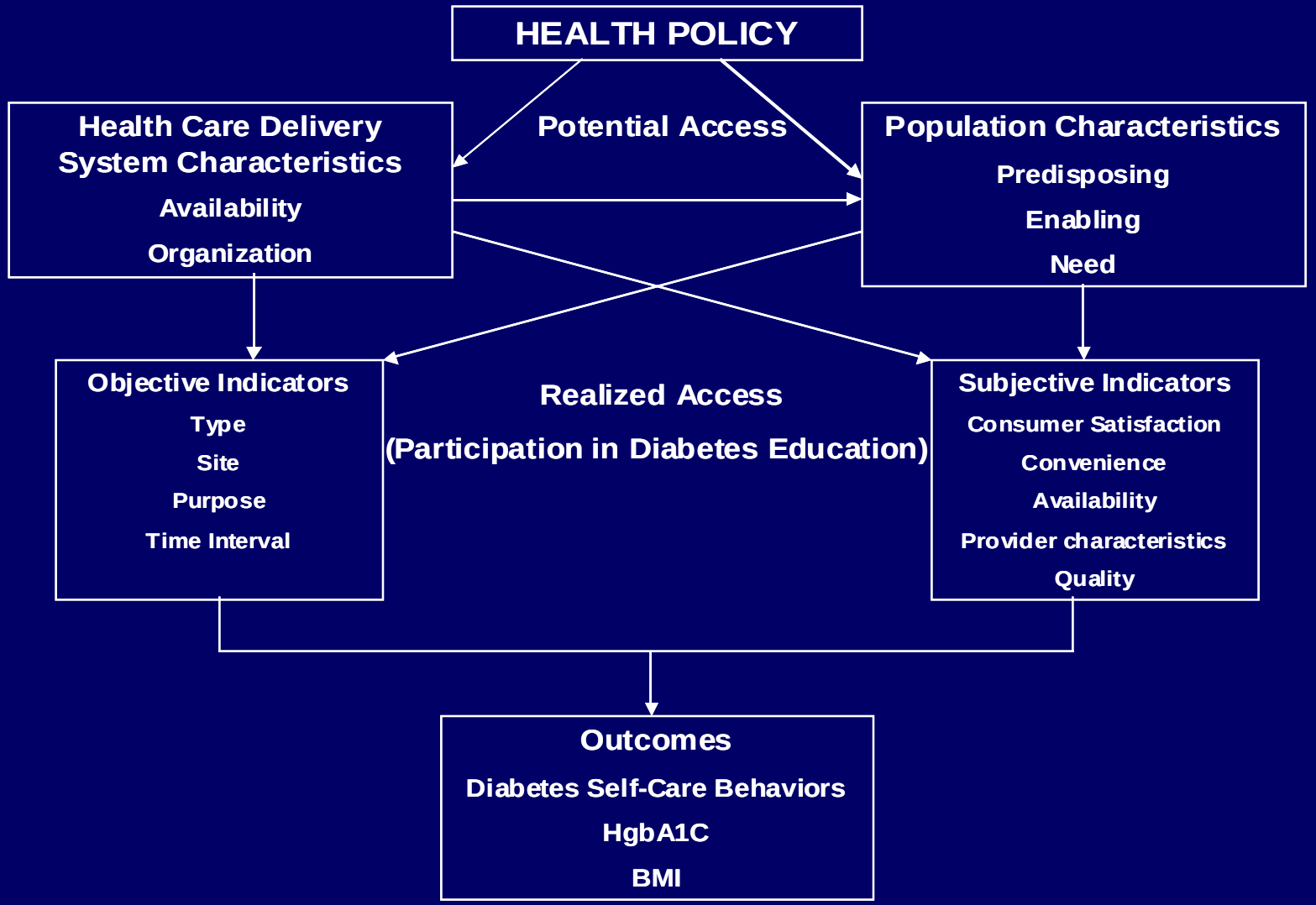
Mexican Americans living along the US/Mexico Border have

- higher rates of type 2 diabetes,
- perform less self-care, and
- have less access to primary health care, including diabetes self-care management education
- Factors associated with diabetes education attendance in this population are unknown

Study Design



Access Framework (Aday & Anderson)



Mapping the Organization…

The Chronic Care Model (CCM) consists of 6 domains of service delivery

1. Organization of the Health Care System
2. Community Linkages
3. Delivery System Design
4. Clinical Information Systems
5. Self-Management Support
6. Decision Support

Individual Characteristics Affecting Participation in Diabetes Education

- Predisposing
- Enabling
- Need

Description of the Tier 1 Study

- Descriptive, cross-sectional study
- Community health center with multiple sites along the U.S.-Mexico border
- Variables included diabetes self-care behaviors, acculturation, HgbA1C, BMI and diabetes self-efficacy

Sample Selection

- Inclusion Criteria:
  - Age 35 or >
  - Able to communicate verbally
    - Whisper test
    - Clock draw
  - Diagnosis of type 2 diabetes
  - BAHC patient
- Exclusion Criteria:
  - Clinic visit > 2 years ago
  - Inability to perform self-care

Predisposing Factors Site Comparison

Variable	Site 1 n=30	Site 2 n=26	Site 4 n=28
Age	61 (11)	69 (10)	62 (12)
Acculturation	**1.4 (.73)**	3.1 (1.0)	*1.4 (.64)*

Predisposing Factors Site Comparison

Variable	Site 1 n=28	Site 2 n=21	Site 4 n=26
Born in Mexico	23 (82%)	1 (5%)	24 (92%)
Hispanic Ethnicity	28 (100%)	6 (29%)	26 (100%)

Enabling Factors Site Comparison

Variable	Site 1	Site 2	Site 4
<8th grade completed	n=28 23 (82%)	n=20 3 (15%)	n=26 23 (89%)
Income < $10,000	n=24 14 (58%)	n=14 6 (43%)	n=23 23 (100%)

Self-Care Behaviors Site Comparison

Variable	Site 1 n=28	Site 2 n=21	Site 4 n=26	F	p value
Diet	4.9 (1.5)	4.6 (1.6)	4.6 (1.6)	0.25	0.78
SMBG	3.5 (2.7)	4.0 (2.7)	2.9 (2.7)	0.98	0.38
Exercise	**5.2 (2.4)**	**2.5 (2.4)**	3.1 (2.9)	7.8	<0.01
Foot Care	5.9 (1.1)	5.2 (1.4)	5.2 (1.5)	3.09	0.05

Patient Assessment of Chronic Illness Care - Site Comparison

Variable	Site 1 n=28	Site 2 n=21	Site 4 n=26	F	p value
Activation	2.6 (1.4)	**1.9 (1.1)**	**3.2 (1.4)**	4.8	<0.05
Decision Support	3.8 (1.1)	**3.1 (1.0)**	**4.1 (0.9)**	5.5	<0.01
Goal Setting	**3.1 (1.3)**	**1.9 (1.0)**	2.6 (1.2)	5.8	<0.01

Patient Assessment of Chronic Illness Care - Site Comparison

Variable	Site 1 n=28	Site 2 n=21	Site 4 n=26	F	p value
Follow-Up Coordination	2.8 (1.4)	2.3 (1.1)	2.7 (1.4)	1.1	0.34
Problem Solving	3.1 (1.4)	2.5 (1.4)	2.7 (1.3)	1.2	0.31

Intervention Development

Individual Level

- Individualized self-management goal setting that focuses on 1-2 goals
- Promotora follow up for barrier identification and progress to goals

System Level

- Chart demonstrating progress self-management goals on patient chart for provider

Implications of Study

- Factors that affect the use of diabetes education resources are different across sites
- Interventions for diabetes must be tailored to the site and the patient
- Diabetes educator is key link between clinic and promotora
- Promotora is key link between patient and clinic
- Integration of goal and progress to goals identified by promotora
- Need for community based participatory research to make lasting change

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