



Making Data Count

Measuring Diabetes and Obesity in the Indian Health System

December 18-20, 2007

IHS Division of Diabetes Treatment and Prevention

Evaluation of the SDPI Diabetes Prevention and Health Heart Demonstration Projects

Yvette Roubideaux, MD, MPH

Session: D4

SPECIAL DIABETES PROGRAM FOR INDIANS Competitive Demonstration Projects

Evaluation and Lessons Learned

Yvette Roubideaux MD MPH



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Competitive Demonstration Projects

- **Overview**

- Background of the SDPI
- Development of the Evaluation
- Lessons Learned

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- **Special Diabetes Program for Indians**

- Balanced Budget Act 1997
 - \$30 million/year x 5 years
 - Prevention/Treatment of Diabetes in AIANs
 - Grants to over 300 IHS, tribes, urban Indian programs
- Consolidated Appropriations Act - 2000
 - Increased funding to \$70 million/year
- HR 5738 - 2002
 - Extended SDPI through 2008; Increased funding to \$150 million per year
 - Congressional direction
 - More funding for data
 - Competitive grant program
 - » Address diabetes prevention and most compelling complication of diabetes (cardiovascular disease)
 - » Evaluation required

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- **SDPI Competitive Grant Program**

- Tribal Consultation
- IHS Director decision
 - \$27.4 million/year x 5 years
 - Grants to 60-70 programs (\$23.3 million)
 - Administration, Coordination, Evaluation (\$4.1 million)
 - “Competitive”- programs compete for funding
 - Demonstration Projects
 - Programs implement activities in 1 of 2 areas
 - » Diabetes Prevention; Cardiovascular Disease Risk Reduction
 - Collaborative development of activities
 - Comprehensive Evaluation, Coordinating Center

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- **Overall Structure of Program**

- IHS Division of Diabetes Treatment & Prevention
 - General oversight, coordination, leadership
- IHS Grants Management
 - General oversight of grant administration, financial audits, monitoring and report
- Coordinating Center – UCHSC/UA
 - Day to day coordination of overall program
 - Facilitation of collaborative process, communication
 - Technical assistance to grant programs
 - Development and implementation of comprehensive, multi-component evaluation

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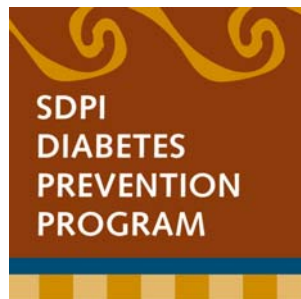
Competitive Demonstration Projects

- **Why have a planning year?**
 - We knew “what”
 - Congress, Science, RFA
 - We didn’t know “how”
 - Diverse group of programs, experience, expertise
 - Importance of developing common activities to evaluate for all programs despite diversity
 - Translation into different communities, cultures
 - Need for technical assistance – complex activities
 - Collaborative process to involve grantees in development
 - FY 2005 – 6 Planning Year meetings

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- **Names of Demonstration Projects**
 - National name/logo
 - Local name/logo





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Development of the Core Elements

- **Diabetes Prevention**
 - Recruit and screen to find people with prediabetes
 - Goal: 48 people per year
 - Teach 16 session DPP curriculum in group sessions
 - Individual coaching on physical activity, weight loss
 - Retention
 - Community activities
 - Outcomes – weight loss, lifestyle changes, prevention of diabetes
- **Healthy Heart Project**
 - Recruit and screen to find people with diabetes
 - Goal: 50 people per year
 - Intensive case management
 - Treat CVD risk factors to target goals
 - Provide education on CVD risk reduction
 - Retention
 - Community activities
 - Outcomes – improvement in CVD risk factors, CVD prevention

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Evaluation !?!?

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- **Evaluation Design**

- Congress required evaluation of CGP
- Designed as public health program evaluation
 - Process – did programs successfully implement the activities, lessons learned?
 - Outcomes – did participants improve on short-term, intermediate and long-term outcomes, what factors were associated with successful participants and programs?
- Importance of evaluation – 2007 Report to Congress, advocacy efforts to reauthorize SDPI

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- **Evaluation Design**

- Process – did programs successfully implement the activities, lessons learned?

- Measures?

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- **Evaluation Design**

- Outcomes – did participants improve on short-term, intermediate and long-term outcomes, what factors were associated with successful participants and programs?

- Measures?

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- **Evaluation Design**

- Lessons Learned?

- Measures?

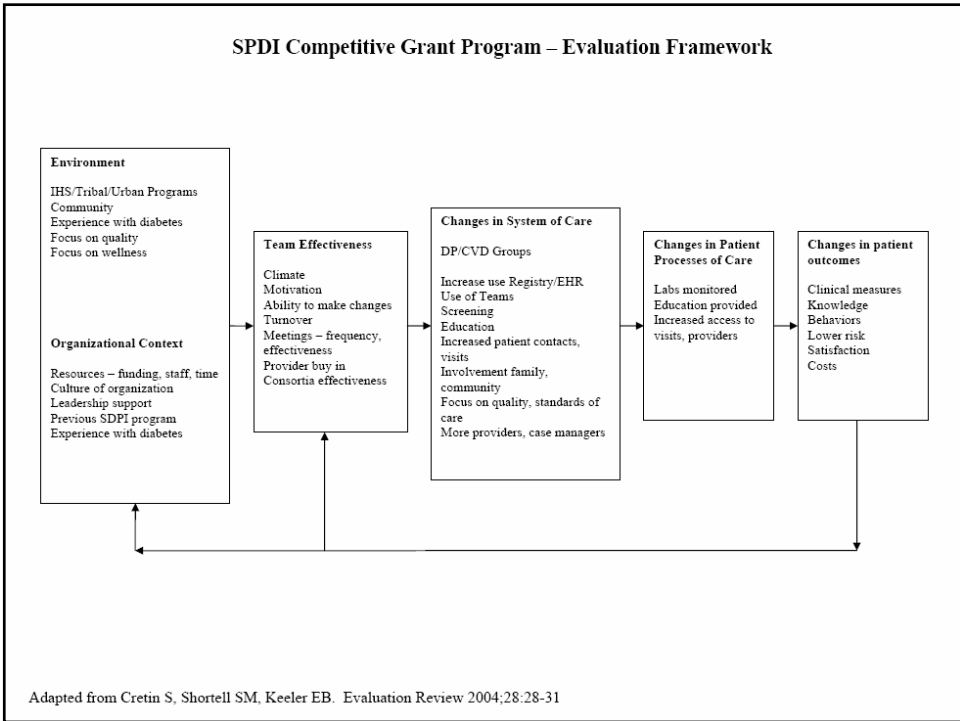
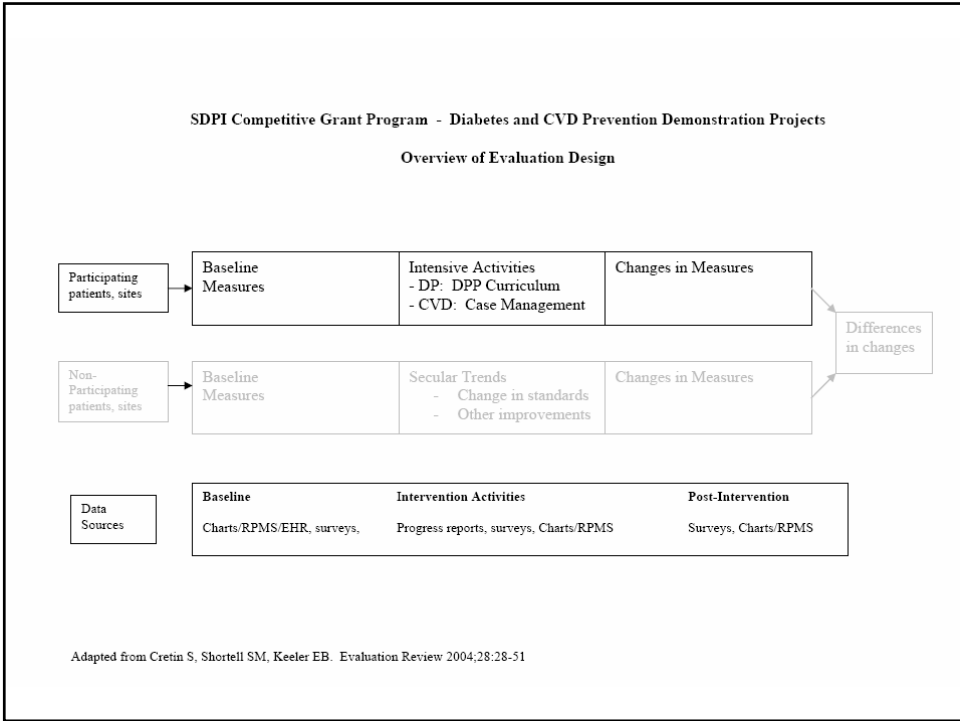
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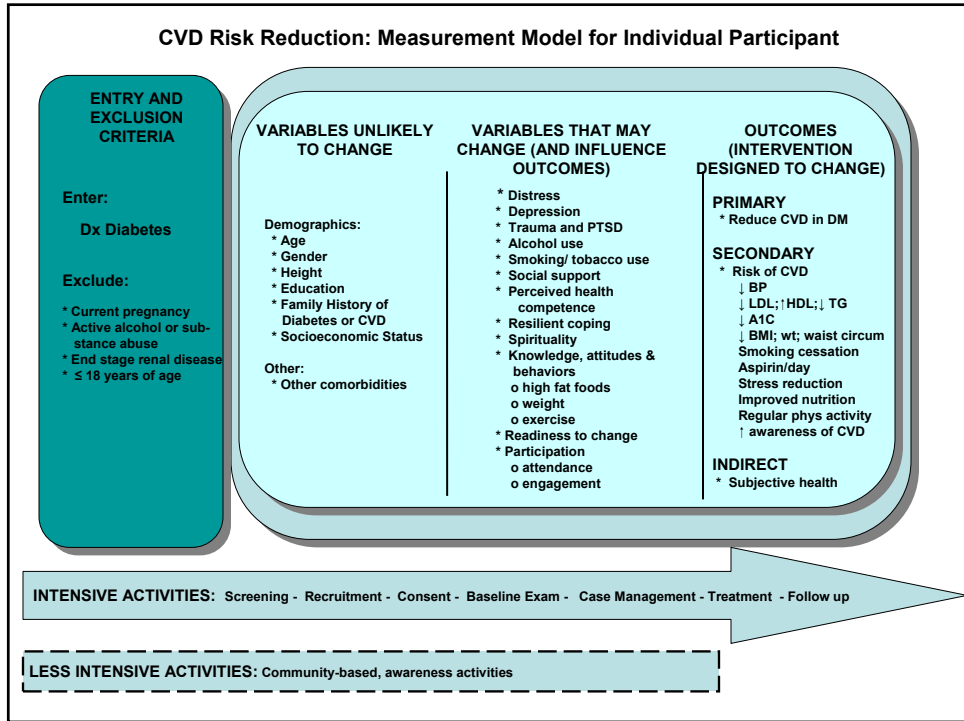
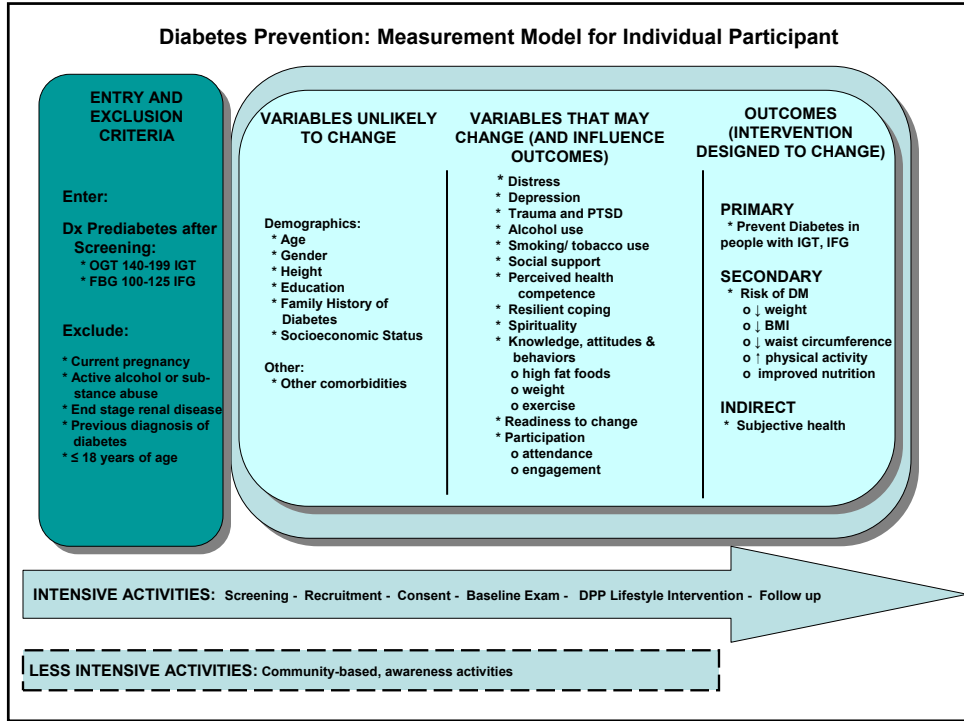
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- **Evaluation Design**

- Grant Program Participation

- Input on what outcomes to measure
 - Input on factors that might promote or hinder success of programs and participants
 - Input on design of evaluation
 - Did not want a comparison group
 - Did not want randomization
 - Reviewed draft forms
 - Training on evaluation/data management
 - Site Data Coordinators
 - Understood importance of evaluation
 - Accountability to Congress





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- **Evaluation Design**

- Recruitment/Screening:

- Registry - tracking
- Community Screening Worksheets – test results

- Baseline Assessments:

- Core Elements – basic outcomes
- Participant Questionnaire – influencing factors
- Family Questionnaire – level of support

- Follow up Assessments (DP only)

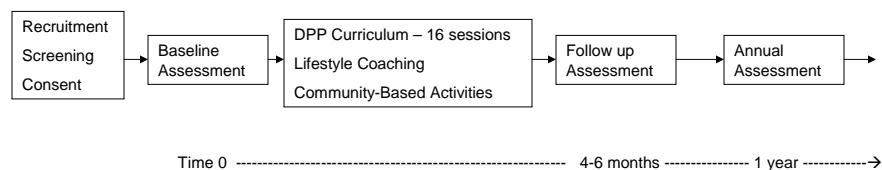
- Annual Assessments

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- **Evaluation Design**

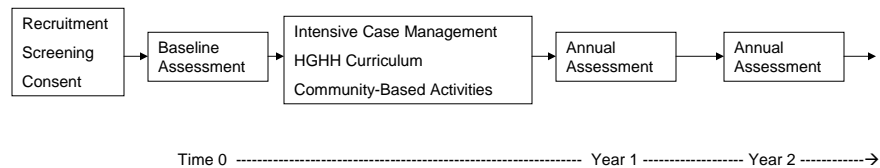
- SDPI Diabetes Prevention Program



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- **Evaluation Design**
 - SDPI Healthy Heart Project



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- **Evaluation Design**
 - Other Participant/Program forms
 - Recruitment Activities
 - Participant Involvement
 - Retention
 - Team activity
 - Providers
 - Community
 - Organization
 - Interviews with programs

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- **Lessons Learned So Far - General**

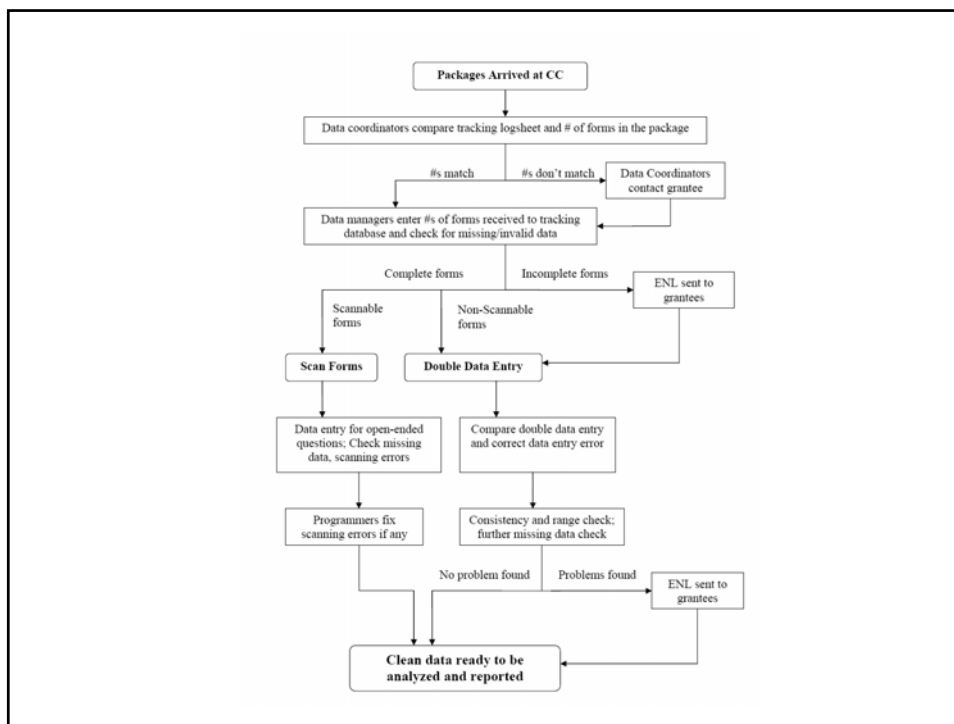
- Getting Started was a challenge
 - Access to funding in PMS, Hiring, Communication, Computers/Internet
- Planning Year/Developing Core Elements
 - Wide range of experience, start vs. plan, diverse training needs, turn over of staff, community/tribal buy in/support
- Grants Management issues
 - Dealing with a grant process, tracking, allowable items, carry over, consortium issues

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- **Lessons Learned So Far - Evaluation**

- More extensive than previous SDPI grants
- Common activities vs. local variation
- Scope of the evaluation
- Public health program evaluation vs. research
- IRB, HIPAA issues
- Time for Local, Tribal approvals
- RPMS access/use
- Evaluation training, data quality
- Data collection and management process



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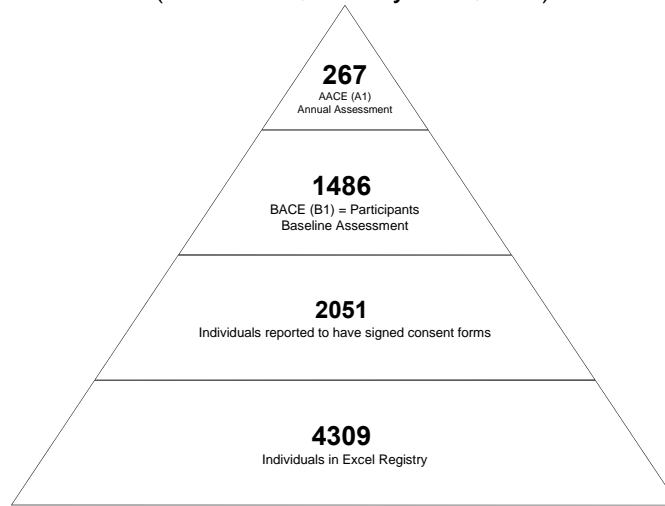
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- **Current Status**

- SDPI Diabetes Prevention Program
 - Programs teaching curriculum, reporting weight loss and excitement of participants
 - Recruitment: 1956 participants as of 10/31/07
- SDPI Healthy Heart Project
 - Programs doing monthly case management, teaching curriculum, reporting enthusiastic participants, reporting improvements in risk factors
 - Recruitment: 1850 participants as of 10/31/07
- Evaluation – data submission process ongoing
 - Semi-Annual Progress Reports

HH: Recruitment, Participant Accrual, and Baseline/Annual Assessment Progress

(November 1, 2005 – June 30, 2007)



** Data from 30 HH Grant Programs in which the majority of programs have completed 1 year of Intensive Activities as of June 30, 2007

HH: Comorbidities at Baseline

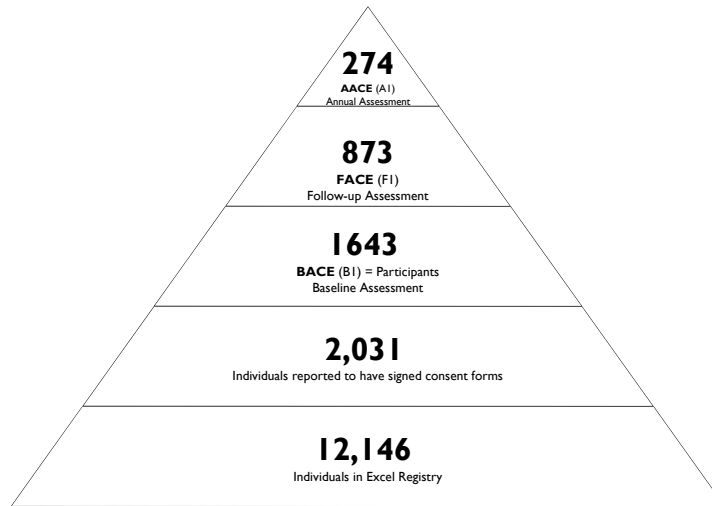
- Diabetes +

	Percent
High Blood Pressure	66.4
Back Pain	44.4
Depression	26.3
Osteoarthritis	24.8
Heart Disease	18.4
Rheumatoid Arthritis	11.7
Ulcer/stomach disease	10.5
Lung Disease	7.1
Anemia or other blood disease	6.8
Kidney Disease	4.2
Liver Disease	2.4
Cancer	1.8



DP: Recruitment, Participant Accrual, and Baseline/Follow-up/Annual Assessment Progress

(January 1, 2006 – June 30, 2007)



** Data from 36 DP Grant Programs in which the majority of programs have completed 1 year of Intensive Activities as of June 30, 2007

DP: Comorbidities at Baseline

- Prediabetes +

	Percent
Metabolic Syndrome*	73.6
High blood pressure	37.9
Back Pain	33.6
Depression	17.0
Osteoarthritis	15.5
Ulcer/stomach disease	8.2
Rheumatoid Arthritis	6.5
Heart Disease	4.9
Lung Disease	4.5
Anemia or other blood disease	4.0
Liver Disease	2.1
Cancer	1.5
Kidney Disease	0.5



* To be diagnosed with Metabolic Syndrome, an individual must have three or more of the following conditions: 1) A waist circumference > 40 inches (or 102 centimeters) for men, or > 35 inches (or 88 centimeters) for women; 2) TG > 150 mg/dl or on drug treatment for high TG; 3) HDL < 40 mg/dl for men and < 50 mg/dl for women, or on drug treatment for low HDL; 4) Systolic blood pressure (SBP) > 130 mm Hg or diastolic blood pressure (DBP) > 85 mm Hg; 5) FPG > 100 mg/dl.

**Table 5A.02: DP Baseline and Follow-up Clinical Characteristics
(for participants with BI and FI only)**

	N	Baseline Mean	Follow-up Mean	Mean Change	Percent Change
Weight (lbs)	825	215.4	206.3	- 9.1	- 4.2
BMI	825	35.6	34.1	- 1.5	- 4.2
Waist (inches)	808	43.9	42.2	- 1.7	- 3.7
Hip (inches)	806	46.9	45.6	- 1.2	- 2.5
Waist to Hip Ratio	802	0.9	0.9	- 0.0	- 1.1



Note: Since only data for participants with a BI and an FI so far are used in this table, the baseline and follow-up mean numbers differ from Table 4B.01 and Table 5A.01. Data from January 1, 2006 to June 30, 2007 – most programs have completed at least one full year of intensive activities.

DP: Lifestyle Measurements

- Notable Improvements from Baseline to Follow-up

	Baseline (%)	Follow-up (%)
Physical activity is \geq 150 minutes per week	23	57
Stages of change for physical activity – action stage	22	43
Hours of sedentary activity per day - \leq 2 hours	18	36
Stages of change for alcohol drinking – action stage	21	24
Stages of change for smoking – contemplation stage	54	57



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- **For more information**

- Special Diabetes Program for Indians
 - IHS Division of Diabetes Treatment and Prevention
 - www.ihs.gov/MedicalPrograms/Diabetes
- SDPI Competitive Demonstration Projects Coordinating Center
 - Yvette Roubideaux MD MPH, Co-Director
 - yvetter@u.arizona.edu

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- **Evaluation - Summary**

- Overall good progress by grant programs
- Data collection process burdensome but working
- Evaluation continues (~1.5 years of activities)
- Many lessons learned in the process
- Data will be valuable to these and other SDPI programs
- Important role in reporting back to Congress
- SDPI Reauthorization status determines next steps
- Dissemination planning in progress

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- **Questions?**

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Evaluation and Lessons Learned

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