

Outcomes of Diabetic Patients Enrolled in the Patient Assistance Liaison (PAL) Program

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Scope

- Diabetes affects 23.6 million Americans
 - 17.9 Million Diagnosed
 - 5.7 Million are unaware that they have this disease
- Health care costs for a diabetic can exceed
 - \$116 billion medical expenditures
 - \$27 billion diabetes care
 - \$58 billion chronic diabetes complications
 - \$31 billion excess general medical costs
 - Total economic costs: \$174 billion every year

The Diabetes Resource Center (DRC)

- Established in 1991 at St. Joseph Center for Health and Human Services in Providence, RI
- Who do we help?
 - Persons with diabetes who:
 - Have limited or no resources
 - Are under- or uninsured
 - Have diabetes-related needs:
 - Medication
 - Assistance in accessing primary care, specialty clinics, social services, etc.
 - Case management
 - Diabetes education

Funding of the DRC

- DRC relies heavily on public support from foundations, corporations, trusts, and individual gifts
- Pharmaceutical corporations donate medications, supplies, and educational materials
- Since its inception, DRC has served 4,000 patients

Patient Assistance

- ❑ The DRC acts as a safety net by providing a limited formulary of diabetes medications
- ❑ Adult Primary Care (APC) clinic patients need numerous other medications to manage comorbidities
- ❑ To obtain free meds, enroll in a Patient Assistance Program (PAP)
- ❑ The process can be time-consuming
- ❑ Demand exceeded amount of time that staff had allotted to the program
- ❑ As a result, grant funds obtained to hire a Chronic Disease Support Specialist to provide a structured program for patients' needs

Logistics

- PAL Program
- DRC and APC
- Applications were handwritten
- Computerized System of *Rx Assist Plus Systemetrics Inc.*
 - Input patient information once
 - All fields automatically populate after adding the medications they need
 - Reports differences between diabetic versus non-diabetic
 - Prescription refill reminders
 - Applications are updated automatically, this allows for more time with the patient

Overview of Patients

■ Total Patients

- DRC: 420

- APC: 50

■ Demographics

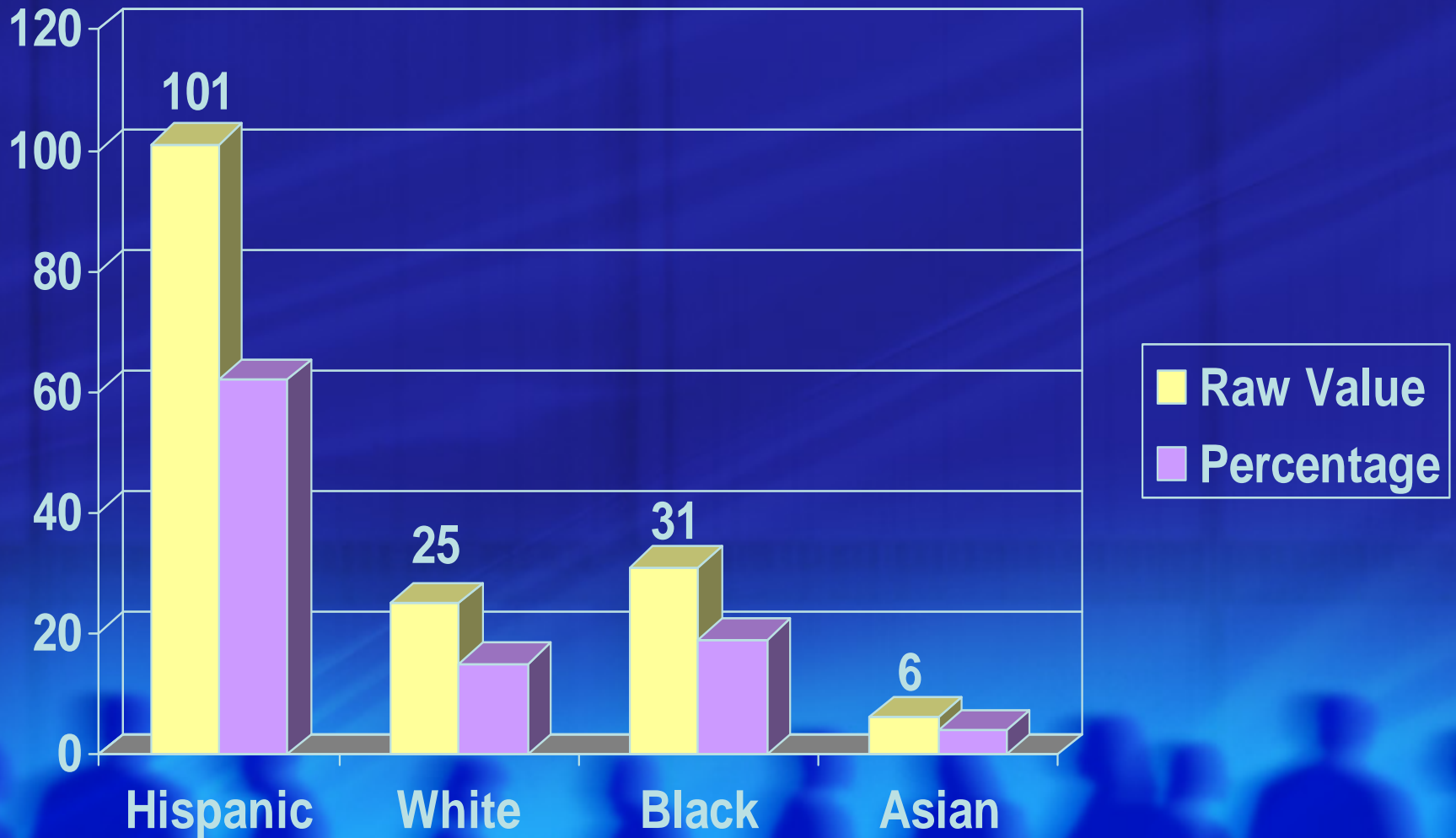
- In one month we see 163 patients with 210 encounters

■ Gender

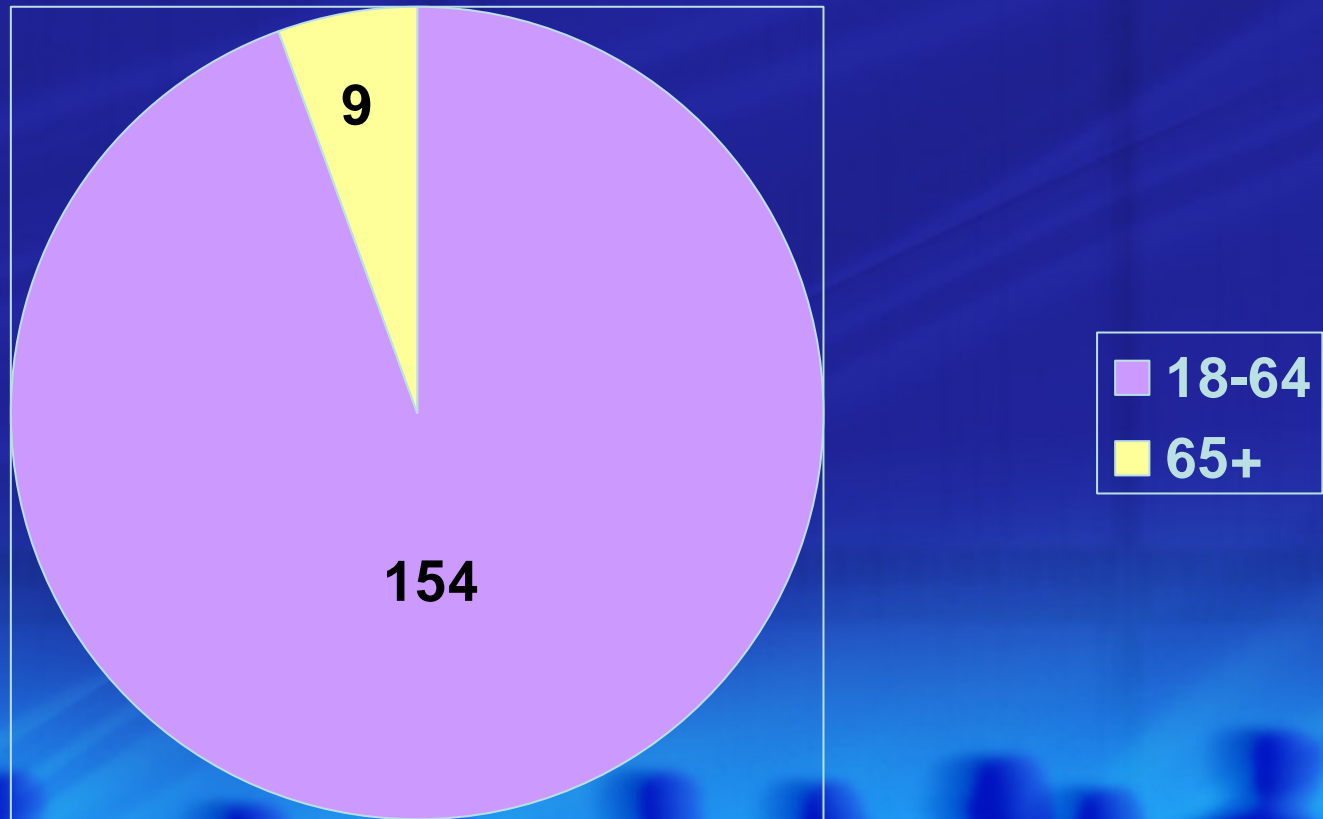
- 76 Male

- 87 Female

Ethnicity



Age Category (Years)



Actual Patient Profile

- A typical diabetic patient may have several comorbid conditions
 - Hypertension
 - Abnormal Lipid Profile
 - Depression
 - Gastroesophageal Reflux Disease
 - Asthma and Allergies
 - Possible Erectile Dysfunction
 - Possible Osteoporosis
 - Smoking Status

Sample Expenses

Medication	Monthly Cost (\$)
Avandamet	225.99
Byetta	229.97
Novolog 70/30	176.20
Avalide	83.32
Lipitor	111.49
Niaspan	82.81
Lexapro	85.99
Prevacid	154.31
Viagra	401.97
Advair diskus	204.70
Singulair	103.99
Boniva	275.08
Chantix	120.91
TOTAL	2256.73

2006 Statistics

August-December

- Average cost of medications for a 1-year supply for patients enrolled in the program for DRC
 - Diabetes Medications: \$205,196.52
 - Non-diabetes Medications: \$126,762.60
 - Total/Patient Savings: \$331,959.12

2007 Statistics

January-December

- Average cost of medications for a 1-year supply for patients enrolled in the program for DRC
 - Diabetes Medications: \$1,052,798.04
 - Non-diabetes Medications: \$829,674.96
 - Total/Patient Savings: \$1,882,473.00
- For APC (non-diabetic patients)
 - Medications: \$156,230.64

2008 Statistics

January-June

- Average cost of medications for a 1-year supply for patients enrolled in the program for DRC
 - Diabetes Medications: \$682,367.88
 - Non-diabetes Medications: \$542,710.32
 - Total/Patient Savings: \$1,225,078.20
 - Projected Savings: \$2,450,156.40
- For APC (non-diabetic patients)
 - Medications: \$255,809.52

2006-2008

■ Total Savings

■ 2006: \$331,959.12

■ 2007: \$1,882,473.00

■ 2008: \$1,225,078.20

■ 2008 (Projected): \$2,450,156.40

■ Actual 2006-2008 Savings

■ \$3,439,510.32

Incorporating the PAL Program

- Some recommendations on incorporating a PAP into a clinic site:
 - Hire Cathy!
 - Purchase a PAP system that meets the needs of your specific clinic
 - Identify someone within your organization who will devote time specifically to this program
 - With the inception of the program, positive outcomes will be seen!

Efficacy

- The DRC saves patients money
- The DRC services a large patient population
- But...Do we make a difference?
- Need evidence that our efforts are cost effective and improve clinical outcomes

The Study

- Assessed patients at baseline and then one year after enrollment into the PAL program
- Enrollment dates began in July 2006 and went through March 2007
- A total of 160 patients were assessed that were divided into two groups
- 80 patients with diabetes mellitus type 2 without insurance were selected at random
- 80 patients with insurance matched for disease state and age brackets

Data Collection Method

- PAL Group: Looked through all diabetic, uninsured DRC patients enrolled in PAL and randomly selected those who met criteria for the study: 80 patients
- Control Group: Randomly selected 80 insured, diabetic patients of the Adult Primary Care (APC) clinic to compare changes in outcomes (improvement or not) with those of patients enrolled in PAL
- Compared patient outcomes from both groups to predetermined baseline values

Study Criteria for Patient Selection: PAL Group and Insured Group

- PAL Group: Must be enrolled in PAL for at least 24 months between the beginning of the program in July 2006 and March 2007
- Insured Group: Must be a DRC patient with medical coverage in period of July 2006 through March 2007
- Both Groups:
 - Currently sees primary care provider at St. Joseph's APC clinic
 - Must have record of office visit upon either enrollment date or the date PAL was formed and 12 months after
 - Must have documented lab procedures done upon enrollment date or PAL start date and 12 months later

Parameters

☐ Outcome Measures

☐ Body weight

- ☐ Loss of 3% of body weight

☐ Blood pressure

- ☐ Both systolic and diastolic
- ☐ Achieved or maintained less than 130/80 resting

☐ Full lipid panels

- ☐ Total less than 200mg/dL
- ☐ LDL-C less than 100mg/dL
- ☐ HDL-C over 40mg/dL
- ☐ Triglycerides less than 150mg/dL

☐ Hemoglobin A1c (HbA1c)

- ☐ Achieved or maintained under 7%

Outcome Measures

- Two groups of patients
 - PAL Program
 - Insured Patients
- Patients were assessed for improvements inside respective groups as well as between the two groups
- Changes occurred both individually as well as between groups
- Interest:
 - Is enrollment in the PAL program as efficacious as having insurance?

Comparative Analysis of Body Weight

Patient Category	Number of Patients Experiencing Weight Loss	Percent Total Patients at Goal
Insured	23	28.75
PAL Program	20	25

Comparative Analysis of Blood Pressure

Patient Category	Patients Maintaining or Achieving <130/80	Percent Total Patients at Goal
Insured	41	51.25
PAL Program	45	56.25

Comparative Analysis of Lipid Profiles

Lipid Type	Insured (%)	PAL (%)
Total-C	57 (71.25)	69 (86.25)
Triglycerides	61 (76.25)	55 (68.75)
HDL-C	47 (58.75)	43 (53.75)
LDL-C	42 (52.50)	57 (71.25)

Comparative Analysis of Hemoglobin A1c

Patient Category	Patients Maintaining or Achieving <7%	Average Value at Baseline	Average Value After 1 Year	Percent of Patients at Goal
Insured	28	8.03	8.26	35
PAL Program	41	8.18	8.12	51.25

Analysis

- Values indicate significant findings
- PAL patients achieved over insured patients
 - Total-C
 - LDL-C
 - HbA1c
- PAL patients were comparable in weight changes, blood pressure values, and HDL-C

Conclusions

- Diabetes affects millions of Americans with huge productivity losses and huge costs to the patient
- Patient Assistance Programs can help if properly initiated and funded
 - Computerized (*Rx Assist Plus Systemetrics*)
 - Provides a gateway for patients to receive other services leading to proper case management
 - Actual 2006-2008 Savings: \$3,439,510.32
- Markers from the study demonstrate positive clinical findings
- PAP Works!

Questions?

