



Making Data Count

Measuring Diabetes and Obesity in the Indian Health System

December 18-20, 2007

IHS Division of Diabetes Treatment and Prevention

Practical Aspects of the Diabetes Management System

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Session: A6

Practical Aspects of the Diabetes Management System

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Sells Service Unit

Tucson Area Indian Health Service



Sells Service Unit

- Sells Hospital
- San Xavier Clinic
- Santa Rosa Clinic
- Westside Clinic



Population 25,000



Tohono O'odham Nation



Objectives

- Features of the diabetes management system that can be applied in patient care
- What to do if you have inherited a very ugly and outdated register
- Benefits vs. costs associated with developing and maintaining a diabetes register
- How to become more proficient in using the Diabetes Management System

One of several packages in RPMS

- PCC data entry
- Pharmacy
- Laboratory
- Asthma
- **Diabetes Management System**

Features of the Diabetes Management System

- The diabetes register
- Patient management tools
- Reports
- Letters
- Notifications
- The Audit
 - individual
 - cumulative

Disease Registers

- Lists of names of people who have something in common
- May be chart, paper or card based
- Computer based
- Contains useful information
- Is maintained and kept correct

Diabetes Register in RPMS

- An electronic system used to track information for patients with diabetes
- Tracks various type of medical information:
 - Onset date, medications, laboratory values, complications

The Diabetes Register Tracking

The following data items are automatically included in the IHS Diabetes Register:

Patient Status	Complications
Active	CVA (Stroke)
Inactive	End Stage Renal Disease
Transient	High Risk Foot
Unreviewed	Hypertension
Deceased	Laser Tx for Retinopathy
Non-IHS	Major Amputation(s)
Lost to follow-up	Microalbuminuria
Noncompliant	Minor Amputation(s)
	Myocardial Infarction
	Retinopathy
Diagnosis	Onset Date: (for Complication)
Gestational DM	
Type 1	Primary Provider: (display only)
Impaired Glucose Tolerance	
Type 2	Register Provider:
Onset Date: (for Diagnosis)	
	Case Mgr:
Entry Date:	Last Review Date:
Date entered in Register	
Last Edited Date:	Next Review Date:
Contact:	
Where followed:	

Types of diabetes registries

- Prediabetes
- Diabetes
- Gestational diabetes
- Pediatric
- Cardiovascular
- Program specific

Why do I need one?

- Individual case management
- Aggregate data
- Quality assurance in clinical care
- Program evaluation
- Data driven program planning
 - Primary prevention
 - Secondary prevention

Diabetes Registry is recognized as an important component of care

“Here are some key improvements that have occurred since the inception of the Special Diabetes Program for Indians.

In 2006:

99% of programs have diabetes registries to track patients (compared with 34% in 1997)”

-Robert McSwain, Acting Director, Indian Health Service
in November 14, 2007 World Diabetes Day message

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Diabetes Self Management Education Program

- Tracking clinical outcomes
- Combine with Case Management/Q-man to generate reports on patient who have participated in your program
- Export to excel spreadsheets



The Diabetes Patient Care Summary

Figure 2. Diabetes Patient Care Summary

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AGE: 37 Sex: M Date of DM Onset: Jun 13, 1985 (Problem List)
DOB: Oct 05, 1962
Last Weight: 277 lbs Jan 31, 1999
Last Weight: 267 lbs Dec 02, 1999 BMI: 43.8
Tobacco Use: NO, DOES NOT USE TOBACCO

HTN Documented (Y/N): Yes DM ACE I or ARI: Yes Dec 08, 1999
Aspirin Use (in past yr): Yes

Last 3 BP: 177/93 Dec 08, 1999
162/90 Sep 01, 1999
162/86 Jul 12, 1999

In past 12 months:
Diabetic Foot Exam: Yes Jul 12, 1999 (Diabetic Foot Exam, Complete)
Diabetic Eye Exam: Yes Apr 24, 1999 (Diabetic Eye Exam)
Dental Exam: Yes Oct 18, 1999
Dental Exam (age40): N/A
(Females Only)
Pap smear: N/A
Stress exam: N/A
Last Hemogram: N/A

DM Education Provided (in past yr):
DM MOBILE I Oct 01, 1999
DM COMPLICATIONS May 01, 1999
DM-CEI Jul 12, 1999

IMMUNIZATIONS:
Flu vaccine in past year: Yes Oct 22, 1999
Tetanus ever: Yes Jan 06, 1997
Td in past 10 yrs: Yes Sep 28, 1993

Last STD Screening: 0 Oct 16, 1998
Last TB Status Health Factor:

Laboratory (most recent):
SGO Feb 19, 1999
Urine Protein: 300 Jun 01, 1999
Microalbuminuria: none Jun 01, 1998
HDL-C: 10.7 Jan 12, 2000
Creatinine: 4.0 Jan 12, 2000
HDL Cholesterol: none
Triglycerides: 767 Jun 21, 1999

DEMO PATIENT DOB: 00/00/0000 Chart #A0MC 12345

*** END CONFIDENTIAL PATIENT INFORMATION -- FEB 2, 2000 10:21 AM [com] *****
    
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Individual Audit

DATE OF DIABETES DIAGNOSIS:

CMS Register:
Problem List:
1st DX recorded in PCC: Mar 16, 2006
Diabetes Type: 2 Type 2
CMS Register:
Problem List: 250.00
PCC POV's: Type 2

TOBACCO USE: 2 Not a Current User
Referred for (or provided) Cessation
Counseling: No

VITAL STATISTICS

Height: 69.00 inches 05/22/07
Last Weight (in 2 yrs): 269.40 lbs 05/29/07

BMI: 39.7
HTN (documented DX): No

Lipid Lowering Agent:
None

IMMUNIZATIONS

Flu vaccine (past yr): Yes 11/02/06
Pneumovax Ever: Yes - 03/30/06
Td in past 10 yrs: Yes - May 27, 2003
PPD Status: NEG
If PPD Pos, INH Tx Complete:

If PPD Neg, Last PPD: May 27, 2003

Date of Last EKG: May 24, 2007

LABORATORY DATA

HbA1c (most recent): 6.2
Date Obtained: May 22, 2007

HbA1c (next most recent):

Last 3 Blood Pressures (in past yr):
116/72 Aug 15, 2007

EXAMINATIONS (in past year)

Foot exam-complete:
Yes-Diabetic Foot Exam-Aug 15, 2007
Eye exam (dilated/fundus):
Yes-Fundus Photography-Aug 15, 2007
Dental exam:
Yes-Dental Clinic visit-Aug 22, 2007

EDUCATION (in past year)

Diet Instruction: Yes
Exercise Instruction: Yes
DM Education (Other): Yes
DM THERAPY

Select all that currently apply
1 Diet & Exercise Alone
X 2 Insulin
3 Sulfonylurea

MOST RECENT SERUM VALUE (in the past 12 months)

Creatinine: 0.9 mg/dl 5/22/2007
Tot Cholesterol:
HDL Cholesterol:
LDL Cholesterol:
Triglycerides:

Urinalysis or A/C Ratio:
Yes 5/22/2007 Urinalysis

Proteinuria:
No NEGATIVE 5/22/2007 URINE
PROTEIN
Microalbuminuria:

Supplemental Section

Does pt have depression as an active
problem? No

Individual Audits

- Helps to meet IHS diabetes standards of care
- Print individual audit report and review prior to patient visit to plan for care
 - used in multidisciplinary “team huddles” in chronic disease collaborative
- Print individual audit report and review with the patient
 - target ranges, exams, labs, education, etc.

Cumulative Audit

- Compare your program to others on the national level
- Compare results from one year to the next
- Compare differences between clinics
- Measure the impact of programs and program changes (example: Mobile Eye Clinic)
- Performance Evaluation (example: patient education)

Follow Up Reports

DIABETES REGISTER - FOLLOW-UP NEEDED REPORTS

(Patients due now or within the next 30 days. All follow-up services are annual unless otherwise noted below.)

- 1 ALL Exams/Procedures-----
 - 11 Foot Exam 12 Eye Exam
 - 14 Pap Smear 18 Dental Exam
 - 2 ALL Patient Education-----
 - 21 Nutrition 22 Exercise
 - 23 General Info
 - 3 ALL Immunizations/Vaccines-----
 - 31 Flu Shot 32 Pneumovax
 - 33 Td (Q10Y) 34 PPD
 - 4 ALL Lab Tests-----
 - 41 LDL Cholesterol 42 HDL Cholesterol
 - 43 Cholesterol 44 Triglyceride
 - 45 Creatinine 46 Hemoglobin A1c
 - 48 UA/Urine Prot 49 Microalbumin
- Type 'ALL' to include ALL Follow-up Needed
Which Report:

Follow Up Reports

- Identify register patients who are due for or have never had exams, patient education, immunizations, vaccines or laboratory tests
- Sorted by name within a community
- Can be limited to patients within a specific community or followed by a specific primary provider
- Used for program planning and quality assurance

Diabetes Wellness Days

- Using follow up reports, patients are identified who are in need of follow up services.
- Sent “invitations” and follow up letter to a monthly diabetes health fair
- Designed to improve quality of care and help meet IHS Standards of Care for Patients with Type 2 Diabetes in a convenient, fun, and non-threatening atmosphere

Services Offered

- Podiatry – annual diabetic foot exams
- Optometry – annual diabetic eye exams
- Dental hygienist – screening, education
- Public health nursing – immunizations, blood pressures, STD and other health information
- Nutrition – height, weight, BMI, body fat composition, education
- Pharmacy – medication and counselling
- Diabetes educators – monitors, supplies, information, recruit participants for DSME program
- Healthy O’odham Promotion Program (HOPP) Fitness Specialists – exercise and program information
- Cardiovascular Disease Risk Reduction – Healthy Heart

Podiatry



Dental Visit



Optometry



Education



Objectives

- What are some of the features of the diabetes management system that can be applied in patient care?
- What do I do if I have inherited a very ugly and outdated register ?
- What are the benefits/costs associated with developing and maintaining a diabetes register ?
- How can I become more proficient in using the Diabetes Management System?

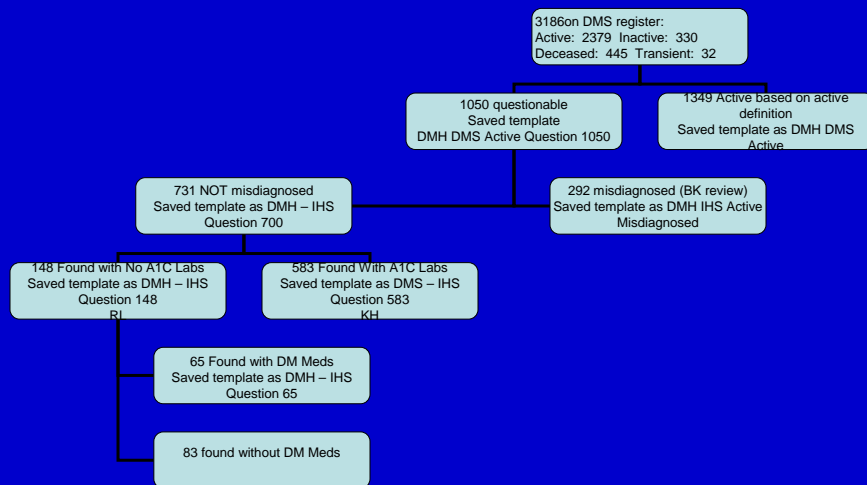
The Diabetes Management System



Sells Diabetes Registry Clean-Up

- Formed a registry team: Area Diabetes Consultant, Diabetes Coordinator, Data Manager, Nurse Educator
- Ran reports – documented process
- Developed shared files
- Met every 2 -3 weeks
- Developed flow sheets and documentation handbook

Sells Registry Clean-up Flowsheet



Decisions and Other Issues

- Definitions
- Patients across the border
- Separate databases for each clinic
- Develop a new registry or repair the old one
- What data would be lost
- What tasks needed to be completed
- Who would be responsible for each task

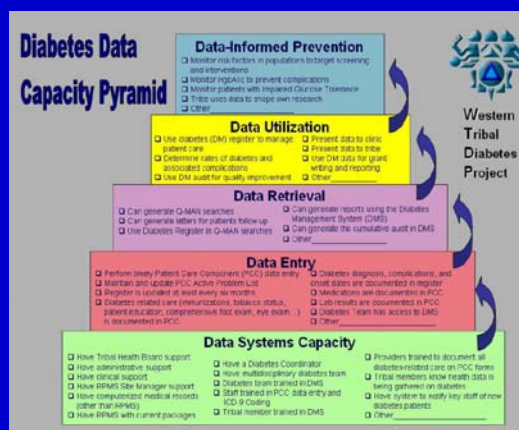
Definitions

- Active
- Inactive
- Transient
- Deceased
- Non-HIS
- Lost to follow up
- Unreviewed

Decisions, decisions.....

- How many registries?
- Which ones?
- Shared or separated by facility?
- Definitions?
- Keep an outdated registry or start fresh?
- Do you have the resources to devote to developing and maintaining the register?
- What applications will you use and who will be responsible?

Self assessment



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- Features of the diabetes management system that can be applied in patient care
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Costs

- Resources to maintain
 - expertise, time, money, training, equipment
- Cost effectiveness – cost:benefit ratio
- Data Quality – output
- Commitment – administrative, staff
- Confidentiality and security

Benefits

- Provides a picture of the impact of the disease in a population or community – number, ages, etc.
- Can assist planning services – primary and secondary prevention
- Can aid getting support – grants, program
- Can aid in providing better clinical care

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Diabetes Management System Training

“There is no such thing as too much RPMS
training”

Train, train, train.....

- Northwest Portland Area Indian Health Board
<http://www.npaihb.org/training/mpaihb.training/>
- Resource and Patient Management System Training
<http://www.ihs.gov/Cio/RPMS/index.cfm?module=home&option=OITTrainingLinks>

Resources

- Ray Shields, M.D.
IHS Diabetes Care and
Outcomes Audit
www.dmaudit.com/
- Toni Jarland
Beartooth Technology
and Development, LLC
East Glacier Park, MT
- Intertribal Council of
Arizona
Epidemiology Center
<http://www.itcaonline.com>
- Audrey Lynch
Phoenix Indian Medical
Center
Diabetes Center of
Excellence
Phoenix, AZ
- Cimarron Medical
Informatics
Tucson, AZ

Read the Instructions!

http://www.ihs.gov/Cio/RPMS/PackageDocs/bdm/bdm_020u.pdf

