Registry Functionality

A Small Practice Perspective

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PCMH Level 3

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UCHSC

Chair, CAFP PCMH Task Force

Westminster Medical Clinic

- NW Denver suburb
- 6000 patents
- 2.5 physicians, 2 PAs, 15 support staff
- Working class, middle America practice
- Participated in Diabetes Collaborative 2004, IPIP 2006, CO PCMH Pilot 2008, DARTNet 2009
- (CDEMS) → ReachMyDoctor → CINA
- NCQA Diabetes 2006→ Heart/Stroke 2007→ PCMH Level 3 2009
- eClinicalWorks 2008

Reality of Medicine

"Comprehensive high-quality management of 10 common chronic diseases requires more time than primary care physicians have available for all patient care."

Annals of Family Practice

May/June 2005

Why the heck get started?

Reality Medicine Rule #1

We are what we consistently do.
Excellence is defined by our habits.
~ Aristotle

Which Direction?

Reality Medicine Rule #2

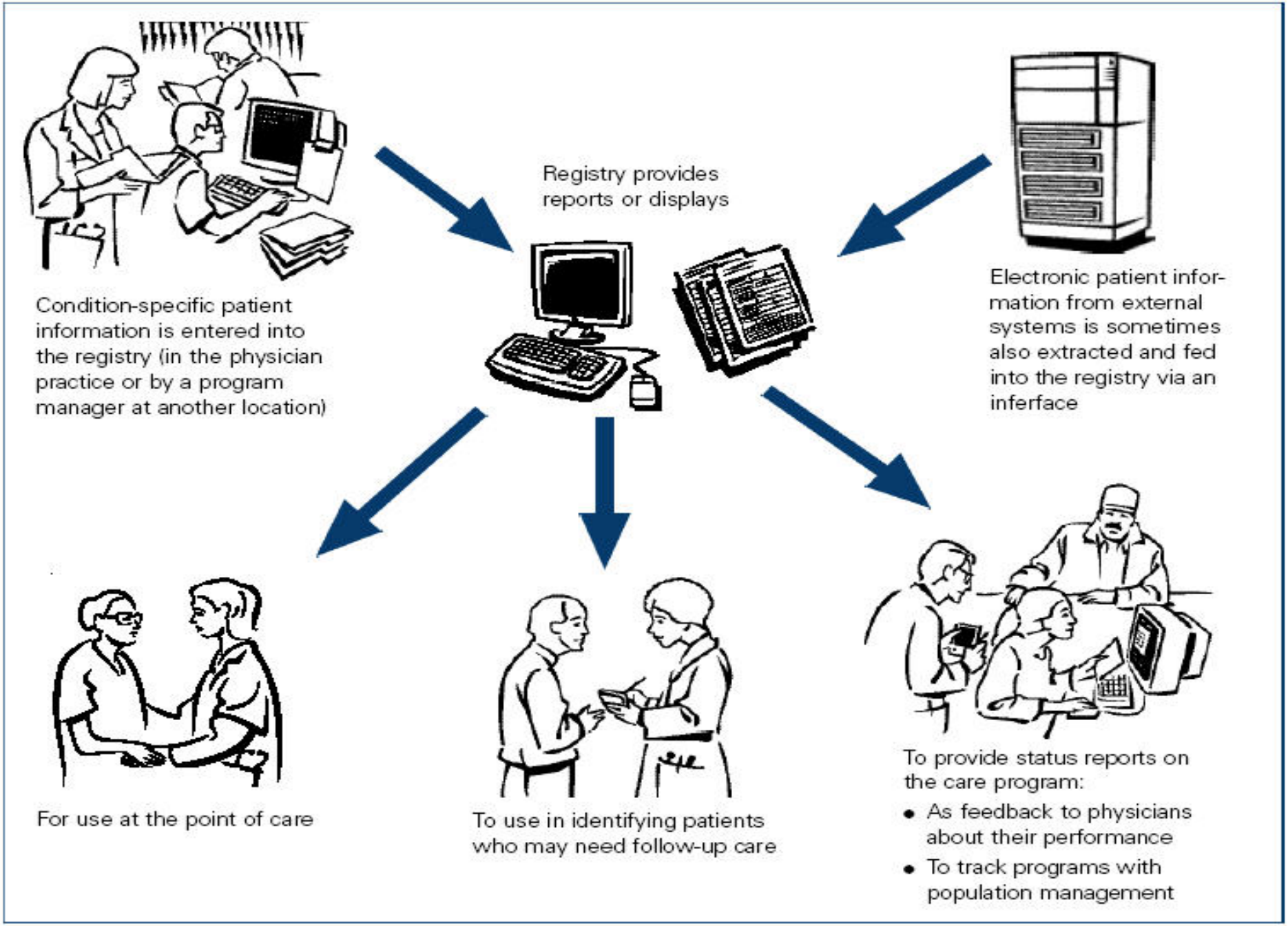
Human kind cannot bear very much reality

~ T.S. Eliot

What is a Registry

- 3 Primary Functions
  - Prepares Care Team for Visit (Analysis)
    - Organized data. Pre-planned visits. Point-of-care data. Flow sheets.
    - Enables task delegation to team members
    - Provide reminders for clinicians (and patients)
  - Manages Populations Outside Visit (Strategy)
    - Enable population management. Ensure regular follow-up. Identification of outliers and recall system.
  - Measures Practice and Physician performance (Accountability)
    - Feedback to providers and patients. Monitors performance of practice team and physician.
    - Ensure use of evidence-based guidelines

Figure 1. Basic Functions of a Disease Registry



Registry Choices

- Public Domain
- Commercial
- Electronic Health Records (EHR) with built-ins
- Proprietary (home grown)

Public Domain Software

- Chronic Disease Electronic Management Systems

  (www.CDEMS.com)
- Adult Preventive Health Services Software (APHS)

  (www.qualishealth.org/aphs.htm)
- Chronic Disease Management System (CDMS)
- Patient Care Management System

  (http://www.ntst.com/products/PatientCareManagementSystem.asp)
- Patient Electronic Care System (PECS2)

  (http://www.cpca.org/healthcollabs/documents/PECS_Info_Packet.pdf)

Commercial Software

- Reach My Doctor (www.rmdnetworks.com)
- Patient Planner (DocSite) – (www.docsite.com)
- i2i Systems (MediTracks) –(www.i2isys.com)
- CINA (www.cina-us.com)
- WellCentive (www.wellcentive.com)
- CliniPro (www.numedics.com)
- Delphi (www.delphihealth.com)
- PECSYS (www.aristos.com)

Reality Medicine Rule #3

A bad workman blames his tools

~ Swahili proverb

EHRs Do Not Improve Adherence To Diabetes Guidelines in Study

Family Practice News 2005

Use of an EHR in Primary Care Practice is not sufficient for ensuring high quality Diabetes Care

Annals of Family Medicine 2007

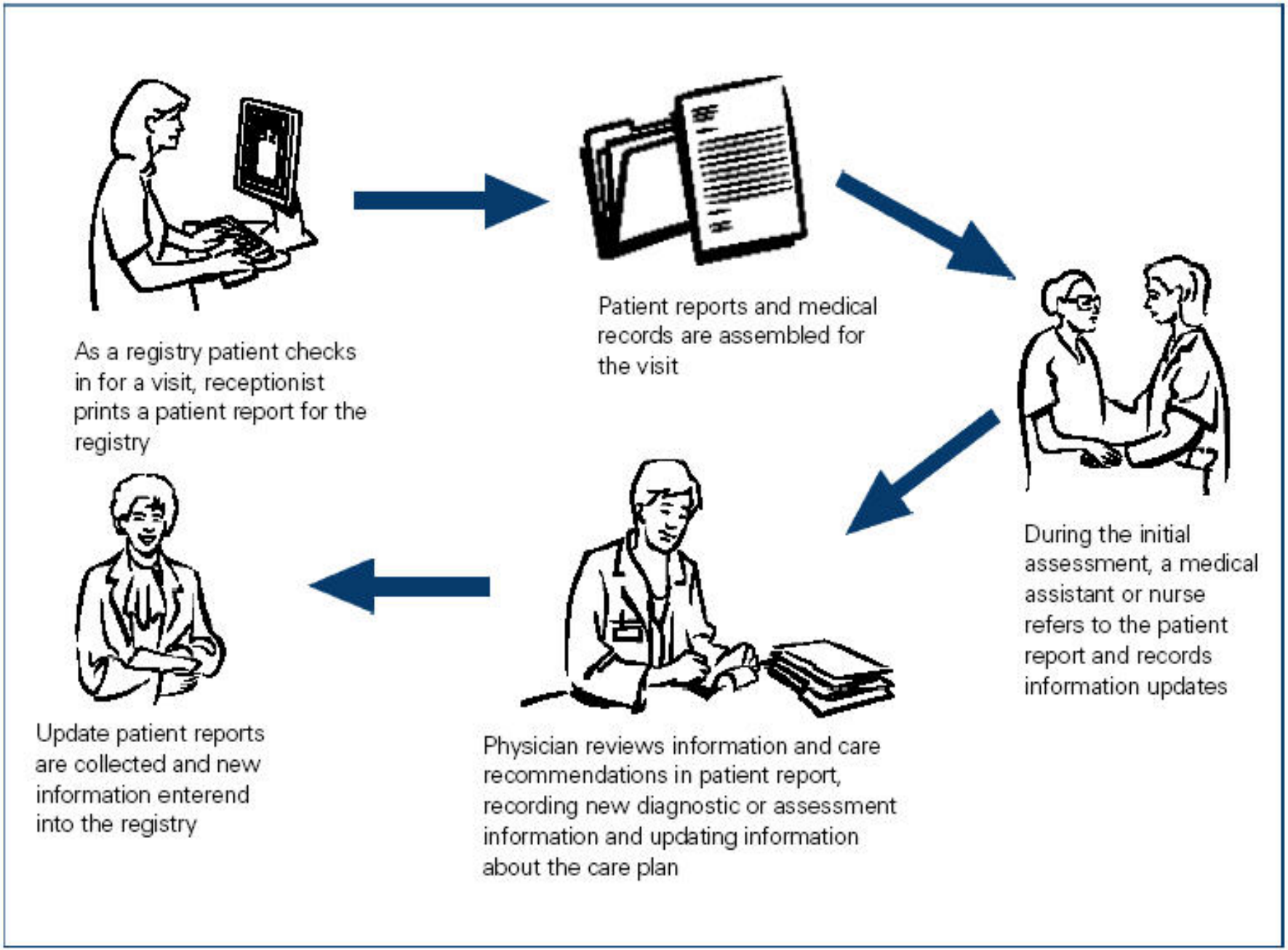
Type 1 Functionality

Point of Care

Type 1 Functionality
Point of Care

- Consistent, Reliable and Organized
  - Structures and organizes visit
  - Integration of evidence-based guidelines
  - Identifies patient care gaps through alerts and reminders
  - Tool for establishing care team roles and responsibilities.
  - Patient education tool

Figure 2. Typical Workflow for Use of a Stand-alone Disease Registry at the Point-of-Care



POC Case Study

- The MA checks the next day's schedule at 4 PM and identifies chronic care patients.
- Mr. DM is 53 years old with uncontrolled diabetes with renal manifestations
- She noted that he needs a Pneumovax and lipids test and prints his flow sheet.
- During pre-visit, assesses BP, foot exam, depression, orders test and gives injection per Standing Orders.

[redacted]

- Health Record
- **Care Plans**
- Health Logs
- Reminders
- Send Message

- Upload User Photo

Legend

- Overdue
- Behind
- Current

Diabetes, Adult Type 2

FAQ

Record Visit | Configure Plan | Add Condition | Print Flowsheet | Remove

History & Physical

Status	Guideline	Frequency	Due Date	Updated	
	Diabetes focused visit	3 months	11/23/2007	8/23/2007	
	Blood Pressure *	Every Visit	11/23/2007	8/23/2007	
	Check Weight (BMI)	Every Visit	11/22/2007	8/22/2007	
	Retinal screening *	Annually	12/12/2006	12/12/2005	
	Inspect feet	Every Visit	11/23/2007	8/23/2007	
	Comprehensive Lower Extremity Exam *	Every Visit	11/23/2007	8/23/2007	
	Oral health assessment	6 months	2/23/2008	8/23/2007	
	Kidney Assessment *	Annually	6/6/2008	6/6/2007	

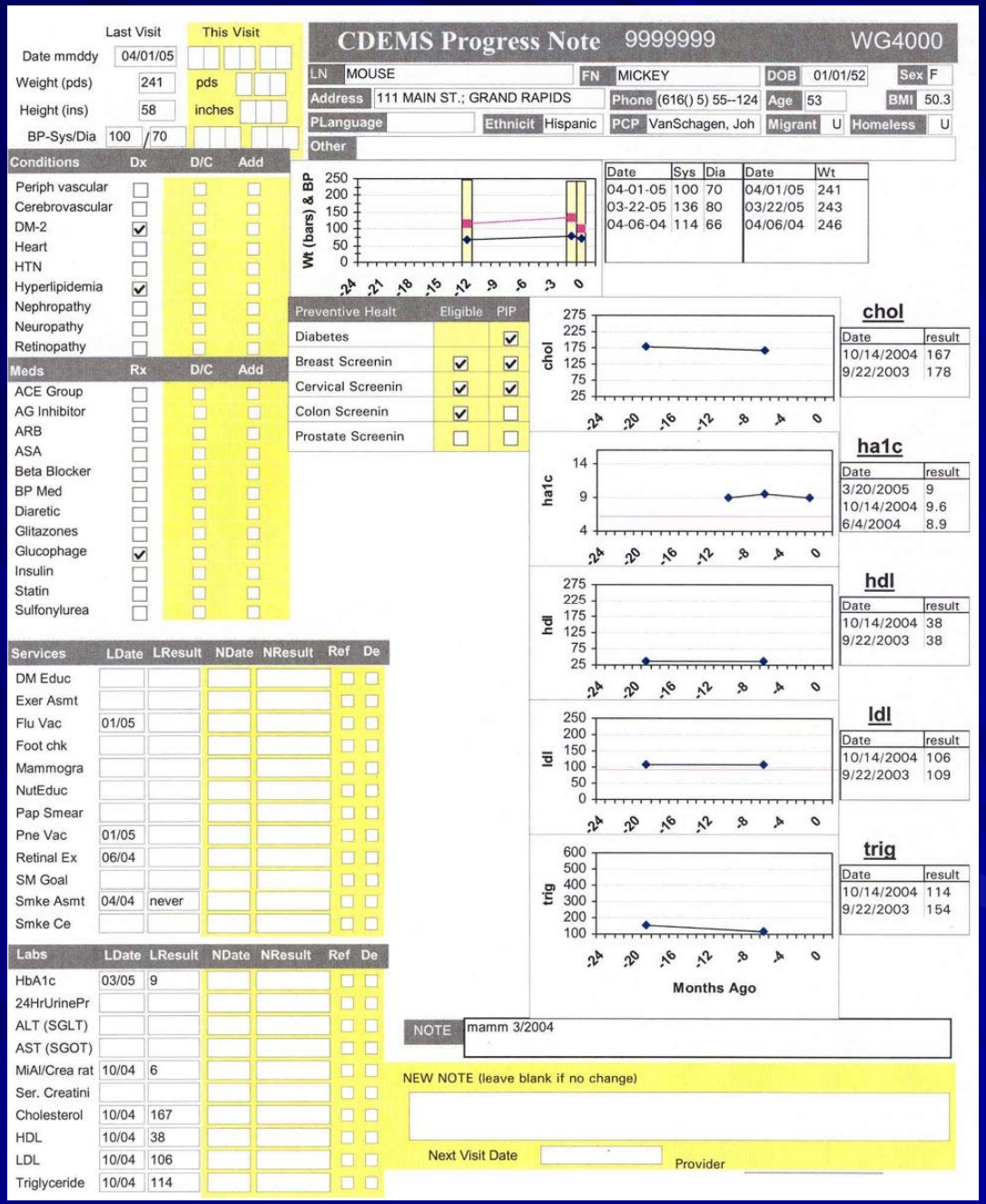
Labs & Tests

Status	Guideline	Frequency	Due Date	Updated	
	A1c *	4 months	12/21/2007	8/21/2007	
	Triglycerides	Annually	7/31/2008	7/31/2007	
	LDL *	Annually	8/22/2008	8/22/2007	
	HDL	Annually	7/31/2008	7/31/2007	

Patient Care Plan

POC Case Study

- During morning huddle, MA discusses her action plan and Mr. DM's specific needs.
- Medical providers sees patient and reviews care plan.
- PCP performs assessment according to guidelines, engages patient in self-management, agrees on goals, and pre-plans next visit.
- MA calls patient in 2 weeks to see if he has questions or needs assistance in problem solving.

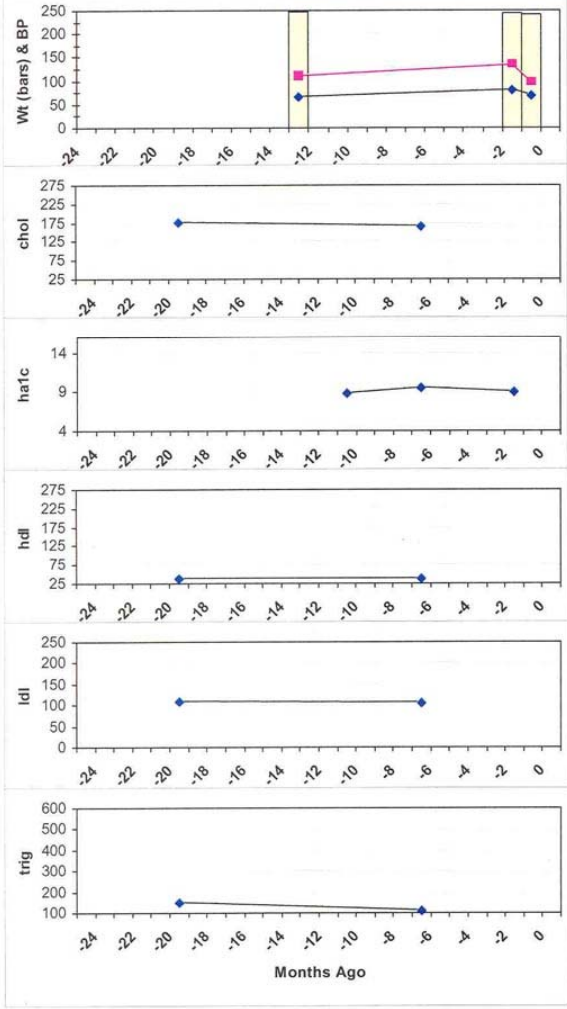

CDEMS Progress Note 9999999 WG4000
LN MOUSE FN MICKEY DOB 01/01/52 Sex F
Address 111 MAIN ST.; GRAND RAPIDS Phone (616() 5) 55--124 Age 53 BMI 50.3
PLanguage Ethnicit Hispanic PCP VanSchagen, Joh Migrant U Homeless U
Other
Last Visit This Visit
Date mmddy 04/01/05
Weight (pds) 241 pds
Height (ins) 58 inches
BP-Sys/Dia 100 / 70
Conditions Dx D/C Add
Periph vascular
Cerebrovascular
DM-2
Heart
HTN
Hyperlipidemia
Nephropathy
Neuropathy
Retinopathy
Meds Rx D/C Add
ACE Group
AG Inhibitor
ARB
ASA
Beta Blocker
BP Med
Diaretic
Glitazones
Glucophage
Insulin
Statin
Sulfonylurea
Wt (bars) & BP
Date Sys Dia Date Wt
04-01-05 100 70 04/01/05 241
03-22-05 136 80 03/22/05 243
04-06-04 114 66 04/06/04 246
Preventive Healt Eligible PIP
Diabetes
Breast Screenin
Cervical Screenin
Colon Screenin
Prostate Screenin
chol
Date result
10/14/2004 167
9/22/2003 178
ha1c
Date result
3/20/2005 9
10/14/2004 9.6
6/4/2004 8.9
hdl
Date result
10/14/2004 38
9/22/2003 38
ldl
Date result
10/14/2004 106
9/22/2003 109
trig
Date result
10/14/2004 114
9/22/2003 154
Months Ago
Services LDate LResult NDate NResult Ref De
DM Educ
Exer Asmt
Flu Vac 01/05
Foot chk
Mammogra
NutEduc
Pap Smear
Pne Vac 01/05
Retinal Ex 06/04
SM Goal
Smke Asmt 04/04 never
Smke Ce
Labs LDate LResult NDate NResult Ref De
HbA1c 03/05 9
24HrUrinePr
ALT (SGLT)
AST (SGOT)
MiAl/Crea rat 10/04 6
Ser. Creatini
Cholesterol 10/04 167
HDL 10/04 38
LDL 10/04 106
Triglyceride 10/04 114
NOTE mamm 3/2004
NEW NOTE (leave blank if no change)
Next Visit Date
Provider

MOUSE, MICKEY **Patient Summary as of:** 4/11/2005

ADVANTAGE HEALTH PHYSICIANS

Recommendations

Test/Treatment Type	Standard for your care	Last Done	Additional Information
Complete foot exam	Every 12 months		Complete exam every 12 months
Discuss smoking status	Cessation offered if smoker	04/04 never	Smoking causes high risk of heart attack, stroke, and amputations
GlycoHgb (HbA1c)	Every 6mo.: Goal < = 7	03/05: 9	Checks for control of your blood sugars over past 3 months.
Influenza vaccine	Every 12 months in Fall	01/05	Helps prevent influenza infection.
LDL "Bad" Cholesterol	Goal < = 100	10/04: 106	Checks for "bad" cholesterol that can cause heart attacks.
Pneumonia vaccine	Once	01/05	Prevents common type of pneumonia, meningitis, and blood infection.
Retinal (eye) exam	Dilated exam every 12 mo	06/04	Checks for eye damage from diabetes (can cause blindness).
Self management goal	Discussed each visit		Helps you set your own goals for controlling your diabetes.
Urine MicroAlbumin	Every 12mo: Goal < = 20	10/04: 6	Checks for protein in your urine (sign of kidney damage.)



Your Blood pressure and Weight

Date	Sys	Dia
04-01-05	100	70
03-22-05	136	80
04-06-04	114	66

Date	Wt
04/01/05	241
03/22/05	243
04/06/04	246

chol

Date	result
10/14/2004	167
9/22/2003	178

ha1c

Date	result
3/20/2005	9
10/14/2004	9.6
6/4/2004	8.9

hdl

Date	result
10/14/2004	38
9/22/2003	38

ldl

Date	result
10/14/2004	106
9/22/2003	109

trig

Date	result
10/14/2004	114
9/22/2003	154

Patient Flow Sheet **CCGC Network**

Name: W [redacted] **Gender: Female** **MRN#:** [redacted]
Address: [redacted] **PCP: Joseph Barclay**
Conditions: Asthma, Diabetes, Prevention **Height: _____ Weight: _____**

Diabetes Flowsheet

	Frequency	Date	Date	Date	Date	Date	Date
History & Physical		**5/12/08**	**6/16/08**	**11/11/08**	**12/11/08**	**2/12/09**	
Blood Pressure	Every Visit	135/85	140/90	111/80			
Check Weight (BMI)	Every Visit		27.7	30.4			
Retinal Screening	Annually		Y	Referral	Referral		
Dental/Oral health assessment	6 Months		Y	Y			
Kidney Assessment	Annually			Y		Y	
Labs & Tests							
A1c	3 Months	8.2					
Triglycerides	Annually	94					
LDL	Annually	151					
HDL	Annually	81					
Total Cholesterol	Annually	251					
Estimated GFR	Annually						
Medications & Immunizations							
Assess Need For ACE/ARB	Every Visit		Y	Y	Y		
Assess Need For Statin	Every Visit			Y	Y		
Influenza Vaccination	Annually		Y	Declined			
Pneumococcal Vaccination	Scheduled			Declined			
Lifestyle & Counseling							
Set Self-Management Goals	Every Visit				Y		
Diabetes Patient Education / Nutrition / Exercise	Every Visit						
Tobacco Use/Exposed to 2nd hand smoke	Every Visit		Y		Y		
Smoking/Second Hand Smoke Counseling	Every Visit		Y				

Type 2 Functionality

Population Management

Type 2 Functionality
Population Management

- Care management via outreach to patients
  - Track patients between visits:
    - Who has a chronic disease?
    - Who is due for a visit? Who is overdue?
    - Who needs labs? Which labs?
    - Who is due for preventive services?
    - Who needs a Self-management goal?
  - Safety
    - Drug recall

Figure 7. Typical Workflow for Use of a Disease Registry to Identify Patients for Outreach

On a regular basis the registry is consulted about patients who could possibly benefit from follow-up contact or care

From printed patient lists or on-line displays the care team identifies patients with gaps in recommended care or not meeting goals.

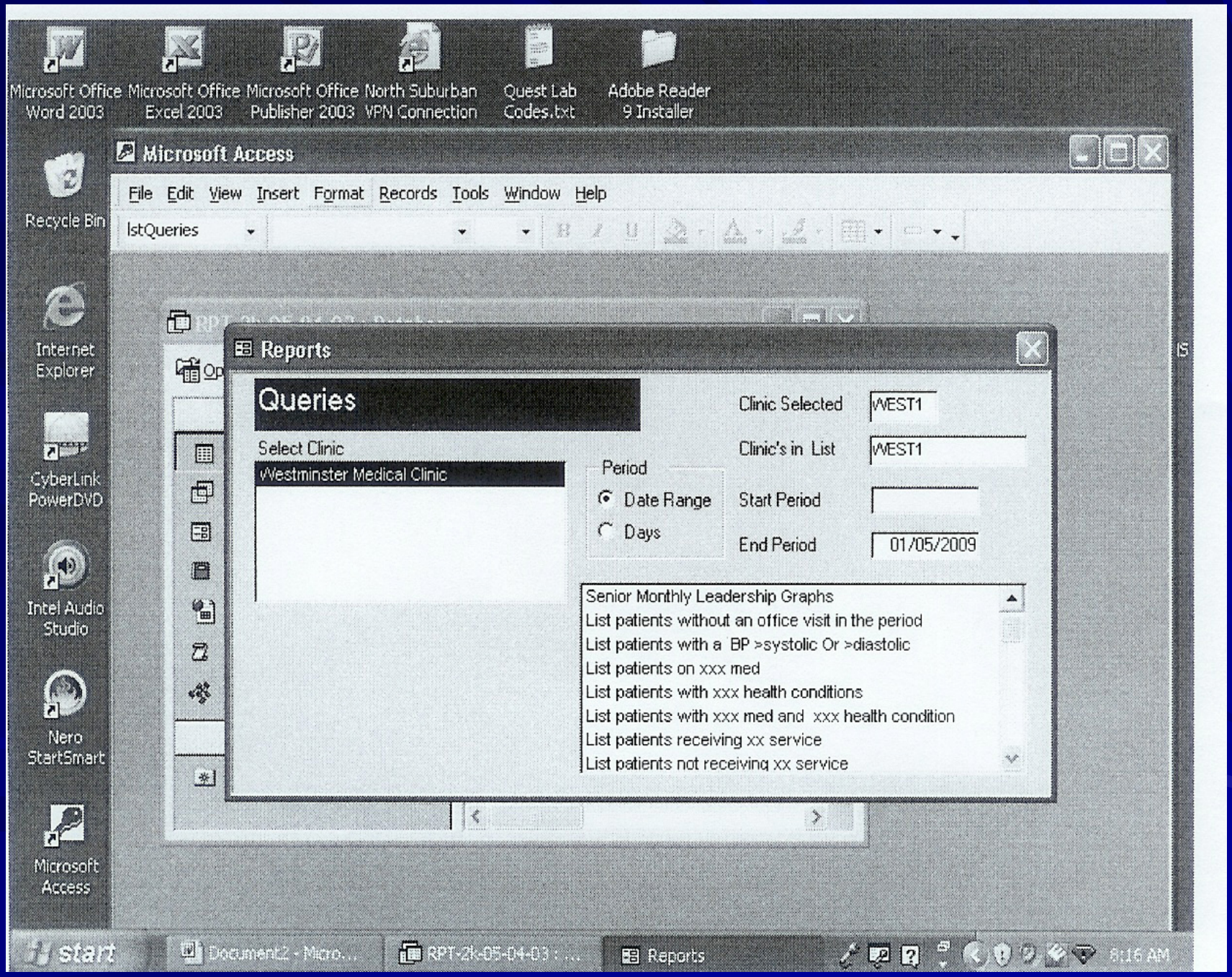
Target patients are contacted by telephone or correspondence

Care team review each patient to determine appropriate follow-up strategies for each patient

Information updates about patient panel, patient status and other registry data is entered into the application

Population Management

- Beginning of each month, the Physician Assistant queries the Registry for the agreed upon measures.
- The data is presented to the providers at their monthly care management meeting.
- Individual and population needs are identified as the focus of the month.
- An action plan is written and posted.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Microsoft Office Publisher 2003
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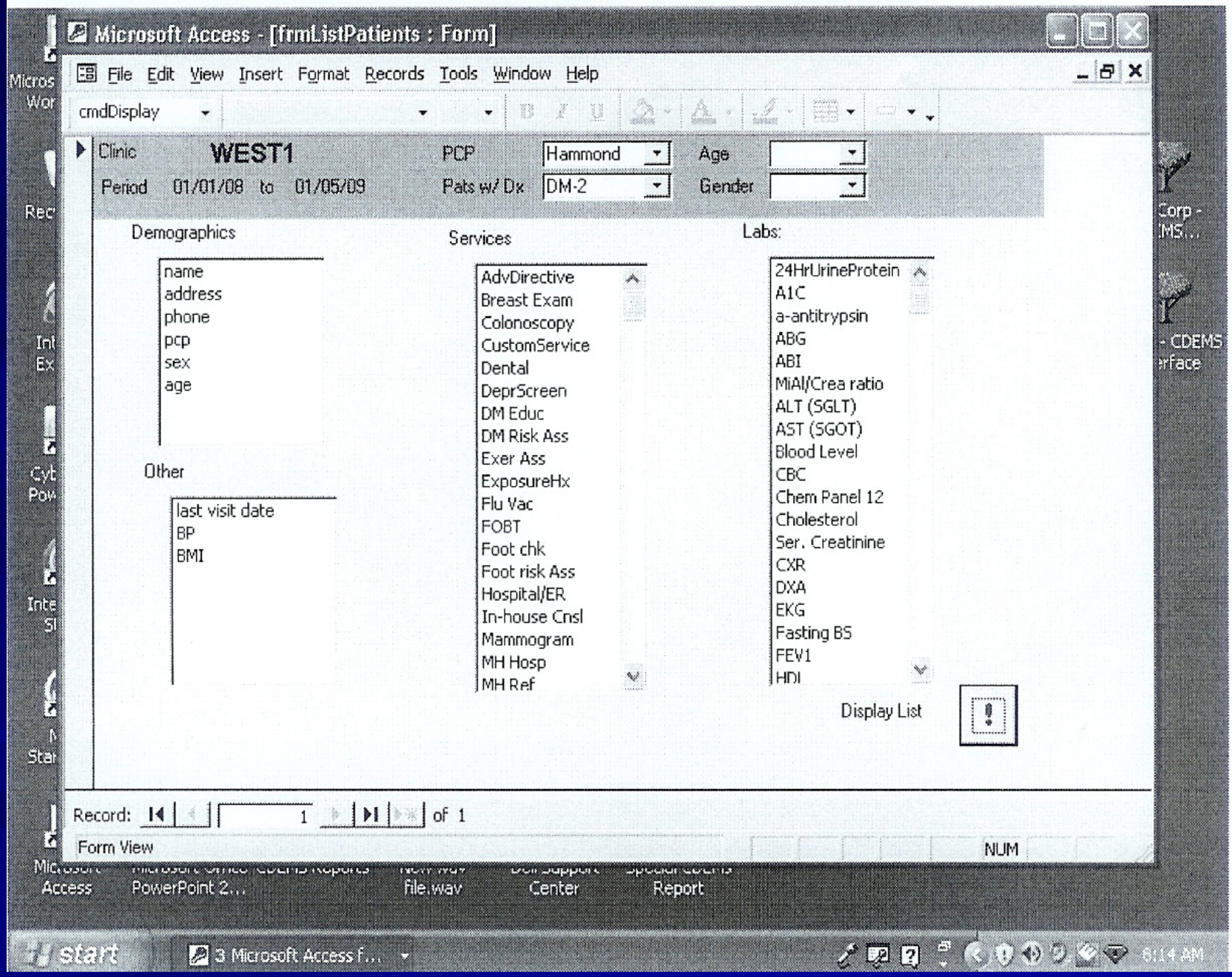
Internet Explorer
CyberLink PowerDVD
Intel Audio Studio
Nero StartSmart
Microsoft Access
Microsoft Access
File Edit View Insert Format Records Tools Window Help
lstQueries
Reports
Queries
Select Clinic
Westminster Medical Clinic
Period
Date Range
Days
Clinic Selected
WEST1
Clinic's in List
WEST1
Start Period
End Period
01/05/2009
Senior Monthly Leadership Graphs
List patients without an office visit in the period
List patients with a BP >systolic Or >diastolic
List patients on xxx med
List patients with xxx health conditions
List patients with xxx med and xxx health condition
List patients receiving xx service
List patients not receiving xx service
start
Document2 - Micro...
RPT-2k-05-04-03 : ...
Reports
8:16 AM


Microsoft Access - [frmListPatients : Form]
File Edit View Insert Format Records Tools Window Help
cmdDisplay
Clinic WEST1
Period 01/01/08 to 01/05/09
PCP Hammond
Pats w/ Dx DM-2
Age
Gender
Demographics
name
address
phone
pcp
sex
age
Other
last visit date
BP
BMI
Services
AdvDirective
Breast Exam
Colonoscopy
CustomService
Dental
DeprScreen
DM Educ
DM Risk Ass
Exer Ass
ExposureHx
Flu Vac
FOBT
Foot chk
Foot risk Ass
Hospital/ER
In-house Cnsl
Mammogram
MH Hosp
MH Ref
Labs:
24HrUrineProtein
A1C
a-antitrypsin
ABG
ABI
MiAl/Crea ratio
ALT (SGLT)
AST (SGOT)
Blood Level
CBC
Chem Panel 12
Cholesterol
Ser. Creatinine
CXR
DXA
EKG
Fasting BS
FEV1
Display List
Record: 1 of 1
Form View
NUM
start
3 Microsoft Access f...

LatestVisitDate	bp-	Foot chk	Retinal Ex	a1c	ldl
12/31/2008	12/31/08 (113/66)	10/01/08	12/09/08	10/16/08 (10.5)	10/16/08 (64)
12/30/2008	11/26/08 (150/88)	11/01/08	12/30/08	11/24/08 (11.4)	11/24/08 (106)
12/23/2008	12/23/08 (132/60)		09/01/08	12/03/08 (6.5)	12/03/08 (64)
12/22/2008	12/22/08 (122/60)		03/13/08	12/10/08 (7.5)	12/10/08 (113)
12/18/2008	12/18/08 (122/64)	09/08/08	08/26/08	09/18/08 (6.1)	09/18/08 (53)
12/18/2008	12/18/08 (158/87)		10/21/08	12/11/08 (62)	12/11/08 (62)
12/18/2008	12/18/08 (112/62)	02/15/08	09/26/08	11/01/08 (8.3)	11/01/08 (90)
12/15/2008	12/15/08 (147/72)			12/08/08 (6.8)	12/08/08 (101)
12/15/2008	12/15/08 (123/80)			12/08/08 (5.9)	12/08/08 (78)
12/12/2008	12/12/08 (123/80)	12/12/08	12/12/08	11/07/08 (7.0)	11/07/08 (73)
12/12/2008	12/12/08 (128/74)		09/04/08	12/12/08 (7.8)	12/12/08 (65)
12/11/2008	12/11/08 (118/74)	12/11/08	05/02/08	12/01/08 (6.0)	12/01/08 (73)
12/08/2008	12/08/08 (130/80)	04/07/08	11/24/08	11/28/08 (6.2)	11/28/08 (64)
12/03/2008	12/03/08 (158/102	11/17/08	11/17/08	11/26/08 (11.2)	11/26/08 (76)
12/01/2008	12/01/08 (122/76)	12/01/08		11/14/08 (6.1)	11/14/08 (94)
12/01/2008	(/)				
11/25/2008	11/25/08 (128/82)	07/10/08		09/22/08 (10.4)	09/22/08 (121)
11/25/2008	11/25/08 (110/62)			10/22/08 (12.2)	10/01/08 (79)
11/24/2008	11/24/08 (116/77)		11/15/08	11/18/08 (7.5)	11/18/08 (86)
11/24/2008	11/24/08 (130/84)		09/29/08	06/13/08 (6.6)	06/13/08 (59)
11/24/2008	11/24/08 (125/82)		03/01/08	11/20/08 (13.8)	11/20/08 (105)
11/18/2008	11/18/08 (118/76)		08/11/08	08/18/08 (5.5)	08/18/08 (48)
11/18/2008	11/18/08 (130/65)		04/03/08	04/02/08 (8.4)	04/02/08 (95)
11/17/2008	11/17/08 (150/84)			07/27/08 (5.7)	07/27/08 (108)
11/17/2008	11/17/08 (130/82)				11/05/08 (66)
11/14/2008	11/14/08 (138/82)	08/01/08	04/15/08	11/06/08 (6.7)	11/06/08 (65)
11/13/2008	10/27/08 (142/82)	10/27/08	10/27/08	10/01/08 (6.9)	10/01/08 (74)
11/13/2008	11/13/08 (120/70)	07/01/08		07/16/08 (9.8)	04/01/08 (51)
11/13/2008	11/13/08 (130/68)	09/01/08	08/04/08		09/01/08 (79)
11/13/2008	11/13/08 (126/84)	10/13/08			
11/08/2008	08/27/08 (146/78)	08/08/08		11/08/08 (8.5)	11/08/08 (90)
11/03/2008	11/03/08 (122/82)		10/23/08	10/29/08 (7.5)	10/29/08 (114)
10/27/2008	10/27/08 (110/64)			03/10/08 (8.8)	07/11/08 (96)
10/23/2008	10/23/08 (129/63)		02/01/08	10/06/08 (7.1)	10/06/08 (56)
10/23/2008	10/23/08 (122/84)			10/13/08 (6.4)	10/13/08 (158)
10/16/2008	10/16/08 (145/83)	10/16/08		08/15/08 (6.3)	04/10/08 (86)
10/16/2008	10/16/08 (116/69)	07/10/08	02/04/08	10/09/08 (6.9)	10/16/08 (96)
10/15/2008	10/15/08 (128/76)	02/06/08	01/30/08	09/ 08 (6.7)	09/30/08 (89)
10/09/2008	10/09/08 (122/70)	02/15/08	10/02/08	08/1 8 (6.8)	03/11/08 (112)
10/09/2008	10/09/08 (124/84)		10/01/08	10/06/0 (6.9)	10/06/08 (69)
10/09/2008	02/21/08 (111/72)	10/09/08		10/09/08 (8.1)	
10/09/2008	10/09/08 (140/64)	09/11/08	09/11/08	01/14/08 (6.3)	01/14/08 (89)
10/07/2008	10/07/08 (120/70)	10/01/08	12/12/08	09/30/08 (6.7)	09/30/08 (99)
10/06/2008	10/06/08 (126/67)		10/16/08	09/16/08 (7.7)	09/16/08 (74)
10/06/2008	10/06/08 (114/67)			09/30/08 (6.8)	09/30/08 (107)
10/02/2008	10/02/08 (119/79)		09/24/08	09/21/08 (6.2)	05/25/08 (98)

Diabetes Population Management Monthly Report	
Provider:	**Date:**

Diabetes Population Management Monthly Report

Provider: Hammond **Date: xx/xx/xx**

Patient	Labs Due	Appointment Due	Chart Review	Other Action
Mr. DM	HgA1c	Yes		Needs Pneumovax
Pt X			Update chart HgA1c 6.2	
Pt Y				Call and check on how is doing
Pt Z				Have pt return HBPM results

Comments/ Instructions: Please call all overdue patients marked on spreadsheet to schedule pre-visit labs and appointment. MAs to perform PDSA on foot exams.

Follow-up/ Reply:

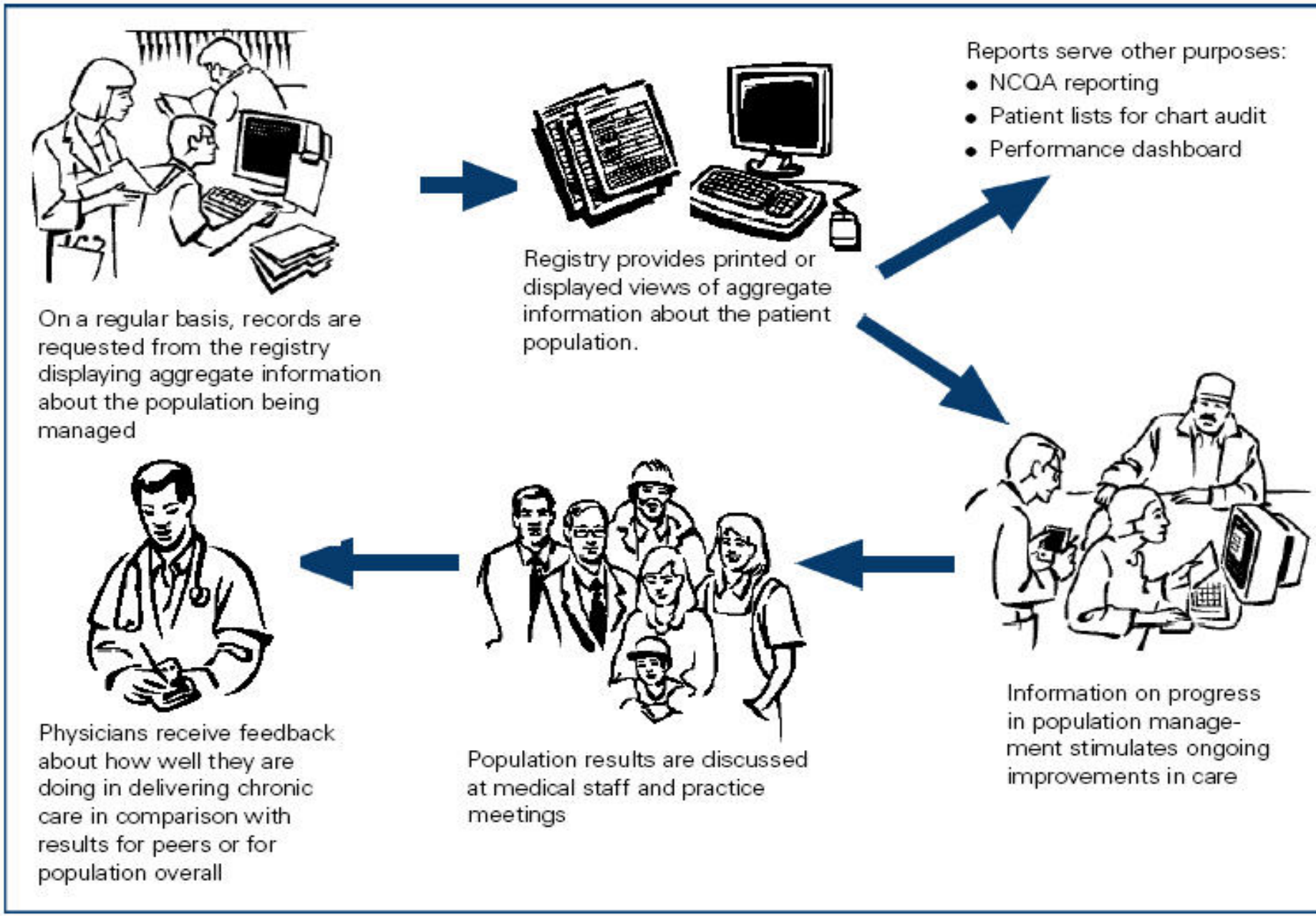
Type 3 Functionality

Performance measures and monitoring

Type 3 Functionality
Performance measures and monitoring

- Measuring performance for quality improvement
  - Aggregated information on care management of practice patients
    - Feed back to individual physicians and practice about condition-specific status of practice patients
  - Aggregated data is basis for performance monitoring for quality and patient safety

Figure 10. Typical Workflow for Use of Population Reporting from a Disease Registry



Diabetes Summary Report

Westminster Medical Clinic

Between 01/01/2000 And 11/17/2005

DEMOGRAPHICS

1. Patients

174	6.41	a. Total registry Avg visits/pt
0	0.0%	b. Pts w/ 0 visits
13	7.5%	c. Pts w/. 1-2 visits
48	27.6%	d. Pts w/. 3-5 visits
113	64.9%	e. pts w/. 6+ visits

2. Gender

95	54.6%	a. Female
77	44.3%	b. Male
2	1.1%	c. Unspecified

3. Age

1	0.6%	a. Age unspecified
1	0.6%	b. <= 14
0	0.0%	c. 15-29
20	11.5%	d. 30-39
28	16.1%	e. 40-49
53	30.5%	f. 50-59
71	40.8%	g. 60+
57	32.8%	h. 65+
100	57.5%	i. 55+
141	81.0%	j. 45+

4. Ethnicity

35	20.1%	a. White
0	0.0%	b. Black
1	0.6%	c. American Indian
2	1.1%	d. Asian
19	10.9%	e. Hispanic
117	67.2%	f. Other/unspecified

5. Insurance

92		a. Insurance indicated
85	48.9%	b. Commercial
0	0.0%	c. Medicaid
7	4.0%	d. Medicare
0	0.0%	e. Other
0	0.0%	f. None

6. Type of diabetes

0	0.0%	a. Unspecified
1	0.6%	b. Type 1
173	99.4%	c. Type 2

7. Special Populations

0	0.0%	a. Migrant
1	0.6%	b. Homeless

** Smoker=marked as current at last evaluation or referred, attended or declined cessation class in period.*

***Smoke cessation class attended, declined or referred to.*

VISIT INFO

8. BMI

140	80.5%	a. BMI calculated
10	5.7%	b. <= 24
35	20.1%	c. 25 - 29
95	54.6%	d. >= 30

9. Blood pressure

174	100.0%	a. Patients w/ bp checked
125	74	b. Avg systolic & Avg diastolic
41	23.6%	c. BP checked _> 135/85
19	10.9%	d. BP checked _> 140/90
89	51.1%	**e. BP checked _< 130/80**
152	87.4%	f. BP checked _< 140/90

10. Medications

13	7.5%	a. Insulin
42	24.1%	b. Sulfonylurea
94	54.0%	c. Glucophage
35	20.1%	d. Glitazones
0	0.0%	e. Prandin
1	0.6%	f. AG_Inhibitor
112	64.4%	g. ACE inhibitors
115	66.1%	h. Lipid lowering
113	64.9%	i. Aspirin
15	8.6%	j. BP Other

12. Health Profile (number % diagnosed)

4	2.3%	a. Cerebrovascular
0	0.0%	b. Heart Disease/CAD
97	55.7%	c. Hypertension
88	50.6%	d. Hyperlipidemia
14	8.0%	e. Nephropathy
9	5.2%	f. Neuropathy
0	0.0%	g. Periph Vascular
4	2.3%	h. Retinopathy
1	0.6%	i. Self monitors BG
1	0.6%	j. Physical Activity >3/ wk
69	39.7%	k. Smoker *

13. Specialty Care Received

30	17.2%	a. Dm Education
13	7.5%	b. Nutrition
144	82.8%	**c. Retinal Exam**
65	94.2%	d. Smoke Cessation**
141	81.0%	e. Pneumonia Vaccination
143	82.2%	f. Flu Vaccination
17	9.8%	g. Dental
139	79.9%	**h. Self mgt goal set?**
111	63.8%	i. Foot Check

TEST INFO

14. A1c or Glycosylated Hb

173	99.4%	a. Patients with test
173	7.0	b. W/.numeric result, Avg
111	64.2%	**c. Under 7.0**
36	20.8%	d. 7.0 to 7.9
15	8.7%	e. 8.0 to 8.9
6	3.5%	f. 9.0 to 9.9
5	2.9%	g. 10+
8	4.6%	h. >= 9.5
147	85.0%	i. < 8.0
168		j. 2+ A1c >=91dys apa

15. MicroAl/Creatinine Ratio

165	94.8%	a. Patients with test
163	62.2	b. W/ numeric result, Avg
133	81.6%	c. Normal (<= 30)

16. Creatinine

169	97.1%	a. Patients with test
169	1.64	b. W/ numeric results, Avg
157	92.9%	b. Under 1.5
9	5.3%	c. 1.5 - 2.5
3	1.8%	d. > 2.5

17 Liver Function Test

169	97.1%	a. Patients with ALT test
169	22.1	b. W/ numeric results, Avg
142	81.6%	c. Patients with AST
142	21.1	d. W/ Numeric result, Avg

18. Lipid Profile

173	99.4%	a. With Cholesterol test
173	171.0	b. W/ numeric result, Avg
25	14.5%	c. Patients >= 200
173	99.4%	d. With Triglycerides test
173	161.9	e. W/ numeric result, Avg
50	28.9%	f. Patients >= 200
173	99.4%	g. With HDL test
173	45.9	h. W/ numeric result, Avg
27	15.6%	i. Patients < 35
173	99.4%	j. With LDL test
173	92.2	k. W/ numeric results, Avg
113	65.3%	**m. Patients Under 100**
50	28.9%	l. Patients 100 - 129
10	5.8%	m. Patients >= 130
163	94.2%	n. Patients < 130

19. 24 hour Ur Protein

0	0.0%	a. Patients with test
0		b. W/ numeric result, avg

Diabetes Measures Summary - Westminster Medical Clinic

Physician: All Providers **Time Period: August**

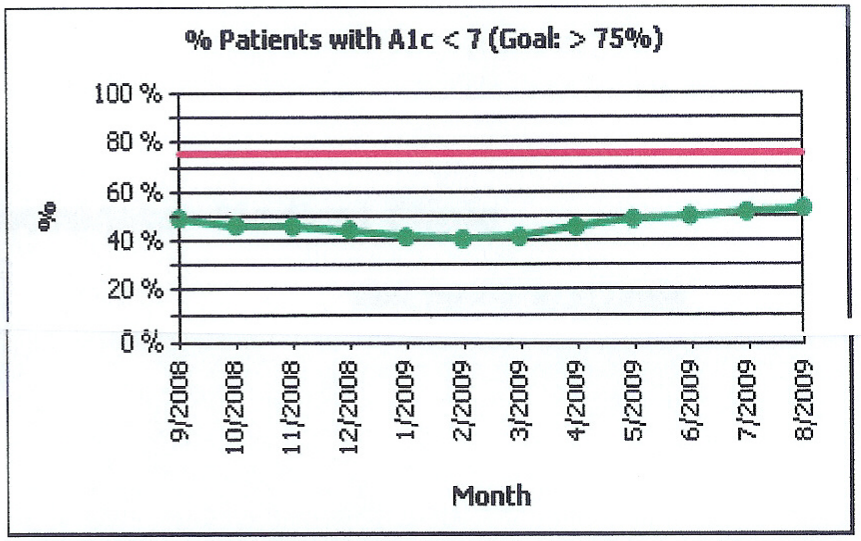
Patients			
Initial Diabetic Population Estimate:			
Patients w/Care Plan (Age: 18-95)		248	
Patients w/Care Plan (Age: 40-95)		238	
A1c			
A1c Documented	> 90%	232	93.5 %
A1c Not Documented		16	6.5 %
Less than 7.0	> 75%	132	53.2 %
Greater than 7.0, Less than 9.0		83	33.5 %
Greater than 9.0	< 5%	33	13.3 %
Cholesterol			
LDL Documented	> 90%	221	89.1 %
LDL Not Documented		27	10.9 %
Under 100	> 70%	162	65.3 %
Under 130	> 90%	204	82.3 %
Between 100-129		39	15.7 %
>= 130		44	17.7 %
Specialty Care			
Aspirin Usage (Age: 40+)	> 85%	107	43.1 %
Influenza Vaccination	> 75%	152	61.3 %
Inspect Feet	> 90%	195	78.6 %
Kidney Assessment	> 90%	223	89.9 %
Set Self-Management Goals	> 90%	188	75.8 %
BP Range Description			
BP Documented		225	90.7 %
BP Not Documented		23	9.3 %
< 130/80	> 70%	136	54.8 %
< 140/90	> 90%	196	79.0 %
> 135/85		13	5.2 %
> 140/90		32	12.9 %
Retinal Screening			
Retinal Screening	> 80%	200	80.6 %
Tobacco Use			
Not Assessed		36	14.5 %
Assess Smoking Status	> 80%	212	85.5 %
Smoker/Exposure		62	25.0 %
Counseled on Smoke/Exposure	> 90%	33	53.2 %

A1c Measure Summary - Westminster Medical Clinic

Physician: **Time Period: 8/31/2009**

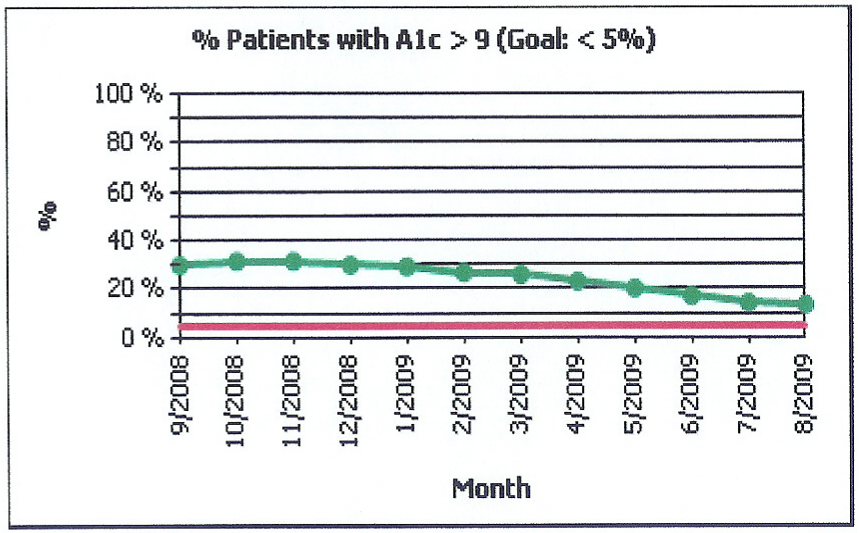
% Patients with A1c < 7 (Goal: > 75%)

Month	# Pts	Count	%
8/2009	248	132	53.23%
7/2009	248	128	51.61%
6/2009	248	124	50.0%
5/2009	248	121	48.79%
4/2009	248	113	45.56%
3/2009	248	103	41.53%
2/2009	248	101	40.73%
1/2009	248	103	41.53%
12/2008	248	110	44.35%
11/2008	248	114	45.97%
10/2008	248	115	46.37%
9/2008	248	122	49.19%



% Patients with A1c > 9 (Goal: < 5%)

Month	# Pts	Count	%
8/2009	248	33	13.31%
7/2009	248	35	14.11%
6/2009	248	42	16.94%
5/2009	248	50	20.16%
4/2009	248	57	22.98%
3/2009	248	64	25.81%
2/2009	248	66	26.61%
1/2009	248	72	29.03%
12/2008	248	74	29.84%
11/2008	248	78	31.45%
10/2008	248	78	31.45%
9/2008	248	74	29.84%



PDSA

- AIM
  - Improve LDL <100 in >70% of DM patients
- Measure
  - Registry review
- Test
  - Identify and contact patients
  - Adjust medication per algorithm
  - Re-test LDL in 1 month

Registry Query

- 78 patients (68% control)
- LDL > 100 in 25 patients

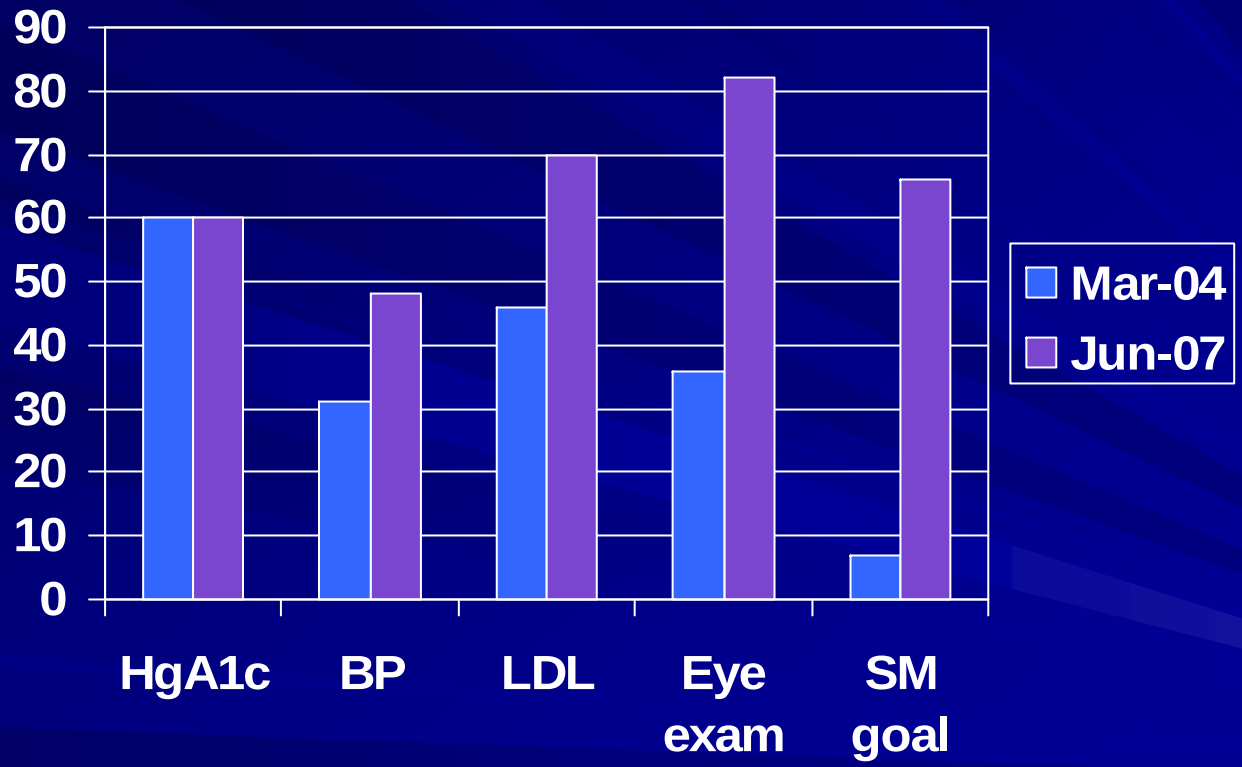
Change treatment	5 (20%)
Overdue for lab or visit (> 3 months)	6 (24%)
Previous action pending. Visit or lab already scheduled	5 (20%)
Administrative error (not my patient or no DM)	5 (20%)
Registry error (current lab missing)	2 (8%)
Extreme outliers identified (>1 year)	2 (8%)

Reality Medicine Rule #4

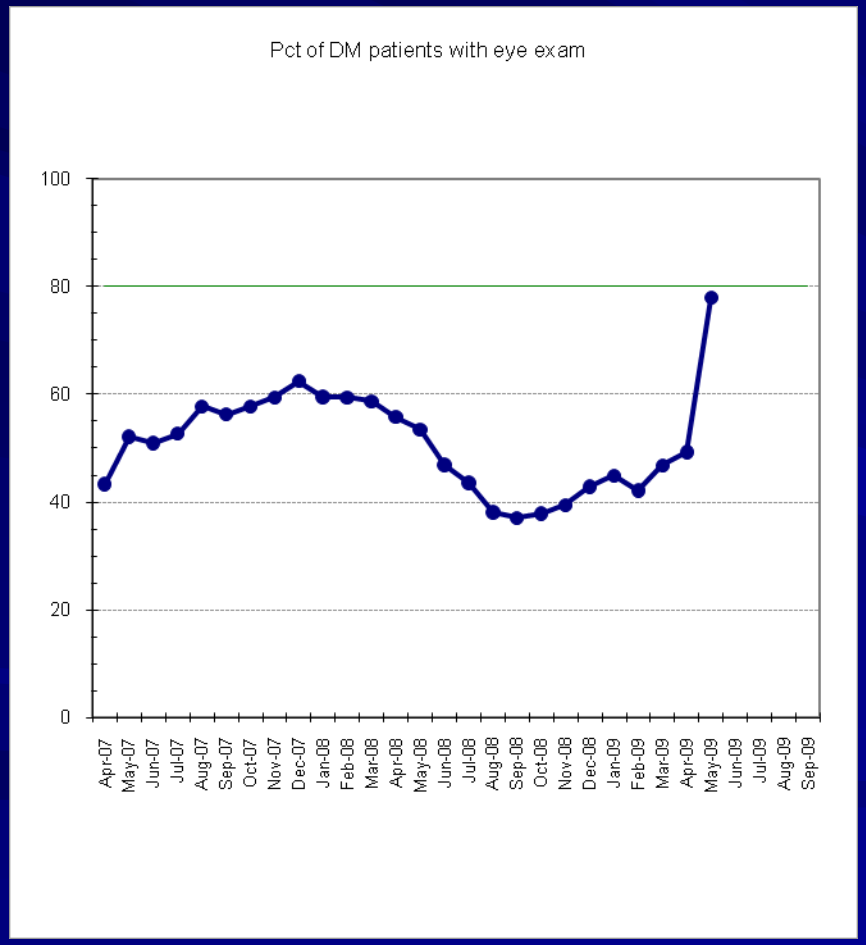
Never confuse motion with action

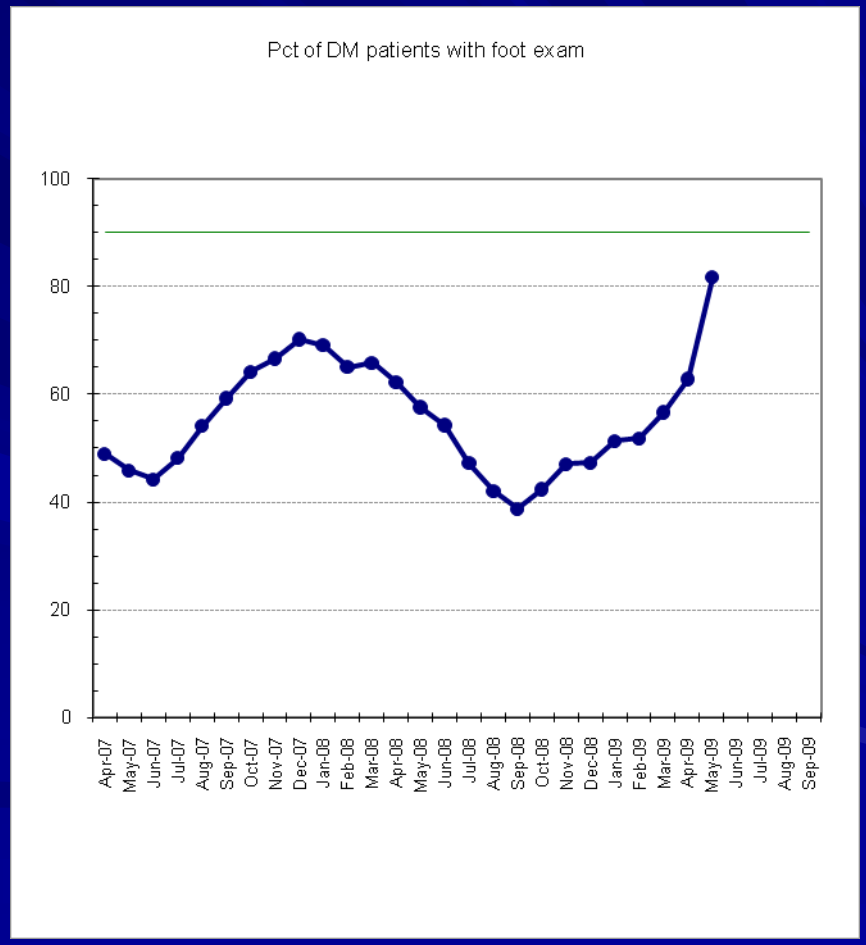
~ Ernest Hemingway

Overall WMC Outcome
% patients at goal



WMC Run Charts





Registry Cycle

- Before patient visit, review care plan /flow sheet and print graphs
- MA updates data and performs tasks per standing orders
- During the visit, Chronic care management. Use graphs and recommendations for patient self-management.
- Pre-plan next visit
- After the visit, note is routed for data entry to update visit information and labs.
- Note filed in chart
- Monthly review of patient measures and physician performance. Test change.

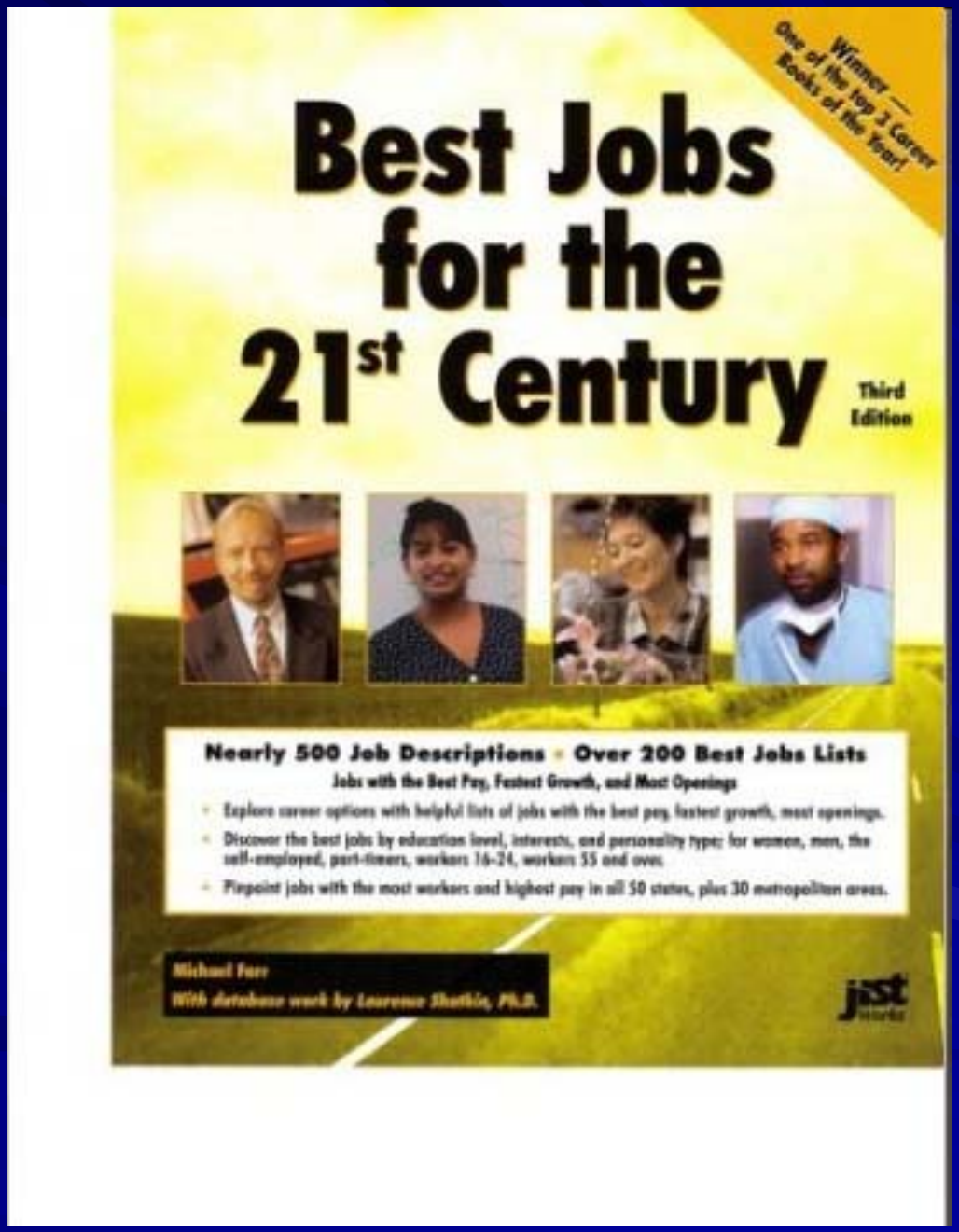
Barriers

- Time
- Belief system and willingness
- Learning new skill contrary to your natural instinct
- Dysfunctional and out-dated clinic infrastructure (Data entry, Charting, Collection and use of data)
- Resistance to change
- Reimbursement

Steps to Success

- Assign a Registry Champion
- Provide time to research options
- Select a registry
- Pick a disease and research guidelines
- Set practice goals and measures
- Determine data entry issues and populate registry
- Demand a laboratory interface
- Determine workflow issues and protocols
- Monthly care coordination and maintenance
- Report measures to physicians and across practice in open forum

WMC Team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Michael Farr
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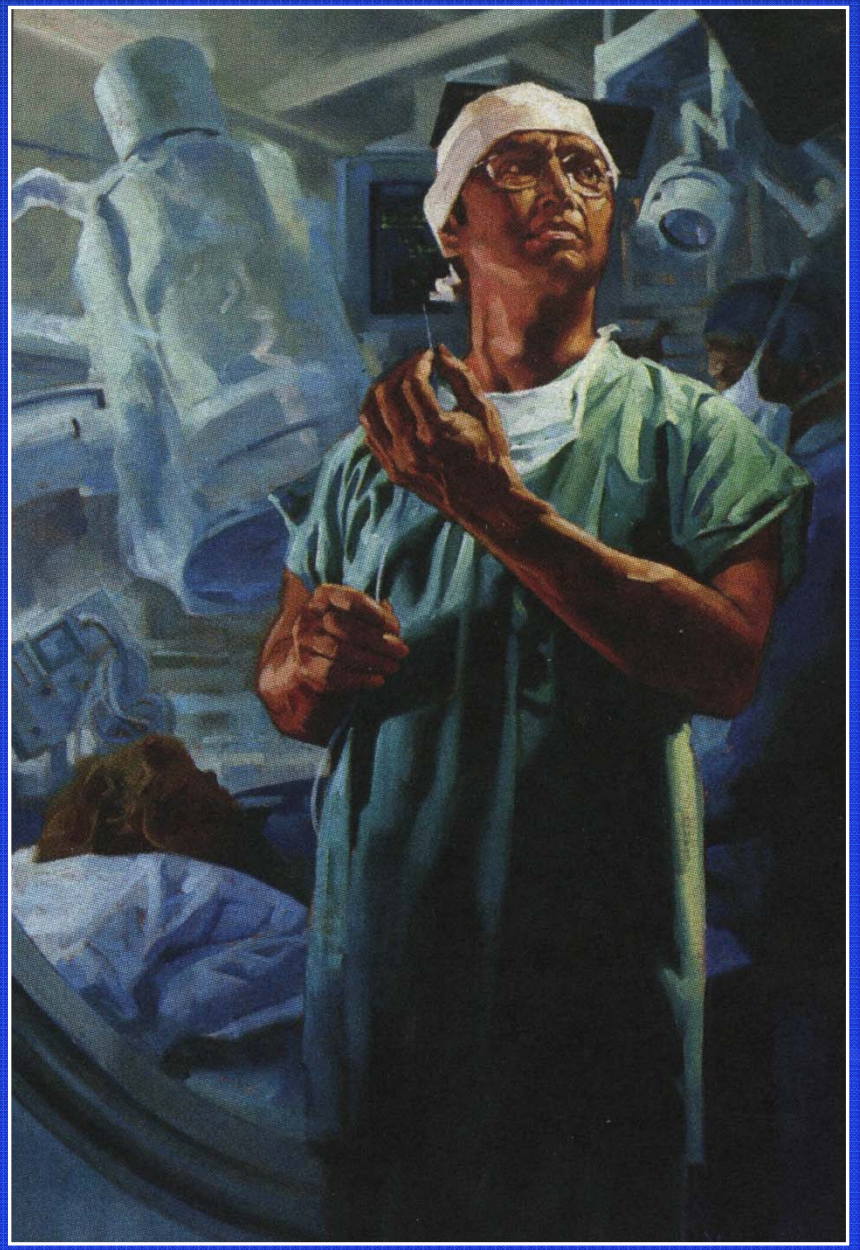
jist works

Reality Medicine Rule #5

The future is purchased by the present

~ Samuel Johnson

Doctor and Doll, by Norman Rockwell, 1942



Untitled, by Gregory Manchess, 2006