



# **HIT, Disease Management and Incentives**

**Models for Using and Rewarding HIT in Disease  
Management Administration**

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BlueCross BlueShield of Tennessee**

**And**

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## Congressional Budget Office Speaks Out

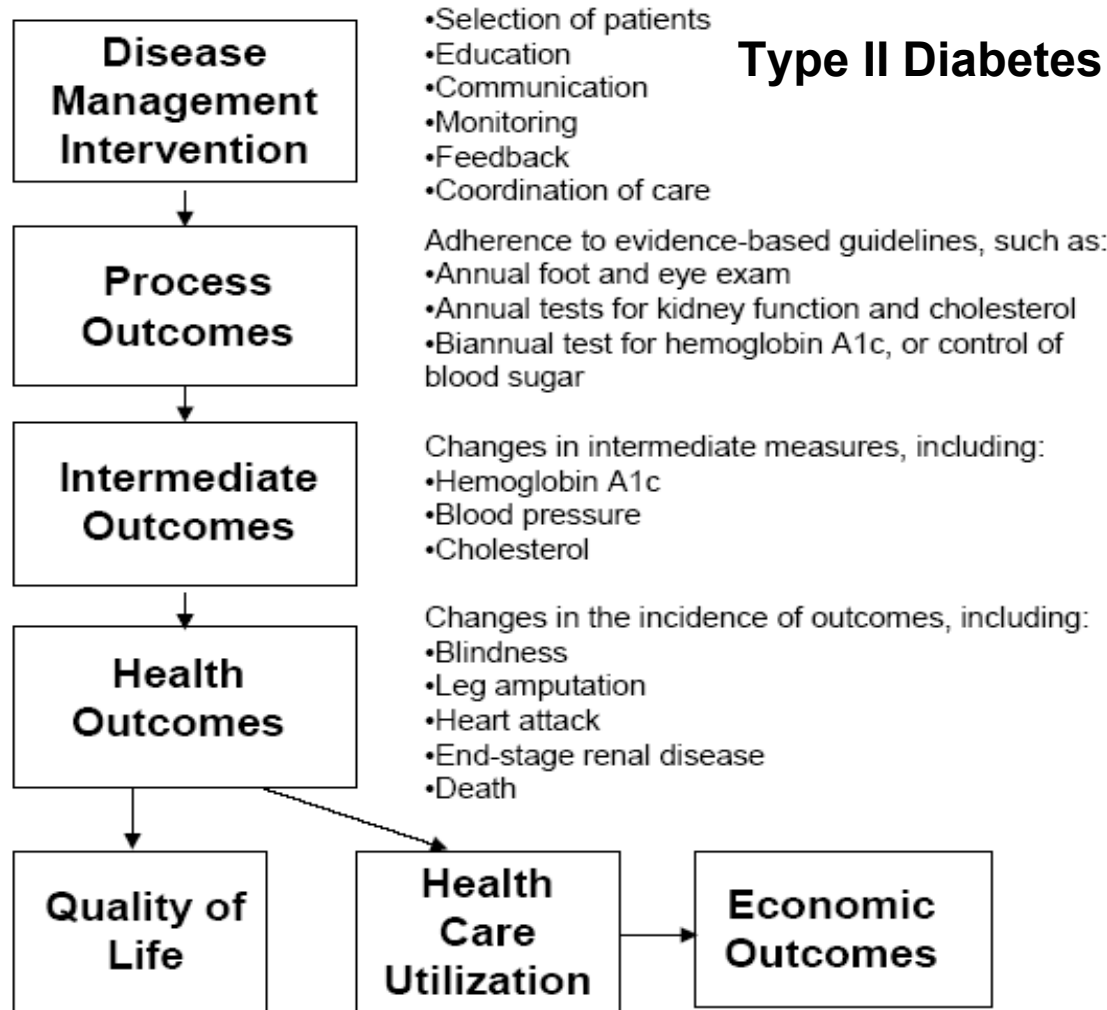
On the basis of its examination of peer-reviewed studies of disease management programs for congestive heart failure (CHF), coronary artery disease (CAD), and diabetes and the conclusions reached by other reviews of the relevant literature published in major medical journals, **CBO finds that to date there is insufficient evidence to conclude that disease management programs can generally reduce the overall cost of health care services.**

## Kaiser Permanente Experience: Staff Model with HIT and DM

Condition/quality indicator	1996	1998	2000	2002
Diabetes				
HbA1c test				
Any	69%	75%	83%	87%
LDL test				
Any	28%	43%	65%	82%
Median LDL	132	123	116	108
Statin medication				
Any	10%	16%	27%	45%
Median days	267	276	275	279
Antihypertensive medication				
Any	58%	63%	69%	72%
Median days	392	417	449	494
ACE inhibitor or ARB				
Any	32%	41%	51%	57%
Median days	326	327	324	325

**“We conclude that the rationale for DM programs, like the rationale for any medical treatments, should rest on their effectiveness and value.”**

## Typical Disease Management Path: Demanding Process and Measures



## Kaiser Permanente Is an Exception: Low EHR Adoption and Implementation Throughout the US

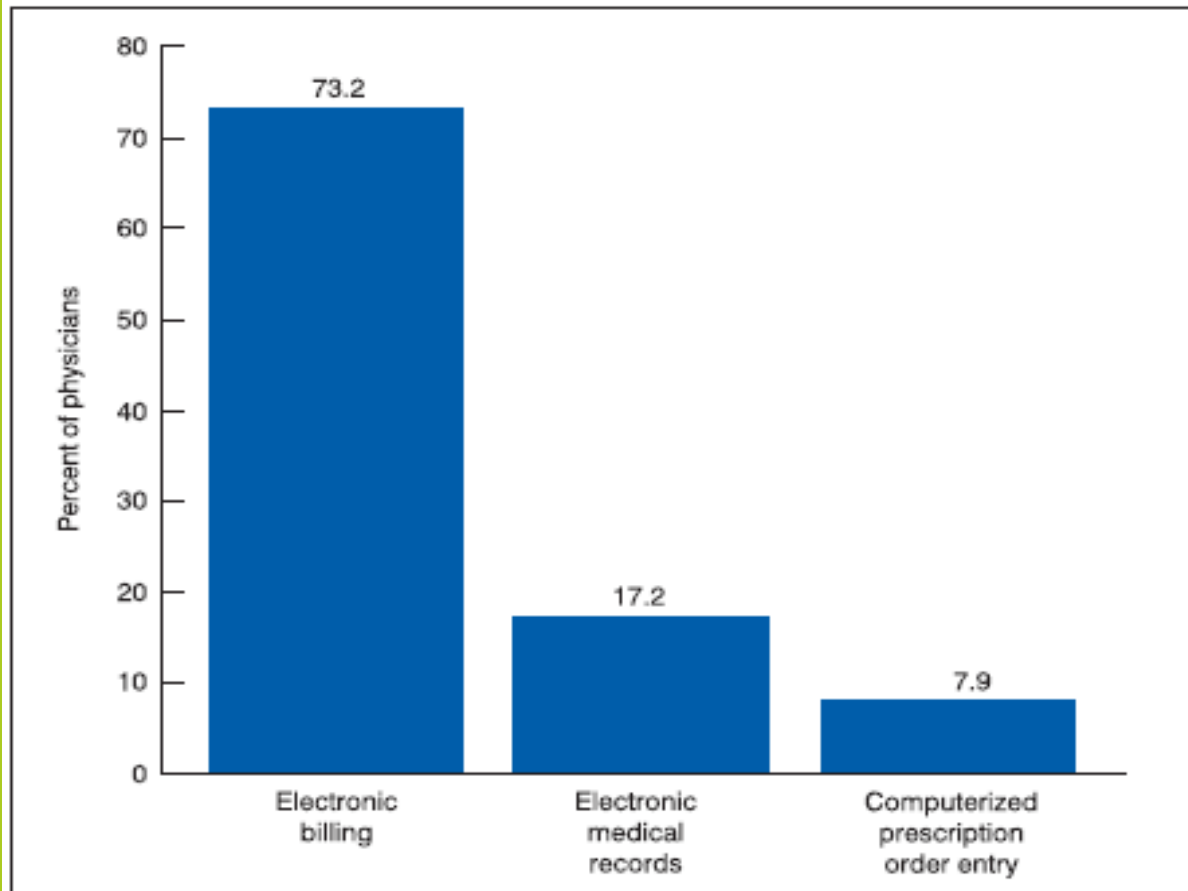


Figure 1. Percent of office-based physicians using selected information technologies: United States, 2003

## Compelling Reason for an EHR Must Exist to Get Adoption

- **FFS service methodology rewards volumes of procedures.**

- Practice management systems needed for billing “units” of service, but...

- Information management for enhancing care is not attractive.

- Routine clinical reporting is not required.

- **Changing reimbursement to systems that pay for accountable outcomes necessitates robust information support.**

- Sophisticated patient tracking

- Decision support at point of service

- Longitudinal care plans

- Outcomes measures with clinical reporting and trending

## How Can EHR Adoption and Use be Stimulated?

- **EHR Subsidy**

- Direct subsidy

- Loan subsidy – low/no interest

- Additional reimbursement for provider reporting of special program measures

- **Payer sponsored and provided applications**

- ASP model EHR

- Specific HIT tool(s)

- E-Prescribing
    - Disease specific portals
    - Data sharing: Community Health record - CHR

- **Pay for use or pay for play – transactional payment (new CPT?)**

- **Entry into Pay-for-Performance Program**

## Pay for Performance (P4P)

- **The next big thing or a lot of “buzz”?**
- **In spite of the press, it is just in its infancy.**
- **Predicated on change to “best practice” and outcome payment**
- **Administration relies on ability to measure and set goals.**
  - Process and/or outcomes measures and goals?
  - Is data accessible? Claims? Clinical Record? Pharmacy?
  - Standardized metrics and calculations? (HEDIS, NQF)
  - Outsourced, turn-key P4P program – Bridges to Excellence/NCQA?
- **Selection of performance reimbursement type**
  - Limited by claims system design
  - Fee increase for following year: not immediate and uses current fee system
  - Year end bonus: not immediate or temporally connected to “event”
  - Immediate reinforcement: behaviorally correct, but requires new and automated payment systems



## P4P National Programs<sup>1</sup>

- 34 health plans with incentive programs
- Hospital and physician programs
- Bonuses 5-20% of claims paid for PCPs—Avg. 10%
- Specialists have fee schedule based (90-110% of fee schedule)
- Two withhold programs
- Paid monthly, quarterly, semi-annual or annual
  - Frequent payouts more effective
- 11 of 28 programs provide bonus of IT use/connectivity

	Incentive Compensation Rate		
Annual Claims Paid (\$000s)	5%	10%	20%
250	12.5	25	50
300	15	30	60

<sup>1</sup>Med-Vantage Pay for Performance Incentive Programs in Healthcare: Market Dynamics and Business Process

## P4P Incentive Models

Program	Incentive Model
Empire BCBS, Verizon, GE, BCBS MI	•2-4 % of all paid Claims
IBC	•2-9% additional increase in annual fee schedule—reduced for adverse results
CMS demonstration with Premier	•1-2% of all paid claims for top performers with penalty of 1-2% for bottom performers
IHA (all major health plans in CA)	•Up to 30% of claims paid and 15% on average •\$42,000 average annual payment—Hill Physicians
Bridges to Excellence	•\$50 PMPY Physician Office Link •\$80 PMPY Diabetes Link •\$160 PMPY Cardiac Link

## P4P Incentive Models: Bridges to Excellence

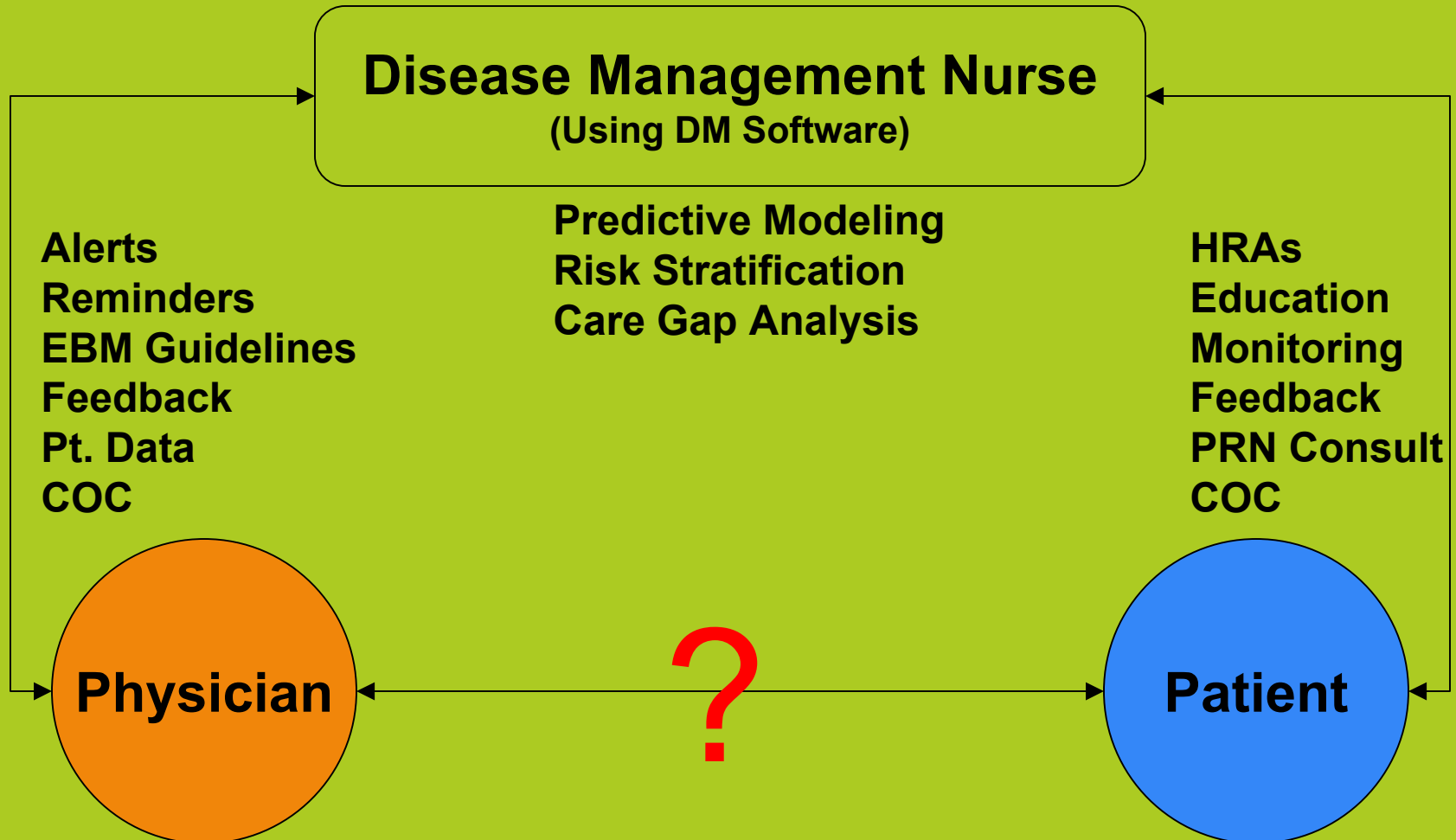
Element	Incentive PMPY	Cost to Employer PMPY	Employer Potential Savings PMPY	Patients	MD Potential Incentive per Year
Physician Office Link	\$50			2,000	\$100,000
Diabetes Care Link	\$80	\$175	\$350	100 (5%)	\$8,000
Cardiac Care Link	\$160	\$200	\$390	100 (5%)	\$16,000
Total	\$260				\$124,000

## P4P Incentive Models: IHA of California

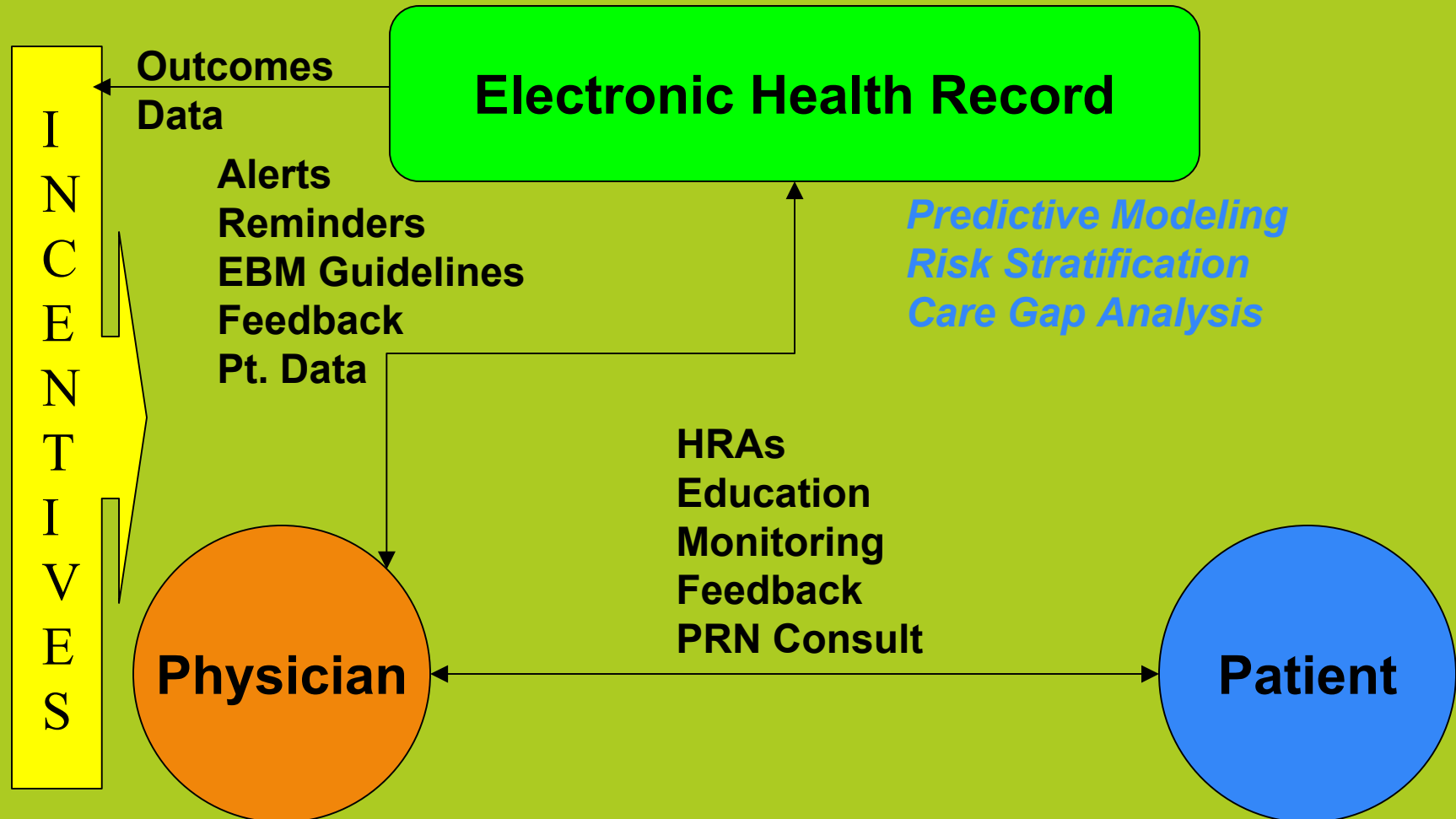
Element	Description	Weighting
Clinical Quality	<ul style="list-style-type: none"> <li>•Childhood immunizations, Breast cancer screening, Cervical cancer screening, Asthma, CAD, Diabetes</li> </ul>	40%
Patient Satisfaction	<ul style="list-style-type: none"> <li>•Specialty care</li> <li>•Access to timely care</li> <li>•MD-Patient Communication</li> </ul>	40%
IT Investment	<ul style="list-style-type: none"> <li>•Data integration</li> <li>•Point of Care Clinical IT</li> </ul>	20%

**\$42,000 performance bonus on average (Hill Physicians)**  
**15% of claims paid on average (up to 30%)**

## Traditional DM Model: Active Management by Payer or Proxy



## Physician EHR Assisted Model: Physician DM Program



## BlueCross BlueShield Tennessee Value Based Diabetes Pilot

- **Participants (must have EHR)**

  - Holston Medical Group

  - Vanderbilt Medical Group

- **Patient Identification and enrolment via either health plan (claims data) or provider**

- **Incentive for participation**

  - Opening “new” codes

    - Telephone and e-mail consultations (can be “non-physician practitioner”)
    - Individual and group education (can be “non-physician practitioner”)

  - Performance incentive – fee increase

## Types of Performance Measures – Type II Diabetes

- **Process**

- HbA1C rates (a starting measure for 2004)

- Retinal exams

- Microalbuminuria test rates

- Results - driving to goal (outcome measure for 2005)

- **Outcomes**

- Admissions and ED visits

- Patient satisfaction

- Patient well being (SF-12)



## Holston Medical Group: Leaders in EHR and Provider Mediated DM



## HMG Guidelines for Glycemic Control

	ADA	AACE
<b>A1C</b>	<b>&lt; 7%</b>	<b>&lt; 6.5%</b>
<b>Fasting Plasma Glucose</b>	<b>90 to 130 mg/dL</b>	<b>&lt;110 mg/dL</b>
<b>Peak Post-prandial Plasma Glucose</b>	<b>&lt;180 mg/dL</b>	<b>&lt;140 mg/dL</b>

## HMG's Electronic Health Record (AllScripts): Flow-Sheet

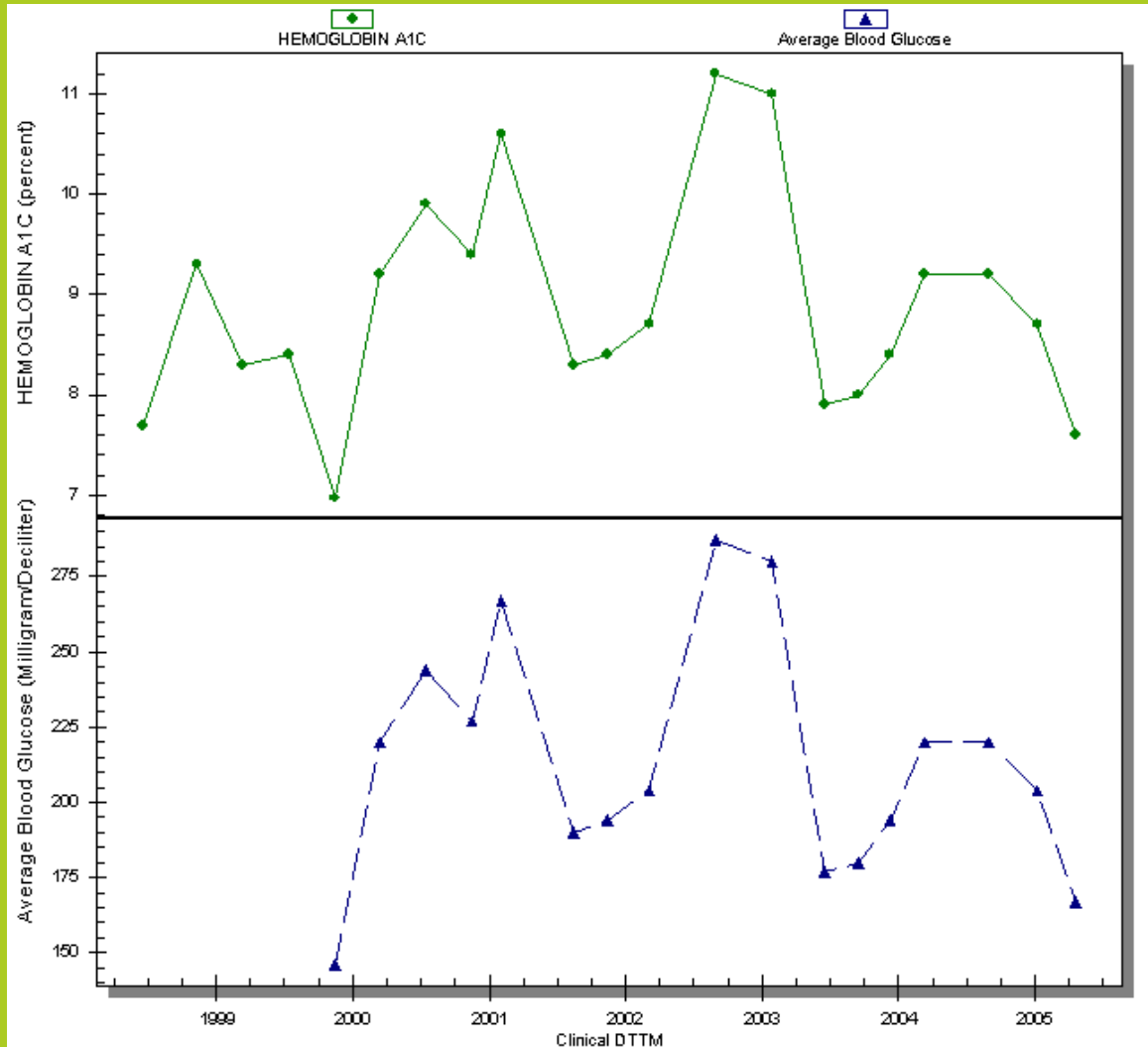
### Flowsheet

 22 Feb 2005

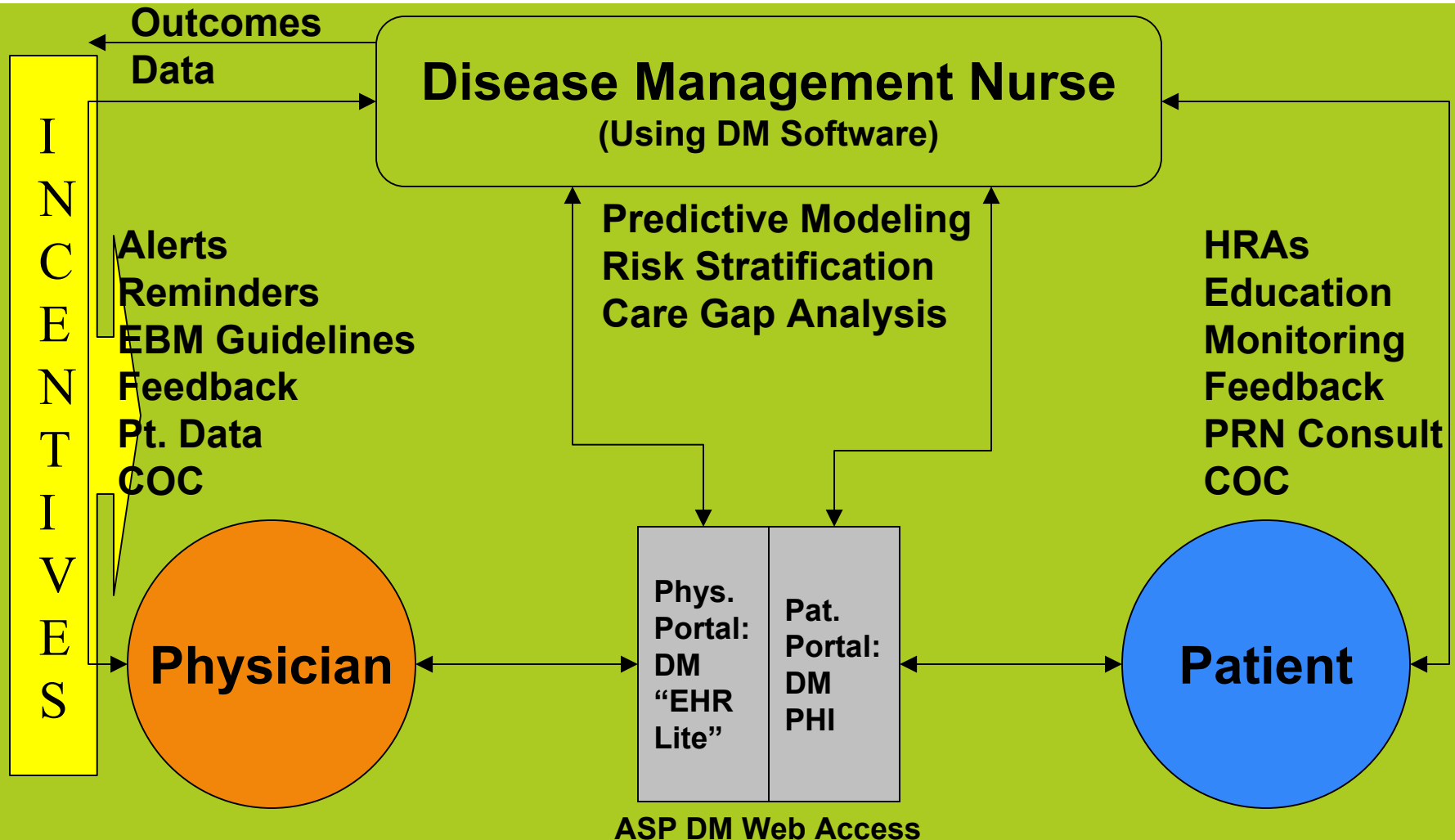
Name: Chem 7/ A1C Time Range: All Sort: Rev Chrono ☐ Show Blank Rows

	20 Apr 2005 RES	06 Jan 2005 Appt	12 Oct 2004 Appt	27 Aug 2004 Appt	11 Mar 2004 Appt	27 Jan 2004 Appt	08 Dec 2003 Appt	15 Sep 2003 Appt
<input type="checkbox"/> SODIUM			142 MEQ/L			139 MEQ/L		
<input type="checkbox"/> POTASSIUM			4.4 MEQ/L			5 MEQ/L		
<input type="checkbox"/> CHLORIDE			106 MEQ/L			103 MEQ/L		
<input type="checkbox"/> CO2			23 MEQ/L			25 MEQ/L		
<input type="checkbox"/> AGP			13			11		
<input type="checkbox"/> GLUCOSE			78 MG/DL			253 MG/DL		
<input type="checkbox"/> BUN			15 MG/DL			11 MG/DL		
<input type="checkbox"/> CREATININE			0.8 MG/DL			0.7 MG/DL		
<input type="checkbox"/> CALCIUM			9.5 MG/DL			9.6 MG/DL		
<input type="checkbox"/> HEMOGLOBIN A1C	7.6 %	8.7 %		9.2 %	9.2 %		8.4 %	8 %
<input type="checkbox"/> GLY HEMOGLOBIN								
<input type="checkbox"/> Average Blood Glucose	167 MG/DL	204 MG/DL		220 MG/DL	220 MG/DL		194 MG/DL	180 MG/DL

## HMG's Electronic Health Record (AllScripts): Graphing Labs



## Dr. – Pt. Enhanced Model: Web Mediated DM Tool from Proxy



# Patient Portal from a Health Plan DM Program



Kate Jones • Thursday, May 27 2004 • Last login date: 5/27/2004



Main Page

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## Ask the Expert

[Ask the Nurse your health questions](#)

[Ask the Coach your fitness questions](#)

## My Messages

5 NEW MESSAGES

[Administrator](#)

[Administrator](#)

[Dr. Klein](#)

[Dr. Blumberg](#)

[Dr. Klein](#)

MORE...

## Health Survey

Are low carb diets really here to stay?

- ☐ Yes
- ☐ No
- ☐ Not sure

SUBMIT

## Today's Health Center

### Type 1 Diabetes

Questions about diabetes? Our step-by-step guide will help you take control of your diabetes!

[Learn More](#)

## Health Centers

- [High Blood Pressure](#)
- [High Cholesterol](#)
- [Weight Loss](#)
- [Type 1 Diabetes](#)
- [Asthma](#)
- [Bloodless Medicine](#)
- [Exercise](#)
- [Low Back Pain](#)

## Today's News



### U.S. Braces for Another West Nile Season

Simple precautions can offer protection from this mosquito-borne virus.

[More Articles](#) | [FDA Approvals](#)

## Health Encyclopedia

Search ADAM Health Encyclopedia:

GO

[Browse by Topic](#)

## Drug Index

Search ADAM Drug Index:

GO

[Search for drug interactions](#)

## News Archive

Search Articles by Keyword:

GO

## Reminders

**YOU HAVE 8 NEW REMINDERS**



## Health Highlights

**Health Highlights for July 2, 2004**

- Surgeon General Links More Diseases to Smoking
- More Fish, Less Refined Grains Seen in New Food Guidelines
- Milwaukee Trying to Control Whooping Cough Outbreak
- California Lawmakers OK Web Link to Canada Drugs
- Atkins Dieter Sues Founder's Estate
- New Drug Approved for Travelers' Diarrhea

## Your Health Tools

- [HgbA1C Tracker](#)
- [Blood Pressure Tracker](#)
- [LDL Tracker](#)
- [Recent Asthma Articles](#)
- [Recent Diabetes Articles](#)

MORE...



# Physician Portal from Health Plan DM Program

Kate Jones • Wednesday, June 16 2004 • Last login date: 6/16/2004

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[Add Observations](#)
[Recommendations](#)
[Open Record](#)

[CYCLE MENUS](#)

Greetings Dr. Case Your last login was: Fri Apr 2 12:11:54 EST 2004

[Scrolling](#)

08/26/2002 15:31:00 PM [1]  
[Your Health News from the Mayo Clinic](#)

08/26/2002 15:31:00 PM [2]  
[New study about Heart Disease](#)

08/26/2002 15:31:00 PM [3]  
[Heart disease is the No. 1 killer in America. Lung cancer is the No. 1 one](#)

[Messages](#)

You have 0 new [messages](#) from:

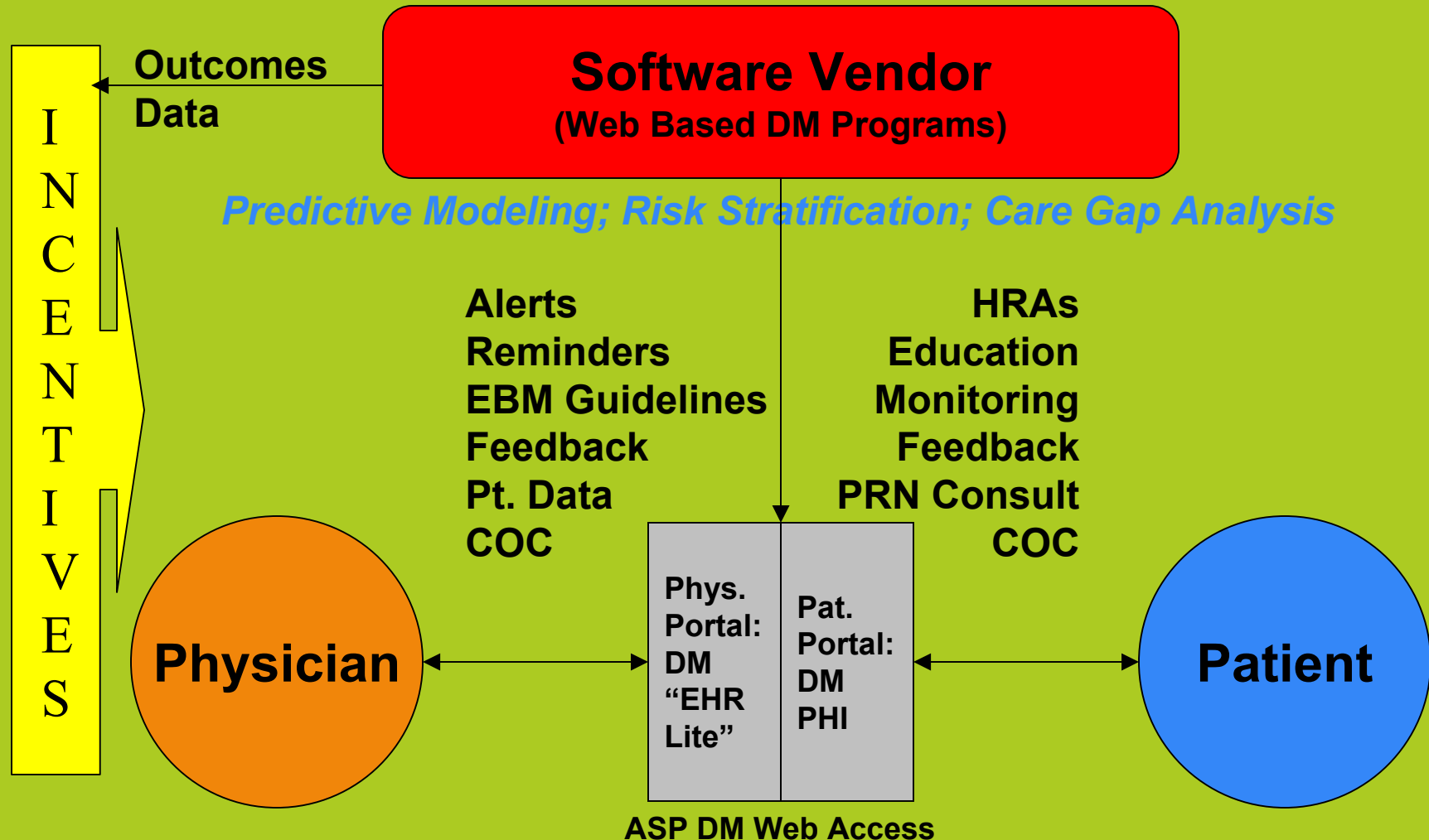
[Population Profiles](#)

Profile name	Update date	Matched members	Refresh	Tracking
Follow Up Call Required	4/1/2004	9		OPEN
High cholesterol	4/1/2004	2		OPEN
HRAs for Review	4/1/2004	0		OPEN
is pregnant = yes	4/2/2004	3		OPEN
Last name B & DOB 1944-65	4/1/2004	9		OPEN
LDL > 150 & W > 200	4/1/2004			OPEN
LDL 100 & 200lbs	1/22/2004	8		OPEN

[Advanced Search](#)

[Show Population](#)

## Dr. – Pt. Enhanced Model: Web Mediated DM Tool from Proxy





## Opening an Interactive Portal For Patient and Doctor: Cerner's PHR for Juvenile Diabetes - IQ Health Diabetes Center

- **Web Based Personal Health Record Toolkit for Monitoring**

- Diabetes treatment plan

- Automated glucometer uploads

- Patient diary and tracking

- Secure interactive messaging

- **Physician Web Access to Diabetes Care Record**

- Enrolment

- Secure messaging

- Master person Index Search

- Track progress and home care

# IQ Health Opening Screen – Personal Health Record



## MY Personal Health Record



Jamie Morgan [Switch Account](#) ▼

[Home](#) | [Connections](#) | [Centers](#) | [My Health](#) | [Reference](#) | [Account](#) | [<Client>](#) | [Help](#) | [Logoff](#)

Home

Search for:  in [Medications](#) [Go](#)



### Message Center



Stay connected with my healthcare providers.

[Inbox](#) | [New Message](#)

From	Subject	Date & Time
Dr. Jones	Lab Result: HbA1c	11/11/0X at 11:05 am
Dr. Jones	Health Information For You	11/16/0X at 11:00 am
Dr. Jones	Appointment Confirmation	11/16/0X at 10:00 am
Dr. Jones	Diabetes Checkup is due	11/16/0X at 10:00 am

### Personal Health Record



My life, my health.

- ▶ Allergies
- ▶ Conditions
- ▶ Immunizations
- ▶ Measurements
- ▶ Medical Tests

#### Medications

[Medication Center](#) | [Interactions](#) | [Refill](#) | [Add New](#) | [View Past](#) | [Print](#)

Medication	Date Started	Amount	Frequency	Health Professional
Capoten	02/12/200X	1 oz	2 times/day	Smith, Bob
Humalog	01/09/200X	2 oz	3 times/day	Jones, Servo
NPH	01/01/200X	2 oz	As needed	Smith, Bob
Aspirin	04/22/200X	1 tab	As needed	

#### Surgeries/Procedures

#### Personal Notes

# Diabetes Center

## My Diabetes Toolkit

Track. Review. Share.

[My Diary](#)

[Diary Summary](#)

[My Plan](#)

[Medical Devices](#)

[Preferences](#)

[Contact Your Care Coordinator](#)

## Resources

Links important to me.

[American Diabetes Association](#)

[Children with Diabetes](#)

[Juvenile Diabetes Research Foundation](#)

[Type 1 Diabetes](#)

[Type 2 Diabetes](#)

## Diabetes Center Managing Made Easy.

Often diabetes goes undiagnosed because many of its symptoms seem so harmless.

Recent studies indicate that the early detection of diabetes symptoms and treatment can decrease the chance. [Read more . . .](#)



## Medication Schedule



What to take and when.

[Add New](#)

[Print](#)

[Interactions](#)

Time	Medication
7:00a	Amoxicillin 125mg oral tablet, chewable
7:00p	Amoxicillin 125mg oral tablet, chewable
As needed	Tylenol Regular Strength
Diabetes	Humalog
	Lantus-Glargine

## Secure Messaging

Message Center <span>?</span>		
Stay connected with my healthcare providers.		Inbox   New Message
From	Subject	Date & Time
Dr. Jones	Lab Result: HbA1c	11/11/0X at 11:05 am
Dr. Jones	Health Information For You	11/16/0X at 11:00 am
Dr. Jones	Appointment Confirmation	11/16/0X at 10:00 am
Dr. Jones	Diabetes Checkup is due	11/16/0X at 10:00 am

# Tracking

View: Glucose ▼

Glucose Calculations (mg/dL)	Breakfast	Lunch	Dinner	Overall
Average	122	123	206	150
Low	77	88	90	77
High	189	199	HIGH***	HIGH***
Standard Deviation	31.9	31.4	143.6	96.9
% Within Target (80-140)	80	90	60	77
% Above Target (140)	0	10	40	17
% Below Target (80)	20	0	0	7
Device Out-of-Range	0	0	1	0

\*\*\*HIGH values are assigned a value of 601 for calculation purposes.

Glucose Results (mg/dL)	Breakfast	Lunch	Dinner
SUNDAY 10/08/2004 <a href="#">Edit</a>	100*, 80*	88*	188*, 191*
MONDAY 10/09/2004 <a href="#">Edit</a>	150*, 120*	97*, 123*	210*
TUESDAY 10/10/2004 <a href="#">Edit</a>	111*	145*	115*
WEDNESDAY 10/11/2004 <a href="#">Edit</a>	77	199	90, 111
THURSDAY 10/12/2004 <a href="#">Edit</a>	189*, 144*	145*, 120*	HIGH
FRIDAY 10/13/2004 <a href="#">Edit</a>	120*	100*, 99*	138*, 293*
SATURDAY 10/14/2004 <a href="#">Edit</a>	128*	112*	120*

\* Values added from device upload.

## Diary Summary

View your progress.

[Print](#) [My Plan](#) [My Diary](#)

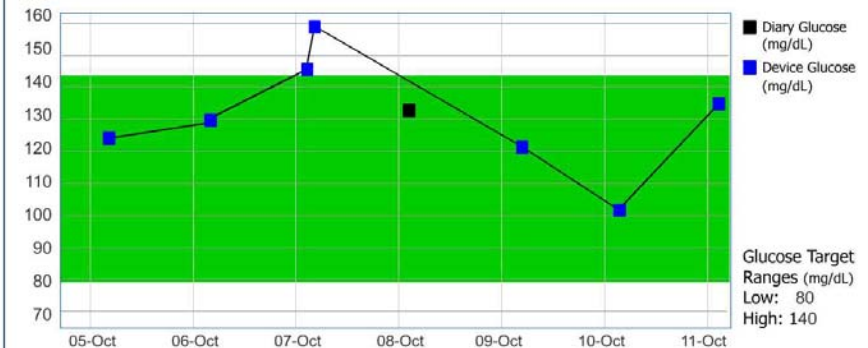
To view a new graph, select the timeframe, which graph(s) to display, then click Redraw Graph.

Start Date: 10/05/04 [Calendar](#) End Date: 10/11/04 [Calendar](#) Meal: Breakfast ▼

Glucose Carb Intake Redraw

### Breakfast

Larger View



Close Submit