



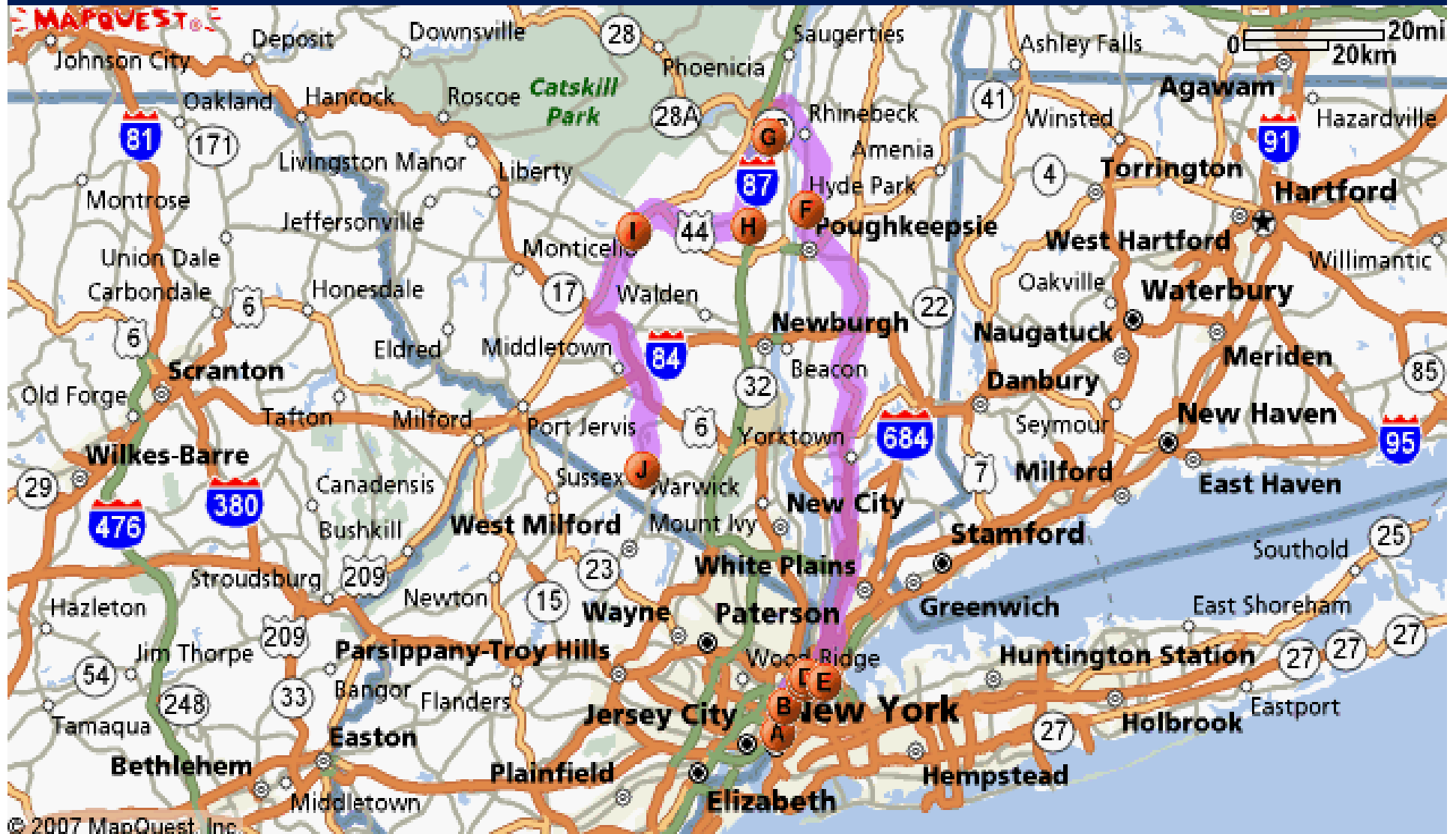
EHR IMPACT ON QUALITY MEASURES AND POPULATION HEALTH IMPROVEMENTS

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October 15, 2007



IFH AT A GLANCE





IFH AT A GLANCE

- Geographic area – Manhattan, Bronx, New Paltz, Kingston, Ellenville, Hyde Park, Port Ewen.
- 15 Community Health Centers
- One School Based Health Center
- Two FP Residency Programs
- Two Free Clinics for the Uninsured
- Two Article 31 Mental Health Sites



IFH AT A GLANCE

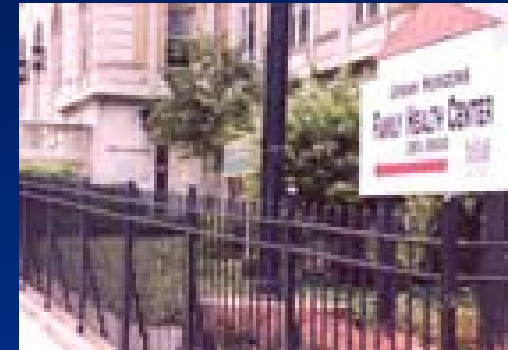
Sidney Hillman



Walton



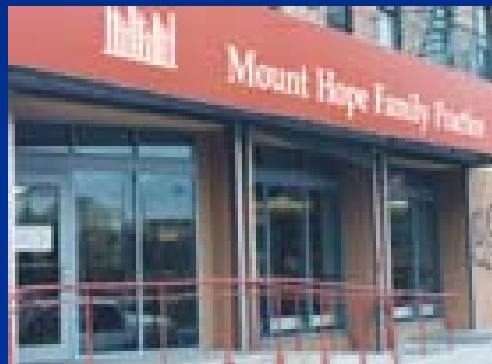
Urban Horizons



Parkchester



Mount Hope



Westchester





IFH AT A GLANCE

New Paltz

Kingston



Hyde Park

Ellenville





QUALITY IMPROVEMENT DEMANDS ON CHC'S

- NATIONAL DEMANDS

National Voluntary Consensus Standards for Ambulatory Care: A Physician-focused Performance Measurement Set. The National Quality Forum has initiated 86 national voluntary consensus standards for measuring and reporting the quality of ambulatory care

NCQA: Reviews Health Plan Performance based on HEDIS. HEDIS is the performance measurement tool of choice for more than 90 percent of the nation's managed care organizations. There are over 70 different HEDIS measures ranging from review of cervical cancer screening to smoking cessation and customer satisfaction.

JCAHO: Ongoing continuous quality improvement expected.



QUALITY IMPROVEMENT DEMANDS ON CHC'S

- REGIONAL

Local Departments of Health-
HEDIS measures often used.

- LOCAL

Use of Pay-For Performance Quality incentives
by PPO's, other medical groups.

Internally Driven CQI utilized to satisfy Grant
requirements.



INFORMATION TECHNOLOGY TOOLS USED TO IMPROVE QUALITY OF CARE

- Electronic decision support tools
- Utilization and sharing of reporting data
- Standardized documentation tools
- Electronic patient outreach
- CQI beyond decision support



IFH QI READINESS PRE-EHR

Access to internal data greatly limited.

Resource allocation limited organization- wide
QI topic review to three topics per year.

Areas covered included comprehensive HIV
review, diabetes, adolescent screening for
tobacco and substance abuse, postpartum
care

Interventions that worked best were those
that facilitated better documentation by
providers (e.g. Stamps)



IFH QI READINESS PRE-EHR

Average time spent on chart review- 30 minutes to one hour per chart depending on the study

Average length it took to complete Pre-EpicCare studies- three months.

Chart reviewers were doctors and nurses at our clinics. Time spent on chart review made it more difficult for them to complete other administrative tasks.



OUTCOMES

IFH transitioned all NYC area clinics into EpicCare between October 2002 and January 2003

Within the first six months provider productivity matched pre-EpicCare levels.

In 2004 and beyond, unprecedented productivity levels were noted and have been sustained.



Outcomes

- Ease of information retrieval
- Availability of reports relevant to CHCs
- Ease of development of custom reports
- Ease of running ad-hoc reports



IFH BEST PRACTICE ALERTS

PRIMARILY BASED ON HEDIS CRITERIA

PNEUMOVAX

SEASONAL FLUVAX

BREAST CANCER SCREENING

CERVICAL CANCER SCREENING

LEAD SCREENING

HGBA1C TESTING AND CONTROL



IFH BEST PRACTICE ALERTS

OPHTHALMOLOGY CONSULTS FOR
DIABETICS

PEAK FLOW MEASUREMENTS FOR ALL
ASTHMATICS

NEPHROLOGY CONSULTS FOR PATIENTS
WITH GREATER THAN 1.8 SERUM
CREATININE

LDL SCREENING

ANNUAL RPR SCREENING IN HIV



DID THEY WORK ?

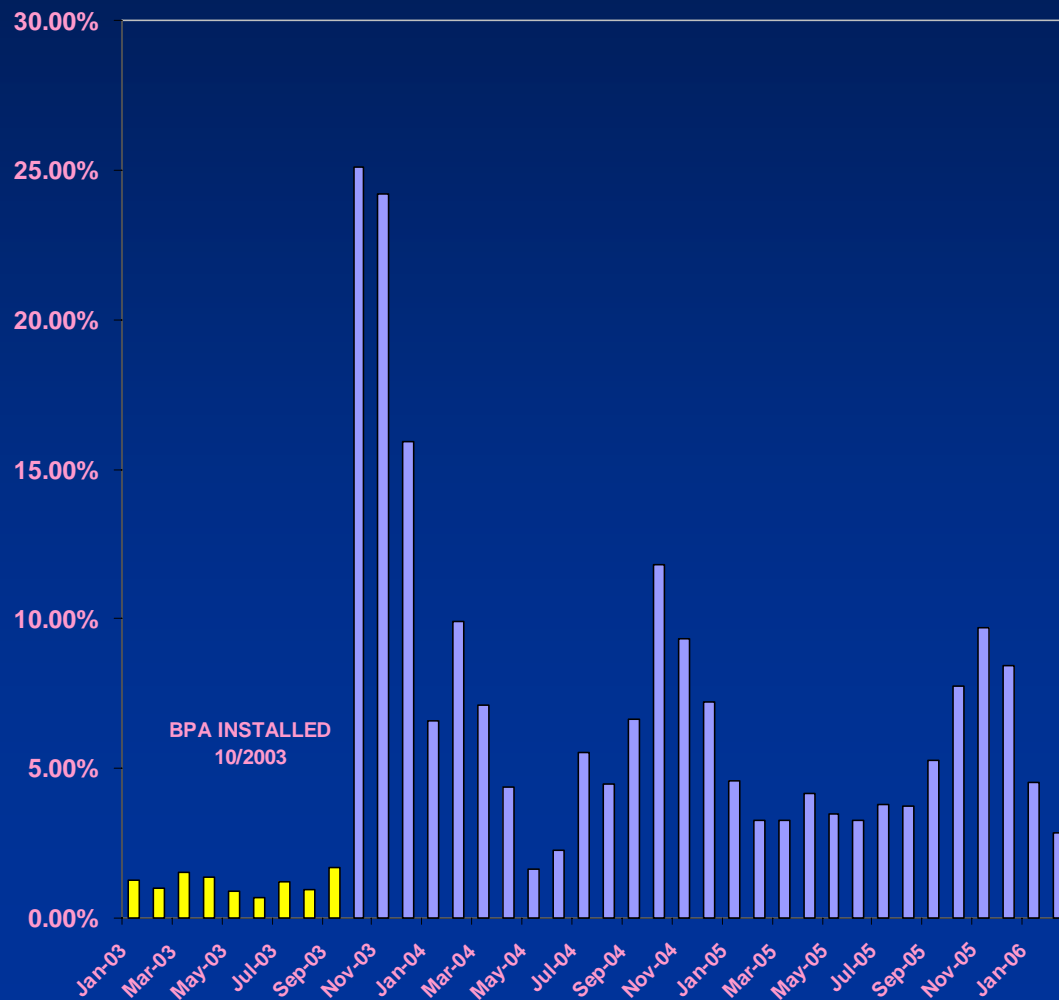
Initial concern about the introduction of best practice alerts (BPA's) replaced by enthusiasm for the improvement seen in multiple clinical areas.

Keys to Success- Making sure that the BPA's were accurate in capturing services rendered (e.g. There are dozens of CPT codes utilized for Cervical Cancer screening)



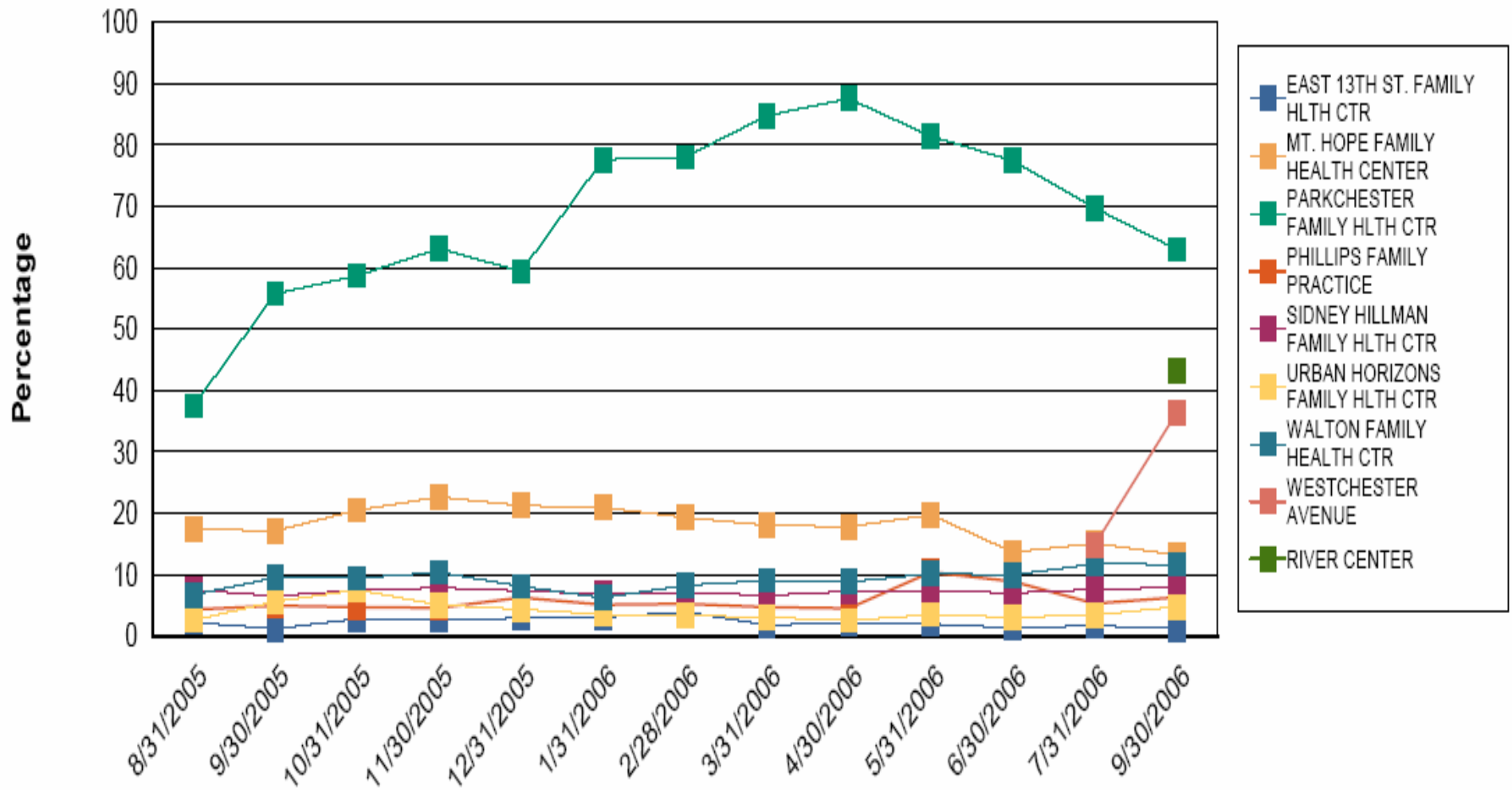
PNEUMOVAX

PNEUMOVAX GIVEN PER AGE GROUP VISIT



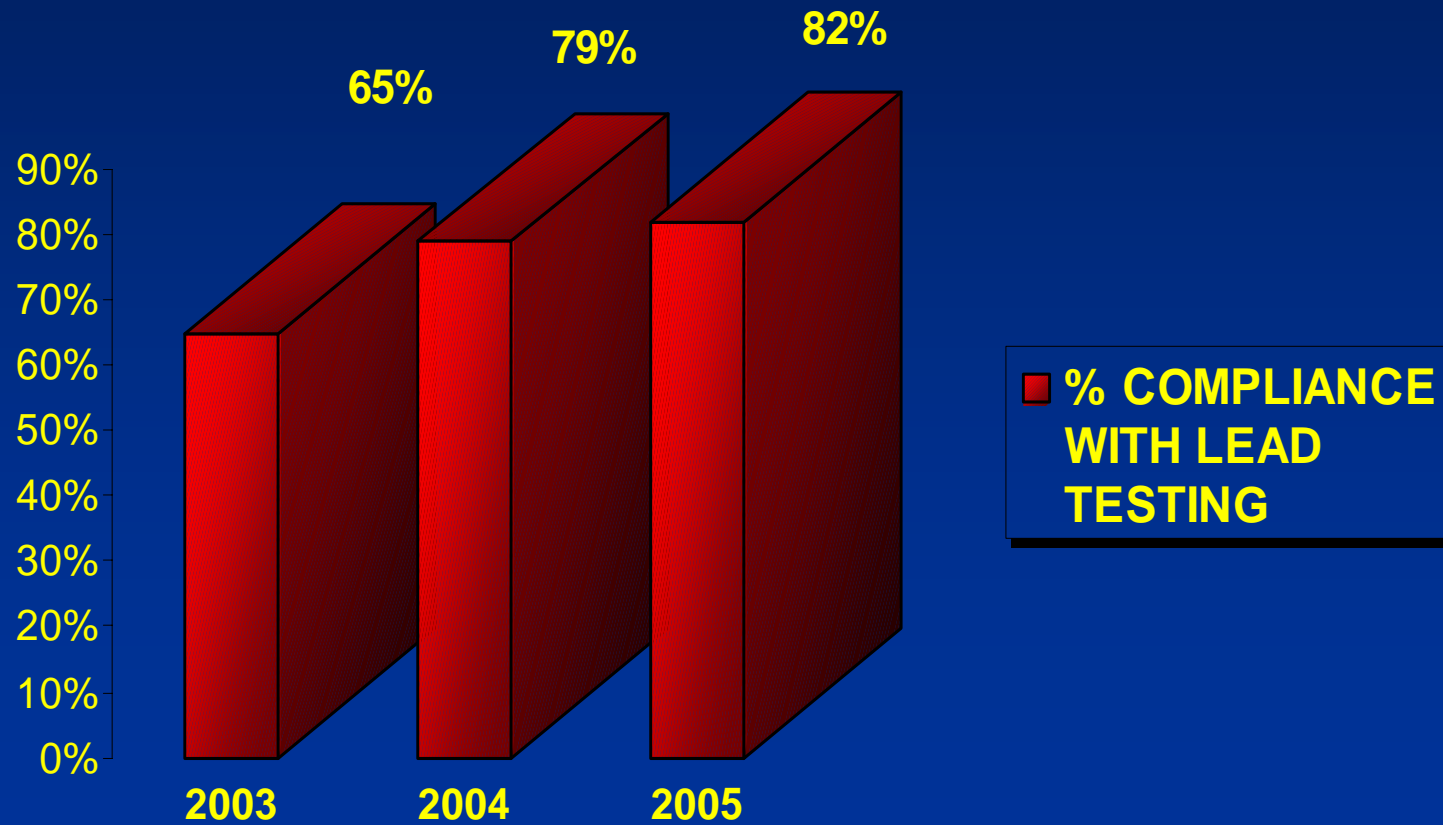


Depression Screen with PHQ2



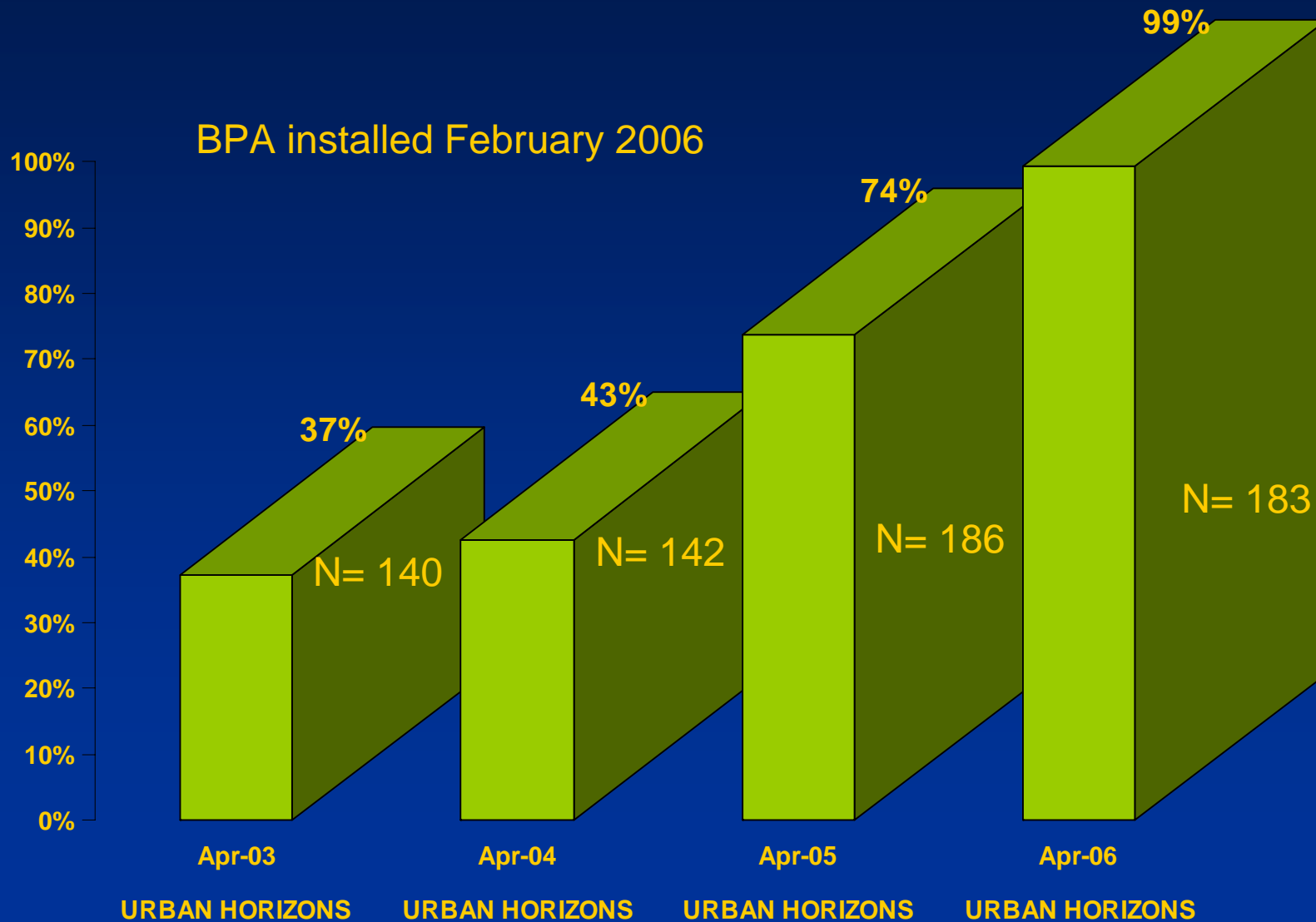
LEAD TESTING IN TWO YEAR OLDS

% COMPLIANCE WITH LEAD TESTING



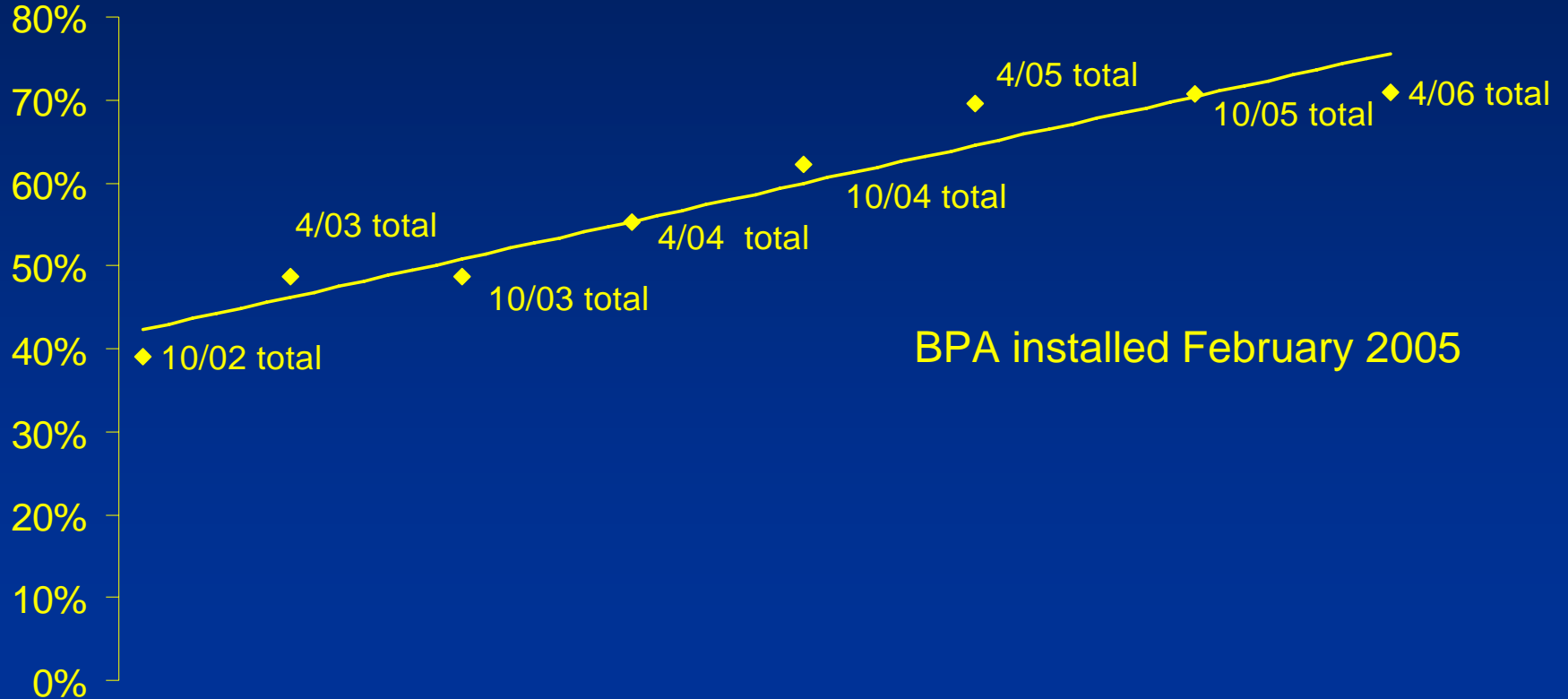


PPD Screening of HIV Patients Urban Horizons 15 Month Reports





RPR TESTING IN HIV PATIENTS ACROSS ALL IFH SITES

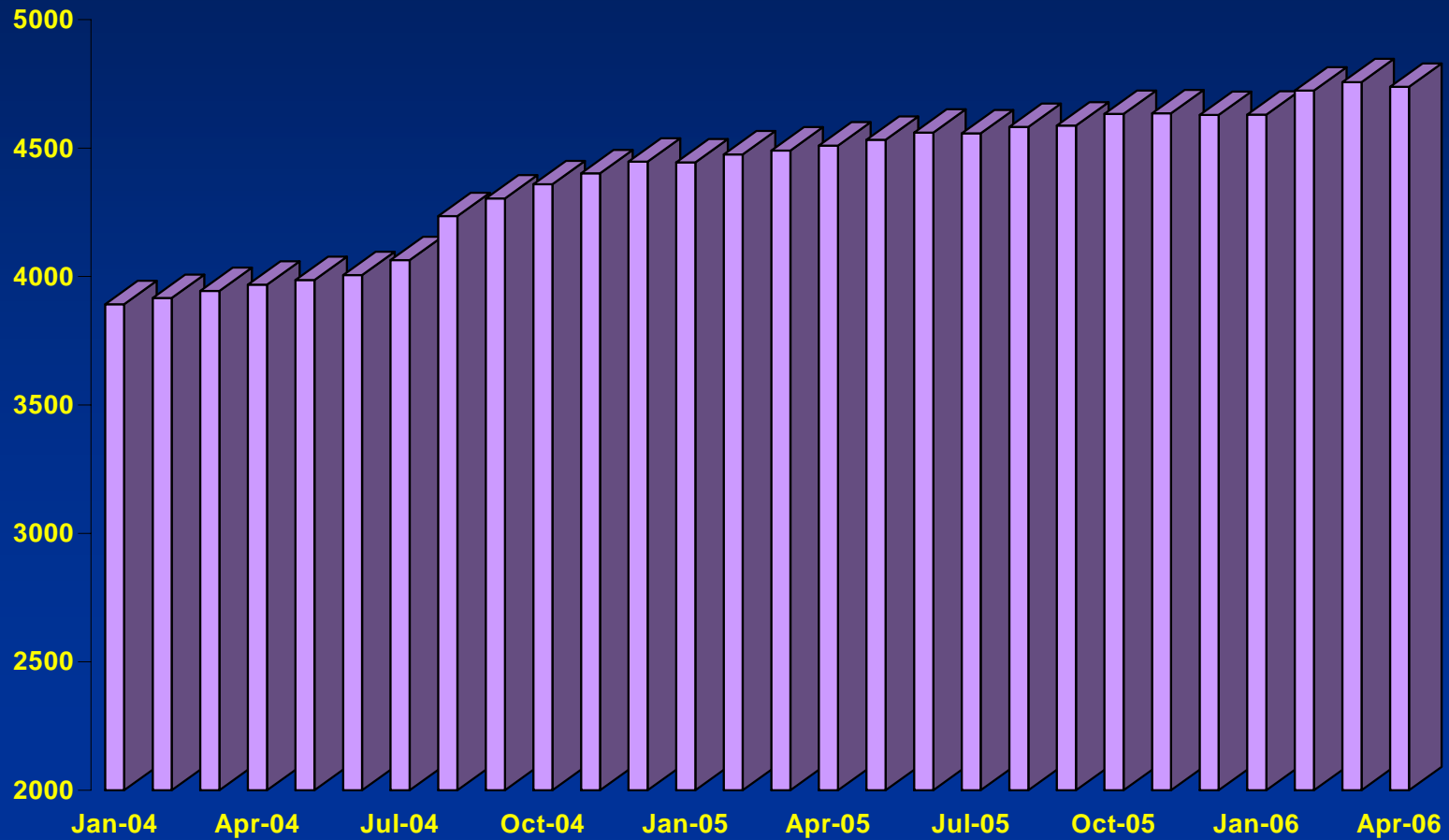


15 month blocks starting from 10/02 to 4/06



DIABETIC ROLLING 12 MONTH AVERAGE REPORTS

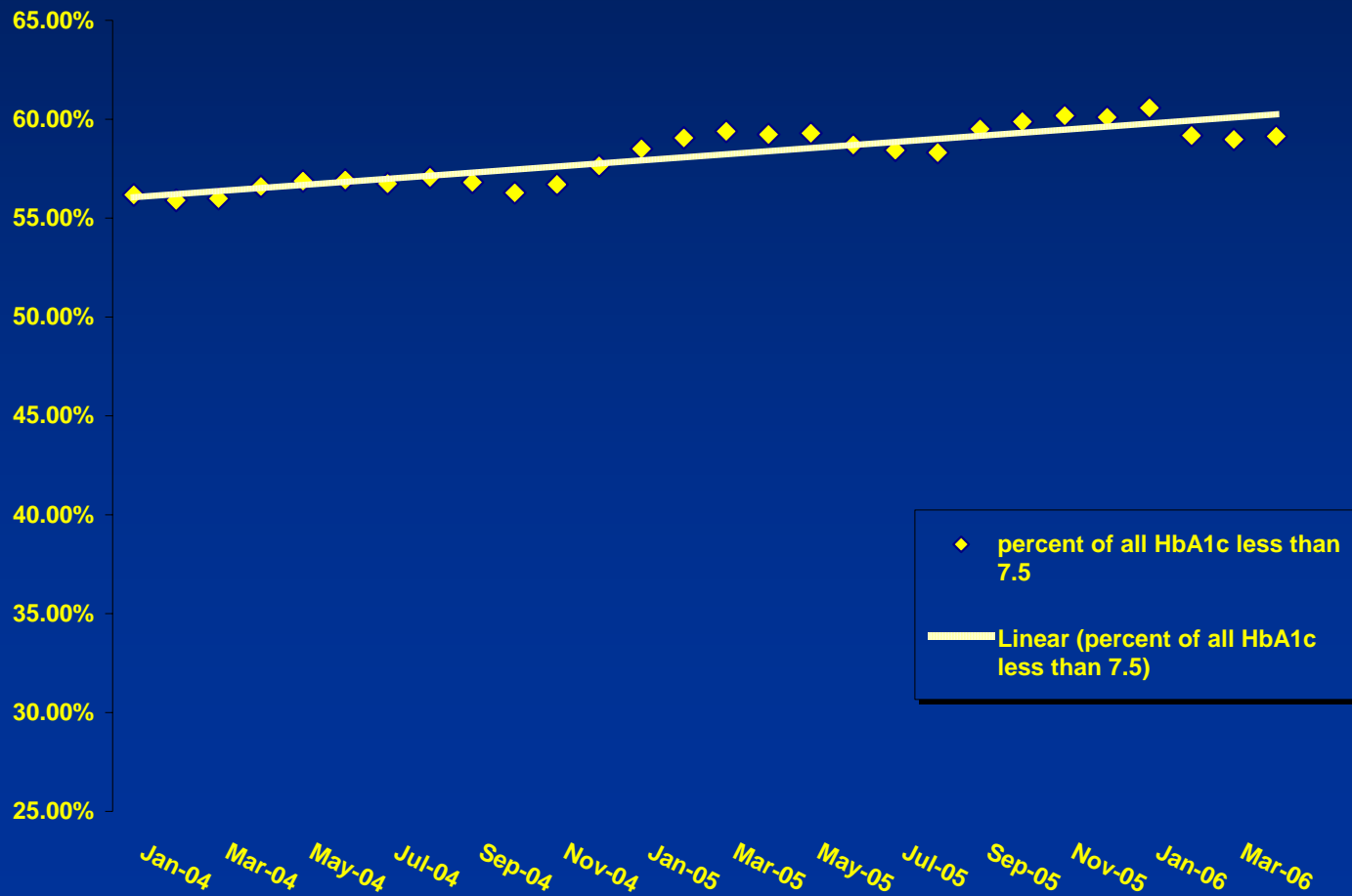
Number DM Patients in Registry



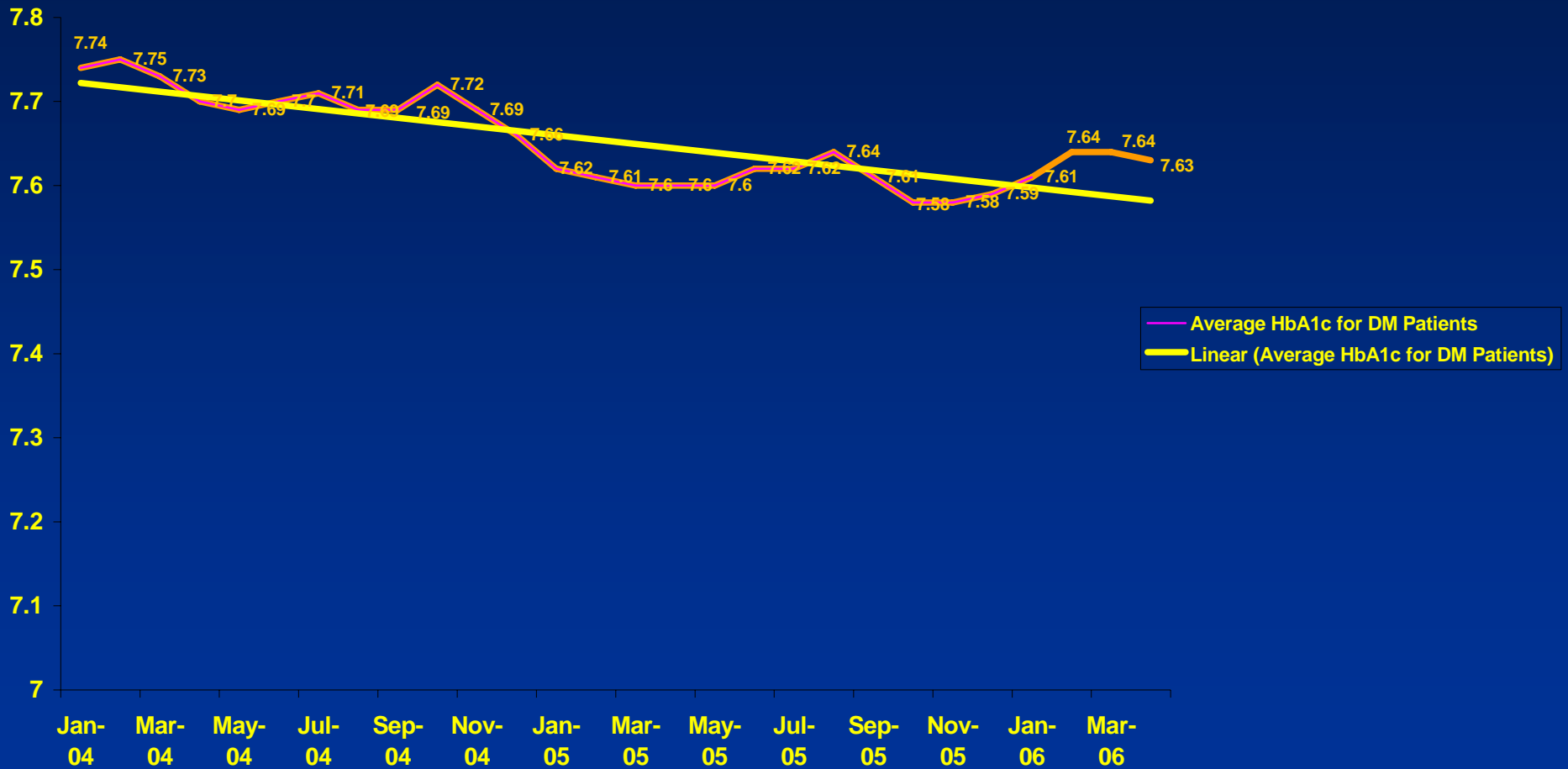


DIABETIC ROLLING 12 MONTH AVERAGE REPORTS

ROLLING 12 MONTH AVERAGE OF PERCENT OF HBA1C LESS THAN 7.5



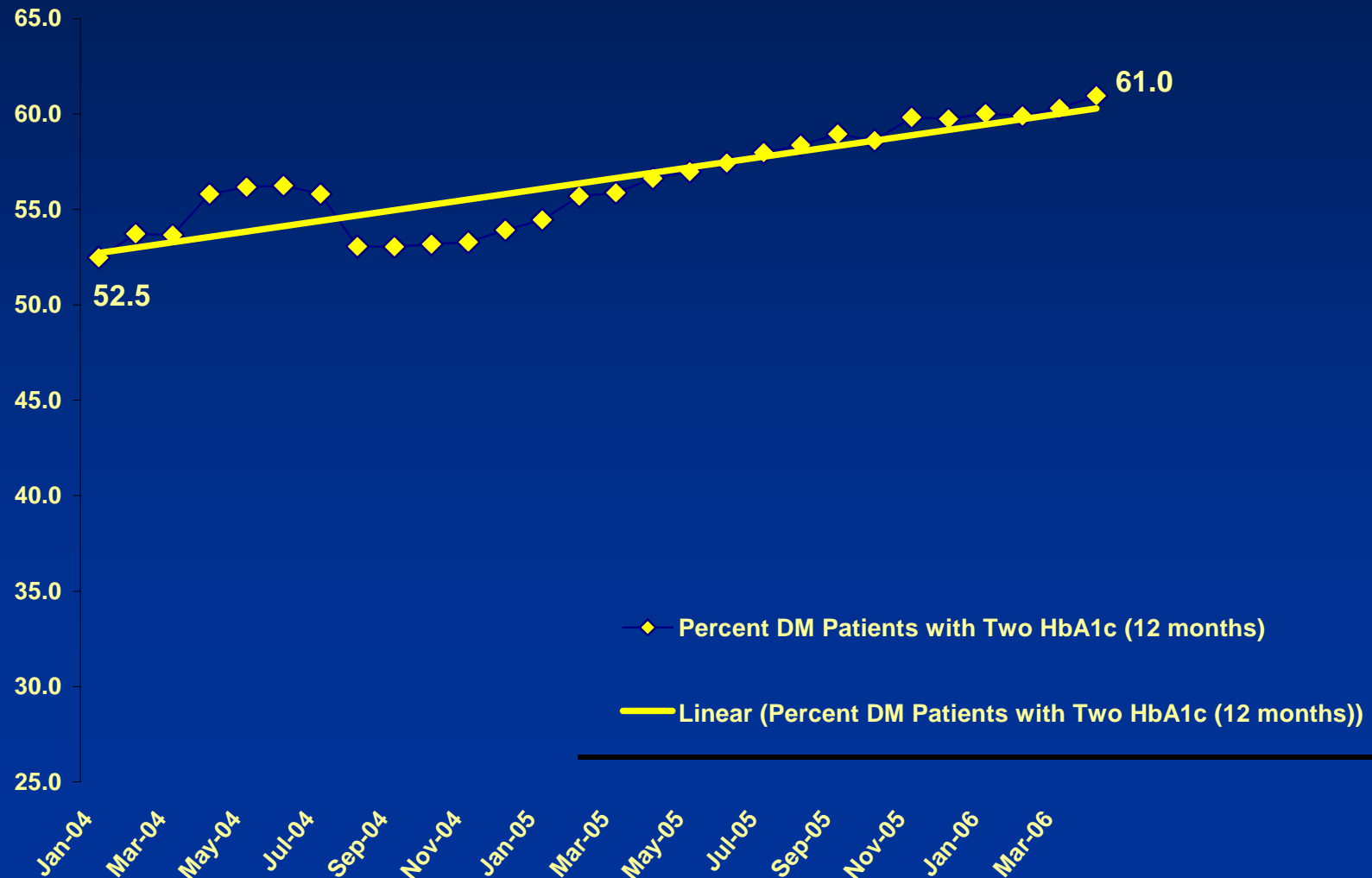
Average HbA1c for DM Patients





HEMOGLOBIN A1C TESTING RATES (TWO A1C)

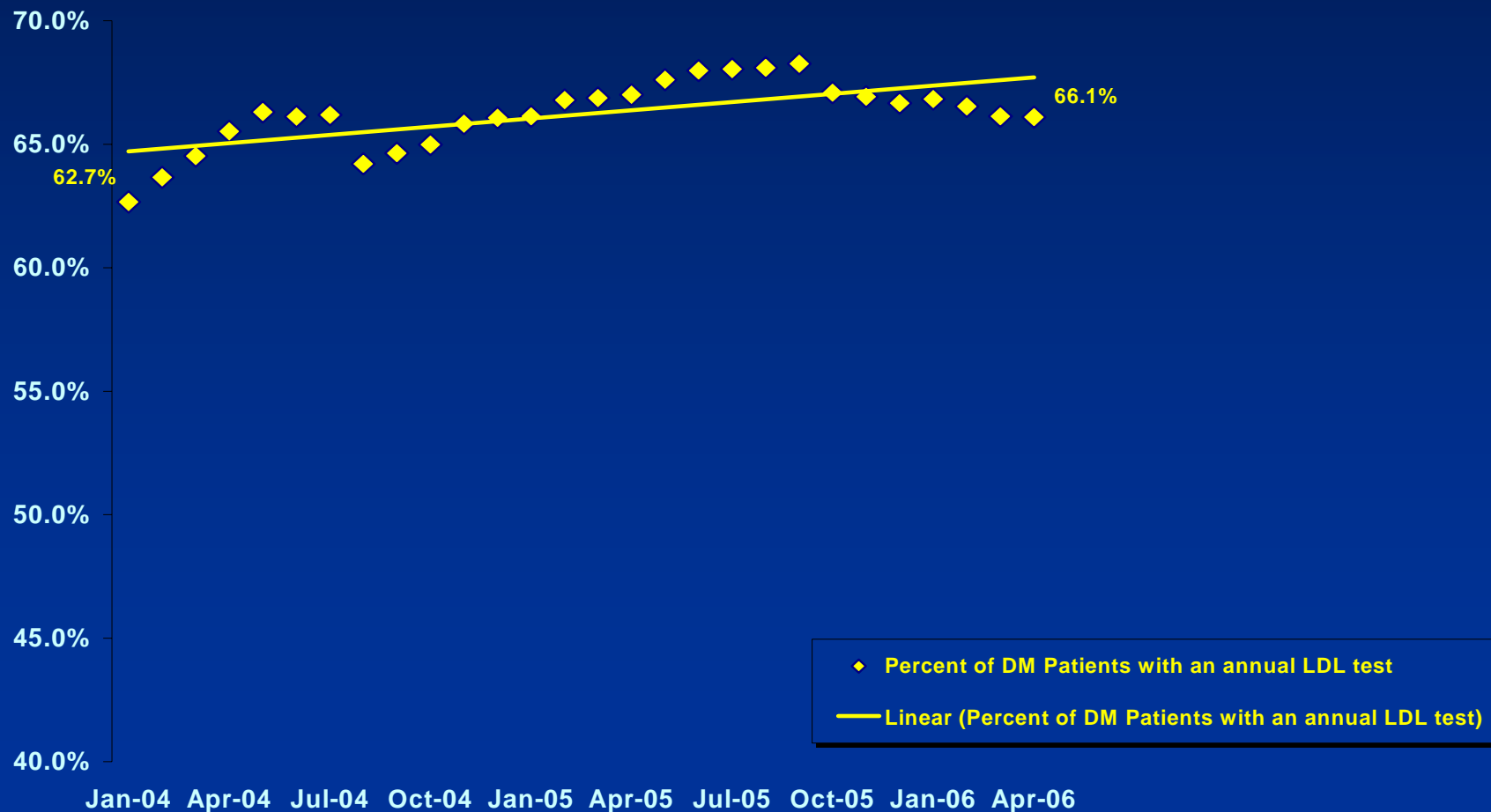
PERCENT OF DIABETICS WITH TWO HGBA1C IN 12 MONTHS





% OF DIABETIC PATIENTS WITH AN ANNUAL LDL TEST

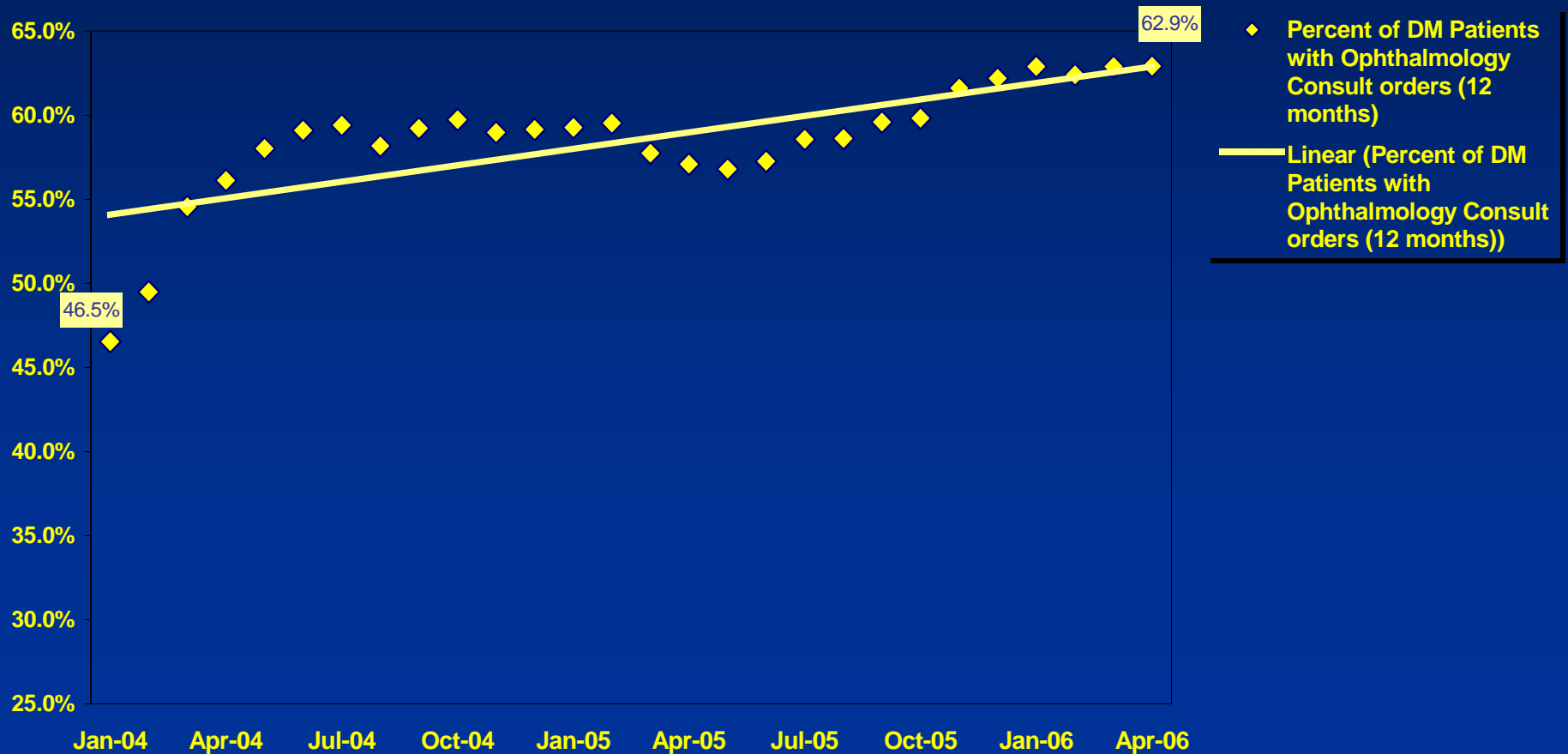
Percent of DM Patients with an Annual LDL Test





Percent of DM Patients with Ophthalmology Consult Orders

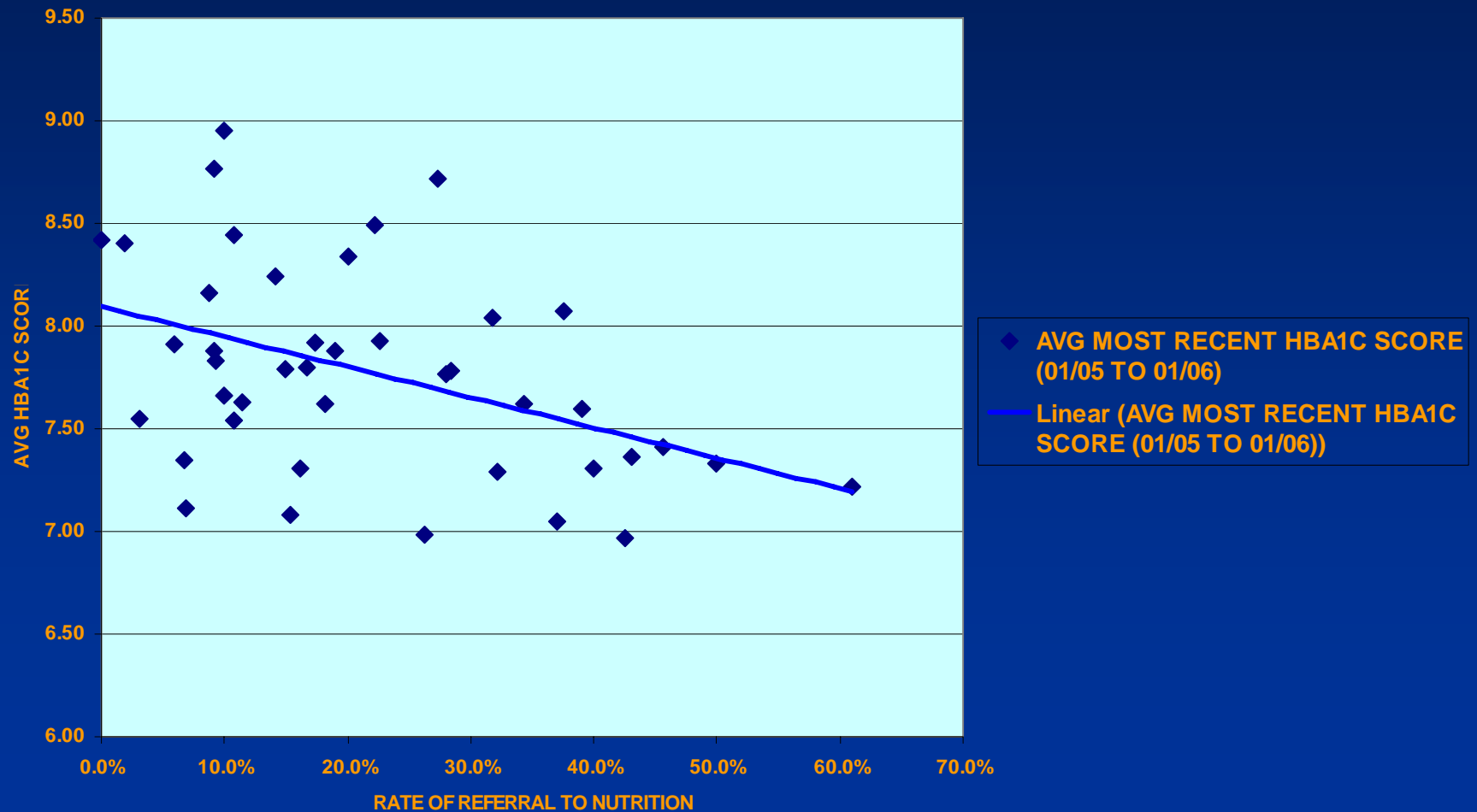
Percent of DM Patients with Ophthalmology Consult Orders (12 months)





LINEAR REGRESSION OF AVG HBA1c SCORE VS REFERRAL TO NUTRITION

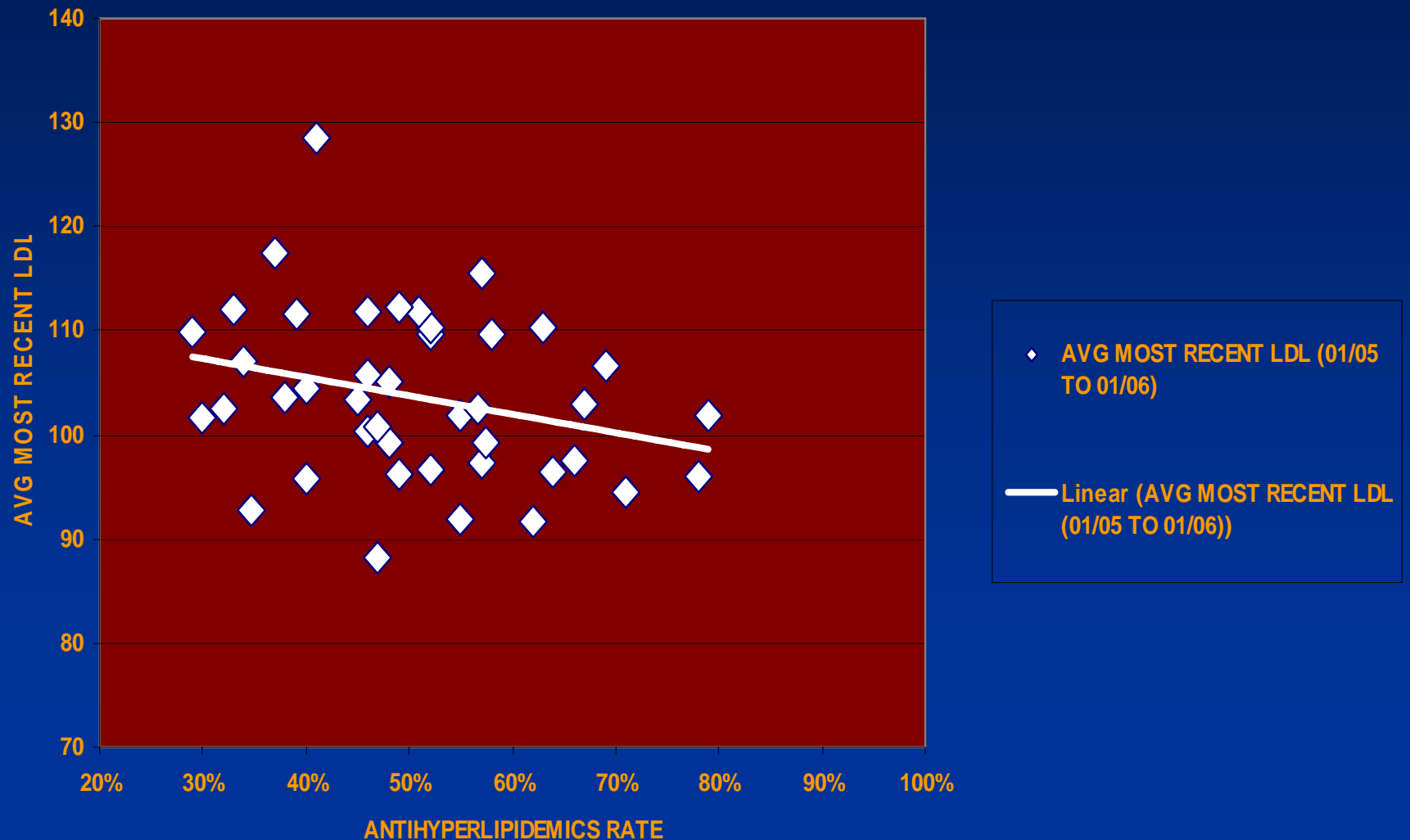
XY AVG MOST RECENT HBA1C SCORE VS REFERRAL TO NUTRITION





XY GRAPH OF MOST RECENT LDL IN DIABETICS AND PROVIDER SPECIFIC RATE OF UTILIZATION OF ANTIHYPERLIPIDEMICS

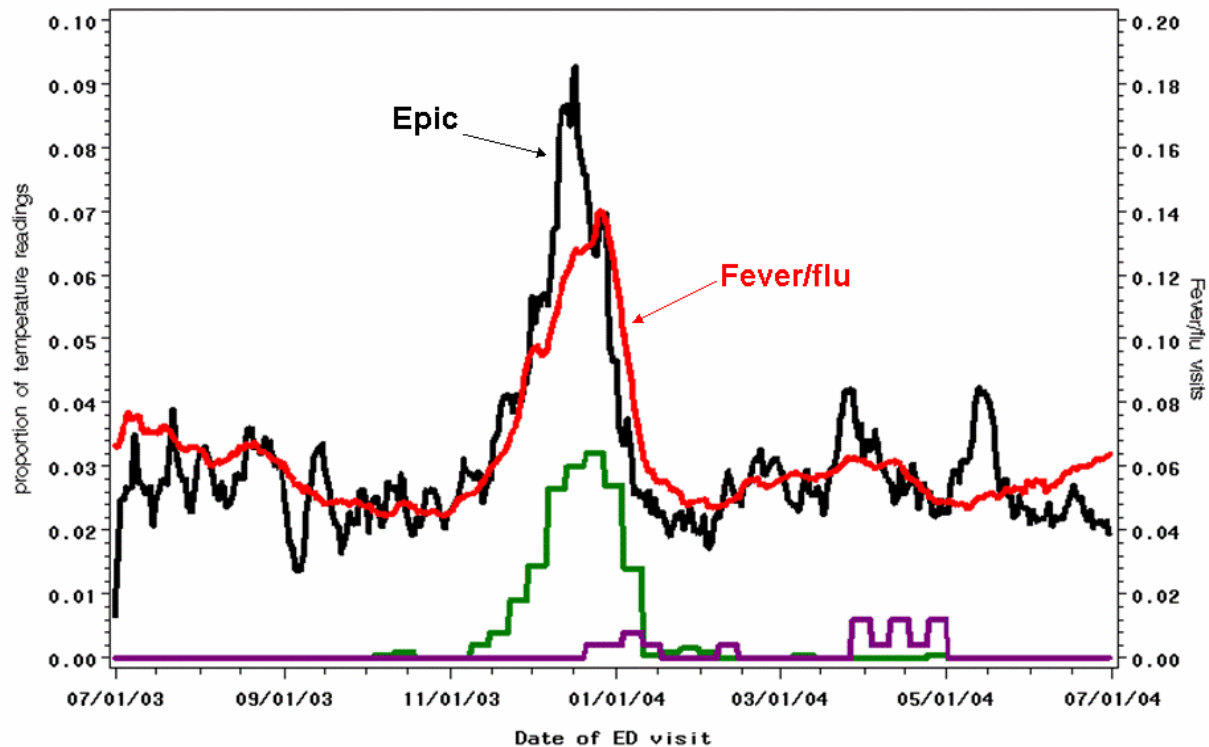
XY ANTIHYPERLIPIDEMICS RATE TO AVG MOST RECENT LDL



Syndromic Surveillance

Epic data: elevated temperatures (> 99.9) vs ED data: fever/flu

Calculated as running 7 day proportions
Flu A and Flu B isolate data at bottom





DIABETES BEST PRACTICE ALERT SCREENSHOT

EpicHyperspace - URBAN-FAM MED

Desktop Action Patient Care Scheduling Billing Referrals Reports Tools Admin Help

Back Forward Home Schedule In Basket Chart Encounter Tel Enc Quick Schedule Secure Print Log Out

Home Zz Test, Gigantor

Zz Test, Gigantor Age Sex DOB MRN Allergies PCP Alert INS
26 yea M 1/1/1980 1139639 No Known Allergies (None) HM, Aler (None)

Visit Navigator (3/7/2006 visit with KITSON) - Viewing

Images Questionnaires Benefits References SmartSets Open Orders Change PCP Print AYS Patient Files SmartForms

Epic **Allergies:** «Reviewed on 3/7/2006» No Known Allergies

ZZ TEST, GIGANTOR (1139639) Age: 26 Sex: M PCP: (No PCP) EMC #: NONE
BP: P: T: T Src: Resp: W: H:

Date Quit: Tobacco Types:
Comment:
Tobacco use last verified on encounter date: «Never verified»
Tobacco use verified in this encounter: No

BestPractice Alerts

1 of 2 **Perform RANDOM BLOOD SUGAR for diabetes - use SMARTSET**
Open SmartSet(s): [IN-HOUSE RANDOM GLUCOSE \[107\]](#)

2 of 2 **Pt in need of Ophthalmology Referral**
(No related orders found in patient record)
Open SmartSet(s): [DIABETIC OPHTHALMOLOGY REFERRAL \[147\]](#)

SmartSet(s):
[Open All SmartSet\(s\)](#)

Hotkey List
Exit Workspace

KWAME KITSON Encounters, Overdue Results 11:52 AM

Start Novell Gro... How to pri... My Comp... Mail From... Abstract ... EpicHyperspa... EpicHyperspa... 11:50 AM



DIABETES SMARTSET SCREENSHOT

Epic Hyperspace - URBAN-FAM MED

Desktop Action Patient Care Scheduling Billing Referrals Reports Tools Admin Help

Back Forward Home Schedule In Basket Chart Encounter Tel Enc Quick Schedule Secure Print Log Out

Home Zz Test, Gigantor

Zz Test, Gigantor Age Sex DOB MRN Allergies PCP Alert INS
26 yea M 1/1/1980 1139639 No Known Allergies (None) HM, Aler (None)

SmartSet - DIABETES

Association Primary Dx Edit Item Add to Favorites Pharmacy Questionnaire Health Maint Accept/Pend Accept/Sign Cancel

Documentation (update prob list, med list, and history section before use smartset)

- Please remember to FIRST start documentation in progress notes with .pti or .idl (multiple)
 - Prob Diabetes
 - Prob Hypertension
 - Prob cholesterol
 - Prob Arthritis
 - PROB Asthma
 - Prob GERD
- Orders (meds should be ordered from med list or order section, don't forget ASA!)
 - Labs (multiple)
 - DIABETIC F/U PANEL (IUFH) [P82947.001]
 - GLUCOSE, SERUM (NON-FASTING) [82947.002]
 - CREATININE: BLD [82565]
 - UREA NITRO: SERUM [84520]
 - HEPATIC FUNCTION PANEL [80076]
 - HGB: GLYCATED [83036]
 - LIPID PANEL [80061]
 - URINALYSIS, COMPLETE [81001]
 - MICROALB/CREAT RATIO, RANDM UR [82043.002]
 - Referrals (right click to enter clinical data and select provider if desired) (multiple)
 - CONSULT TO OPHTHALMOLOGY [9024]
 - CONSULT TO NUTRITION [9020]
 - CONSULT TO PODIATRY [9034]
 - Inhouse testing (multiple)

Authorizing Provider
KITSON, KWAME [45]
 Cosign for Procedures

SmartSet Notes
diabetes documentation and management

Legend
● Standing order
■ Future order

KWAME KITSON Encounters, Overdue Results 12:06 PM

Start Novell Group... My Computer Mail From: "T... Abstract For... EpicHyperspace ... EpicHyperspace ... 12:04 PM



DIABETES SMARTSET SCREENSHOT

EpicHyperspace - URBAN-FAM MED

Desktop Action Patient Care Scheduling Billing Referrals Reports Tools Admin Help

Back Forward Home Schedule In Basket Chart Encounter Tel Enc Quick Schedule Secure Print Log Out

Home Zz Test, Gigantor

Zz Test, Gigantor Age Sex DOB MRN Allergies PCP Alert INS
26 yea M 1/1/1980 1139639 No Known Allergies (None) HM, Aler (None)

Snapshot
Chart Review
Results Review
Flowsheets
Problem List
History
Letters
Demographics
Order Entry
Imm/Injections
Allergies
Medications
Visit Navigator
Select SmartSet
SmartSet - DIA...

SmartSet - DIABETES

Association Primary Dx Edit Item Add to Favorites Pharmacy Questionnaire Health Maint Accept/Pend Accept/Sign Cancel

- URINE DIP W/O MICRO IN HOUSE [81002.INH]
- ECG-ROUTINE W/12 LEADS; W/INTERPT & REPORT [93000]
- procedures (multiple)
 - Monofilament testing feet
- Diagnosis
 - Diabetes (multiple)
 - DIABETES MELLITUS TYPE II-UNCOMPL [250.00]
 - DIABETES MELLITUS TYPE II UNCONTR UNCOMPL [250.02]
 - Other (multiple)
 - BENIGN HYPERTENSION(aka HTN) [401.1]
 - GEN OSTEoARTHROS-HAND(aka OSTEoARTHROS) [715.04]
 - HYPERLIPIDEMIA NEC/NOS [272.4]
- Level of Service
 - los (single)
 - OFFIC/OUTPT VISIT E&M EST SELF-LIMIT/MINOR 10MIN [99212]
 - OFFIC/OUTPT VISIT E&M EST LOW-MOD SEVERITY 15MIN [99213]
 - OFFIC/OUTPT VISIT E&M EST MOD-HI SEVERITY 25 MIN [99214]
- Patient Instructions
 - Self Management (multiple)
 - Self Managment Tool for behavior change
 - Green Light, Yellow Light, Red Light for Diabetes
 - Dietary (multiple)
 - DIABETES FOOD MANAGEMENT [10326]
 - Home Monitoring (multiple)

Authorizing Provider
KITSON, KWAME [45]
 Cosign for Procedures

SmartSet Notes
diabetes documentation and management

Legend
● Standing order
■ Future order

KWAME KITSON Encounters, Overdue Results 12:09 PM

Start Novell GroupWis... Desktop Mail From: "Tim ... EpicHyperspace - U... EpicHyperspace - W... 12:07 PM



DIABETES SELF MANAGEMENT TOOL SCREENSHOT

EpicHyperspace - Additional Patient Instructions - Zz Test, Gigantor

Desktop Ac abc ↩ ↶ .? my + ↵ ↶ ↷ ↸

Back Home

Zz Test

Snapshot

Chart Review

Results Review

Flowsheets

Problem List

History

Letters

Demographic

Order Entry

Imm/Injection

Allergies

Medications

Visit Navigator

Close Encour

Select SmartS

SmartSet -

Green Zone: Great Control.
HbA1c is under 7%.
Blood sugars two hours after meals no higher than 165.
Fasting (before breakfast) blood sugars between 80 and 120

Green Zone Means:· Your blood sugars are under control· Continue taking your medications as ordered·
Continue routine blood glucose monitoring·
Follow healthy eating habits·
Keep all physician appointments

=====
Yellow Zone: Caution·
HbA1c between 7 and 9%.
Average blood sugar between 150-210·
Most fasting blood glucose under 200% Work closely with your health care team if you are going into the YELLOW zone

Yellow Zone Means:·Your blood sugar may indicate that you need

1. an adjustment of your medications·
- 2.Improve your eating habits·
- 3.Increase your activity level

Call No primary provider on file., your nurse, or your nutritionist if changes in your activity level or eating habits don't decrease your fasting blood sugar levels.

Name Nurse:*** Number:*** ***-***

Press F3 key to enlarge form

Home BP Monitoring Recommendation

Future order

Accept Cancel

Hotkey List

Exit Workspace

KWAME KITSON Addendum Notification, Encounters, Overdue Results 1:07 PM

Start EpicHyperspace - URBAN-FA... Novell GroupWise - Mailbox 1:05 PM



ELECTRONIC PATIENT OUTREACH

- 2.0 FTE Outreach/CQI support personnel
- Initially funded by the great gains received from managed care pay for performance incentives
- Now also funded in part by grants for various projects.



ELECTRONIC PATIENT OUTREACH

- Telephonic and Mail Outreach are done to 20,000 plus patients per year.

TYPES OF OUTREACH

- Targeted outreach based on internal reporting data.
- Outreach based on mid-year QARR eligible reports
- Outreach to patients assigned to our practices that have never accessed care.
- Outreach to patients who are no-shows for their specialty appointments/procedures.



ELECTRONIC PATIENT OUTREACH

Major new grant funded CQI outreach effort in 2008 will involve utilizing risk scores for various types of cancer and targeting cancer screening outreach on a risk adjusted basis.

	LAST_VISIT_DATE	AGE	AGE_SCORE	LAST_TOBAC	tobacco score	BMI	BMI_SCORE	ALCOHOL_OZ_PER_WEEK	ALCOHOL_SCORE	_SCORE
zzzzzz11	8/13/2007	79	6	Quit	1	31.74	2	4.9	1	10
zzzzzz12	8/6/2007	81	6	Quit	1	32.05	2	1.5 - 2	1	10



CQI BEYOND ELECTRONIC DECISION SUPPORT

- Clinical measures reach nadir point.
- CQI efforts now refocused on clinical and operational areas that impact patient care.
- Overall goal = Total Quality Management by getting all functional areas and clinical sites involved in local active CQI
- “Back To The Basics” – Re-examining workflow processes.



CQI BEYOND ELECTRONIC DECISION SUPPORT

