Electronic Health Record Strategies for Pay for Performance

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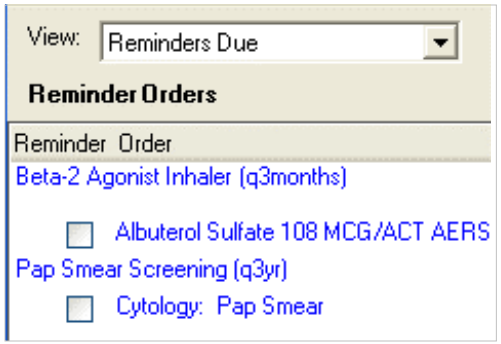


James O'Connor MD
Director of Clinical Informatics

Early Days of EMR…

Access to Records

E&M Coding

Template-based documentation

Electronic Prescribing

EMR Dream has grown up!

Value of EHR in Physician's Practice

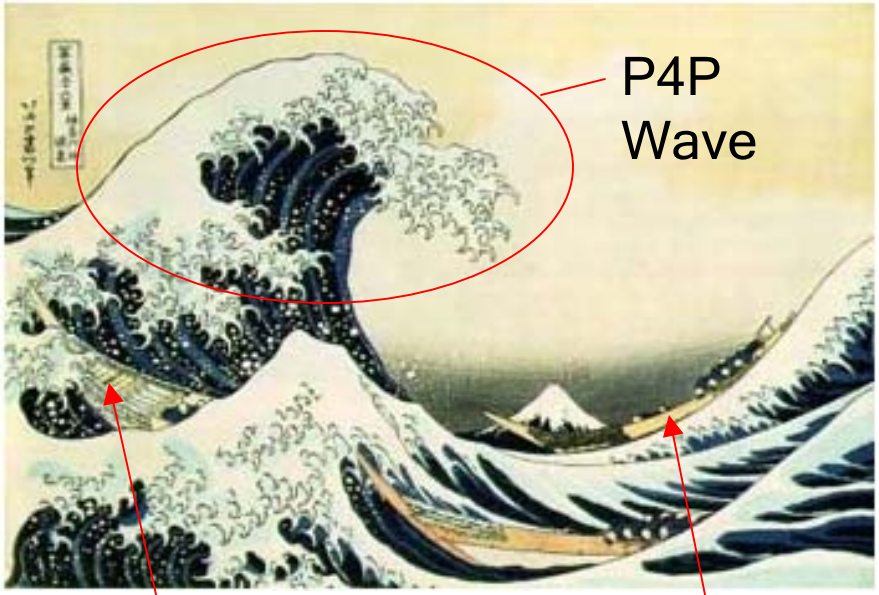
- Multi-year study of Physician Practices with EHR showed*:
  - Systems were completely paid for including hardware and training costs in 2.5 years
  - Each physician following the initial period of capital investment recovery earned on average $23,000 per year after all maintenance costs.
  - Savings achieved by revenue increase (reduced undercoding of E&M service levels) and efficiency benefits (less transcription costs and less medical record staff)
- Single Practice Study showed $30k reduction in transcription costs in the first 8 months of EHR use§
  - Only *3 of 6* orthopedic surgeons using template documentation.
  - Many practices achieve 80 to 90% transcription saving after full implementation.

**HEALTH AFFAIRS ~ 2005 Volume 24 , #5*

§Sports Med Arthosc Review ~2004;12:238-45

Pay for Performance: the next challenge for EHR systems

Do you want to be....



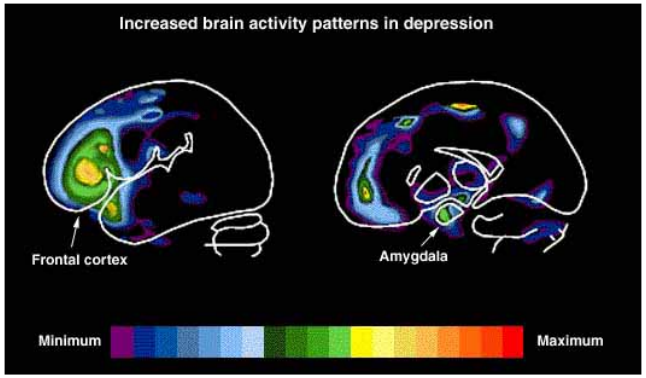
- Pay for Performance (P4P) represents a sea change in how physicians will be reimbursed.
  - This will be at least as significant as introduction of E&M documentation standards in 1985.
  - Concept is straight forward on the surface: Increased compensation is given to physicians who either report quality data and/or show that they meet pre-defined standards.
- The EHR is the main tool for successful capture of the clinical data needed for this type of reporting.
  - Unless the clinical data is captured at the point of care, the burden of retrospectively collecting it would deeply cut into any financial gains.
  - *The right EHR system will allow a practice to establish a workflow which assists the physicians in providing efficient patient care while capturing quality data as a byproduct of patient visits.*

Key for Success

Performance Measures: Examples

- Asthma/Respiratory Illness
  - Asthma: Assessment
  - Asthma: Pharmacologic therapy
  - Appropriate treatment for children with upper respiratory infection
  - Appropriate testing for children with pharyngitis

- Behavioral Health/Depression
  - Optimal practitioner contacts for medication management
  - Effective acute phase treatment
  - Effective continuation phase treatment



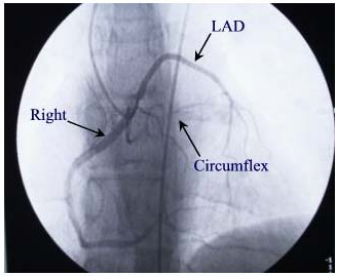
Performance Measures: Examples

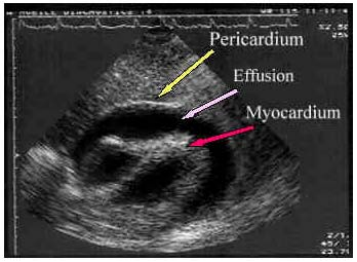
- Diabetes
  - HbA1c Management
  - Foot Exam
  - Microalbuminuria test
- Coronary Artery Disease
  - Symptoms and Activity
  - Lipid Monitoring and Treatment
  - Anti-platelet therapy
- Heart Failure
  - Left ventricular function (LVF) assessment
  - Assessment of symptoms/signs of fluid overload
  - Warfarin therapy for patients with atrial fibrillation

Diabetes Epidemic Could Claim 622,000 Lives Annually by 2025

Changing diabetes program to stimulate system-wide change to combat disease

Nov. 9, 2005 - A new report released today by the Yale Schools of Public Health and Medicine in conjunction with the Institute for Alternative Futures reveals that if the healthcare system in the United States continues to fail in adequately preventing and treating diabetes, by the year 2025 the number of people dying and suffering from diabetes and its complications will roughly triple.





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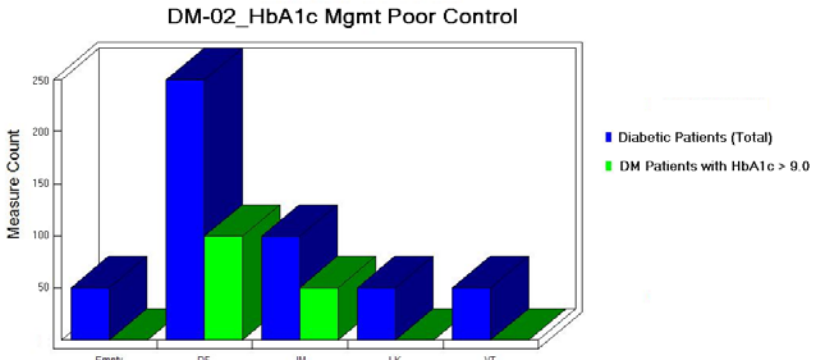
Getting from Performance Measure to P4P Reporting

Physician Consortium for Performance Improvement
Adult Diabetes Core Physician Performance Measurement Set[a]

	Clinical Recommendations/ Treatment Goals	Clinical Performance Measures Per Reporting Year	
A1c Management	A glycosylated hemoglobin (A1c) is recommended during an initial assessment and during follow-up assessments.[9,11] (Level-E Evidence)[11] *Treatment Goals:* AACE/ACE: A1c ≤ 6.5%[9] ADA: A1c ≤ 7%[11]	Percentage of patients who received one or more A1c test(s) **Numerator** = Patients who received one or more A1c test(s) **Denominator** = All patients diagnosed with diabetes	
		Per Patient: Number of A1c tests received Trend of A1c values	*Per Patient Population:* Percentage of patients who received one or more A1c test(s) Distribution of number of tests done (0, 1, 2, 3 or more) Distribution of most recent A1c value by range: <6.0%, 6.0-6.9%, 7.0-7.9%, 8.0-8.9%, 9.0-9.9%, ≥10%, undocumented
Lipid Management	A fasting lipid profile is recommended during an initial assessment and during follow-up assessments.[10,11] (Level-E Evidence)[11] *Treatment Goals:* NCEP[2b]: Total cholesterol <200 mg/dl LDL cholesterol <100 mg/dl Triglycerides <150 mg/dl	Percentage of patients who received at least one lipid profile (or ALL component tests) **Numerator** = Patients who received at least one lipid profile (or ALL component tests) **Denominator** = All patients diagnosed with diabetes	
		Per Patient: Trend of values for each test	*Per Patient Population:* Percentage of patients who received at least one lipid profile (or ALL component tests) Distribution of most recent test values by range (mg/dl): Total cholesterol: ≥240, 200-239, <200, undocumented LDL cholesterol[b]: ≥160, 130-159, 100-129, <100, undocumented HDL cholesterol: <40, 40-49, 50-59, ≥60, undocumented Triglycerides: ≥400, 200-399, <200, 150-199, <150, undocumented

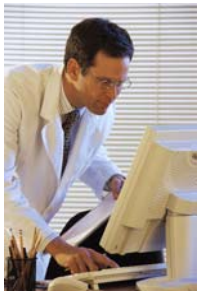
Performance Measure for Diabetes

Patient Care via EHR System



P4P Report on HbA1c Outcomes

From Performance Measure to P4P Reporting: Needs Right EHR and Planning (Not Magic and Hope)

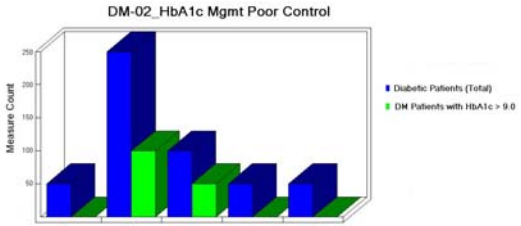


Care Guidelines: Primary Care and Adult Medicine

Pri	Reminder	Frequency	Status
2	Asthma Symptom Monitoring--general	q3months	Overdue
2	Recent ER Visit	q3months	Overdue
2	Asthma Action Plan	q3months	Overdue
2	Asthma Symptom Monitoring--nocturnal	q3months	Due
2	Physical Tolerance Decreased	q3months	Due
2	Beta-2 Agonist Inhaler	q3months	Due
2	Problem Drinking Screening	q2yr	Due
2	Pap Smear Screening	q3yr	Due
2	Depression Screening	qyear	Due

Efficient and Informative Patient Care

Patient Care via EHR System



Structured Clinical Data as byproduct of Patient Visits

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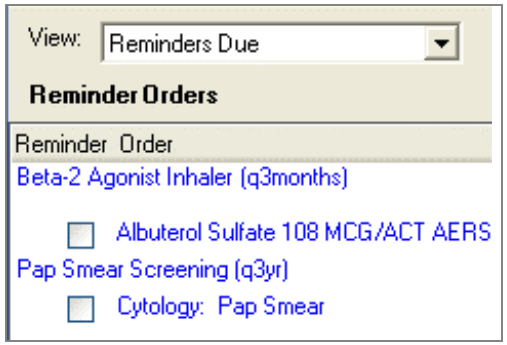
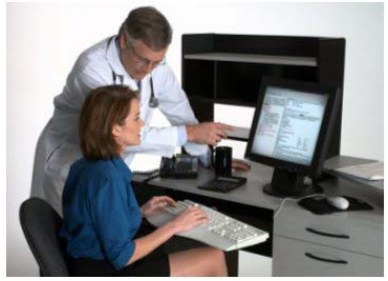
EHR Health Management Guidelines: View from the Clinic…





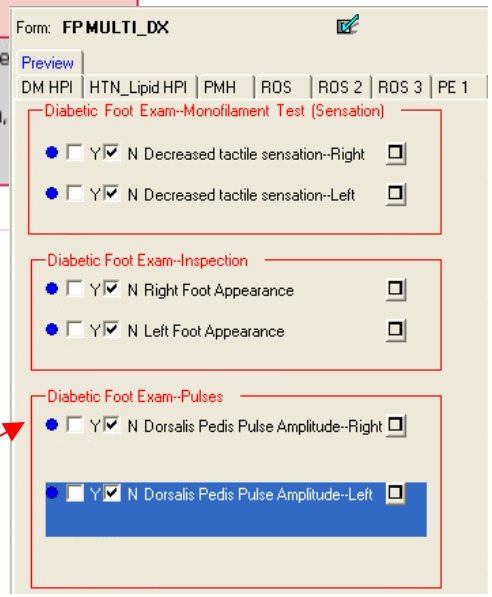
Intergy EHR Health Management: Innovation in Disease Management

Physician Consortium for Performance Improvement
Adult Diabetes Core Physician Performance Measurement Set[a]

	Clinical Recommendations/ Treatment Goals	Clinical Performance Measures Per Reporting Year
Foot Examination *Denominator Exclusion:* Patients with bilateral foot amputation	A foot exam—visual inspection, sensory exam, and pulse exam—is recommended during an initial assessment and during follow-up assessments.[9,14]	Percentage of patients who received at least one complete foot exam (visual inspe sensory exam with monofilament, and pulse exam) **Numerator** = Patients who received at least one complete foot exam (visual inspection, exam with monofilament, and pulse exam) **Denominator** = All patients diagnosed with diabetes

Diabetic Standard in iEHR guideline

data capture via Form



Care Guidelines: Primary Care and Adult Medicine

Pri	Reminder	Frequency	Status
Diabetes (8 items)			
2	Foot Exam	q3months	**Overdue**
2	Aspirin Use	daily	Due
2	Assess Tobacco Use	q2yr	Due
2	Blood Pressure Measurement	q3months	Due
2	Eye Exam by Ophthalmologist	qyear	Due
2	Hemoglobin A1c	q3months	Due
2	Lipid Panel	q3months	Due
2	Urine Protein Screening (microalbumin)	qyear	Due

P4P Rprt

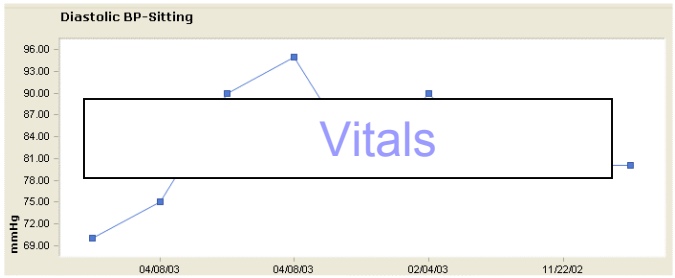
Diabetic Foot Exam
Study period: 10/01/2004 - 09/30/2005

Sum:Diabetics	1866
Sum:Diabetics_foot exam	1645
Percent_Diabetics_foot exam	88.2%

EHR: Capture of Structured Data

Active Medications	Dosage	Days Left	Issued
Hydrochlorothiazide 25 MG TABS	qd 30 days, 2 refills	90 Days Left	04/08/03
Lipitor 20 MG TA			04/08/03
Metformin HCl 50			04/08/03

Medications



Vitals

Lab Tests	Description	Status
04/07/03	Cholesterol, Total	Abnormal
04/07/03	GLUCOSE, PLASMA	
04/07/03	Electrol	
04/07/03	THYRC	
04/07/03	RPR (MONITOR) W/ REFL TITER	
01/28/03	ELECTROLYTE PANEL	

Labs

REASON FOR VISIT

Unspecified reason for visit hyperlipidemia. Reason for visit dizziness.
Reason for visit congestive heart failure.
Reason for visit upper respiratory infection.

HISTORY OF PRESENT ILLN

Steven Carlson is a 69 year old male.
° No headache. ° No worsening vision. ...pnea. ° No polyphagia. ° No changes in urinary habits. ° No polydypsia and no feelings of weaknes... ...numbness not of the limbs. ° No sleep disturbances.

Encounter Documentation

PERSONAL HISTORY

Habits: A recent examination by an ophthalmologist but not by a podiatrist.

ALLERGIES

• Penicillins Reaction: Skin Rashes/Hives Confirmed: 04/08/2003.

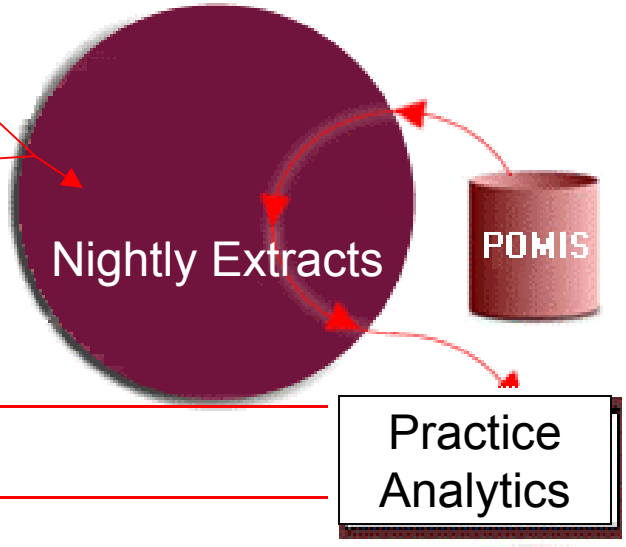
Making Sense of Clinical Data: Analysis Repository

Medications

Labs

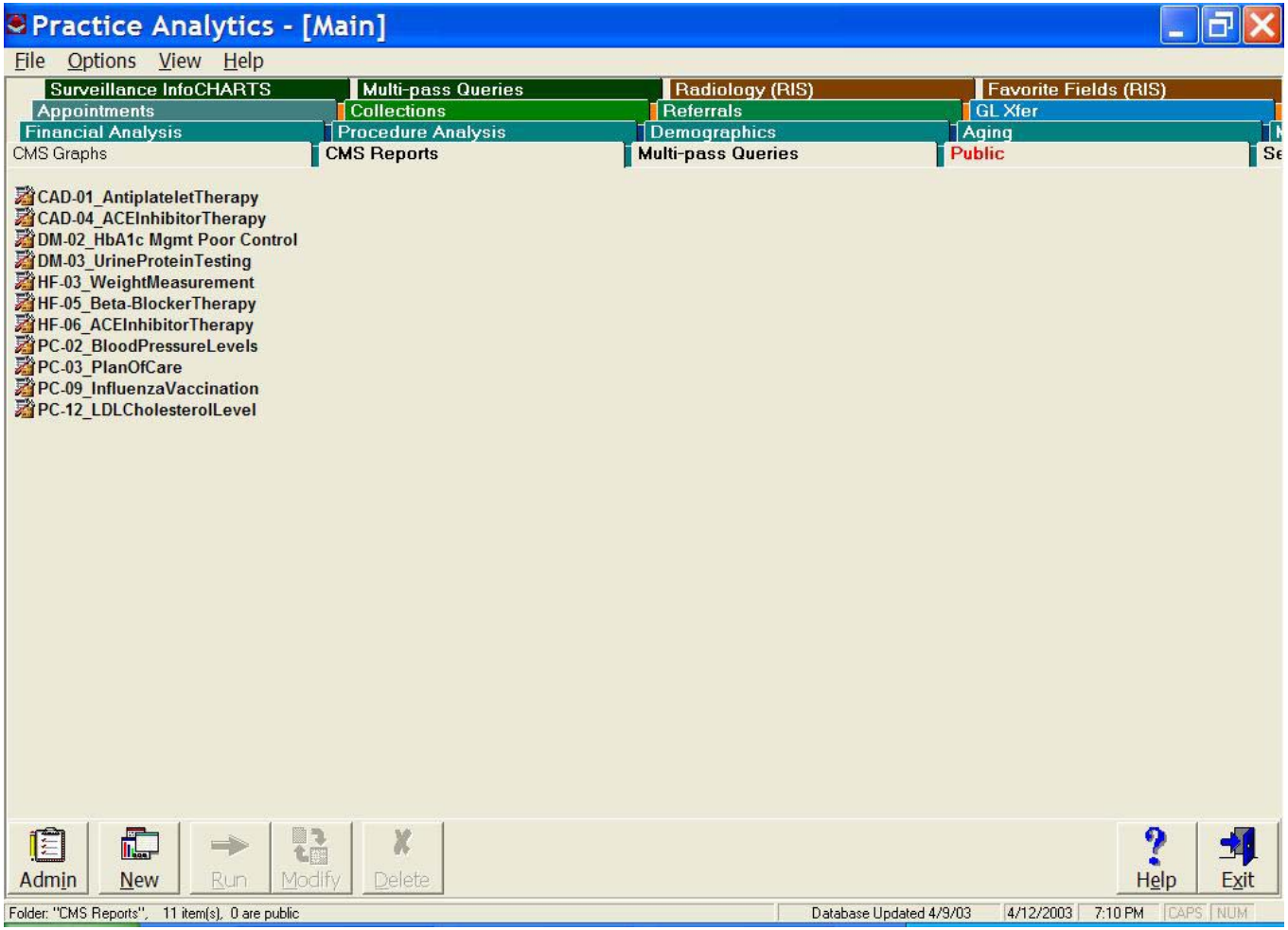
Vitals

Encounter Documentation

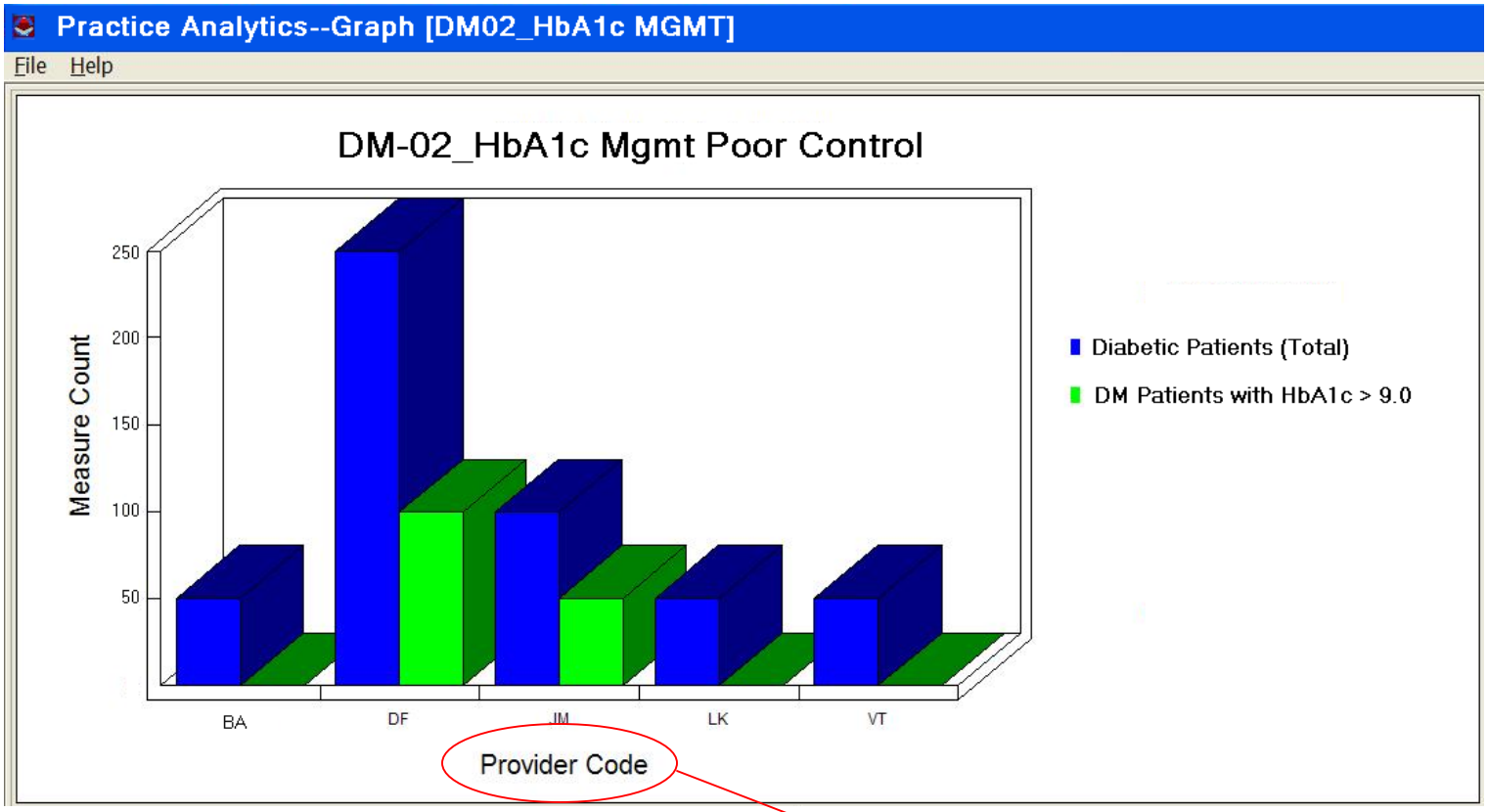


Clinical Intelligence & Outcomes

Practice Analytics: Pre-positioned reports plus ability to create custom queries

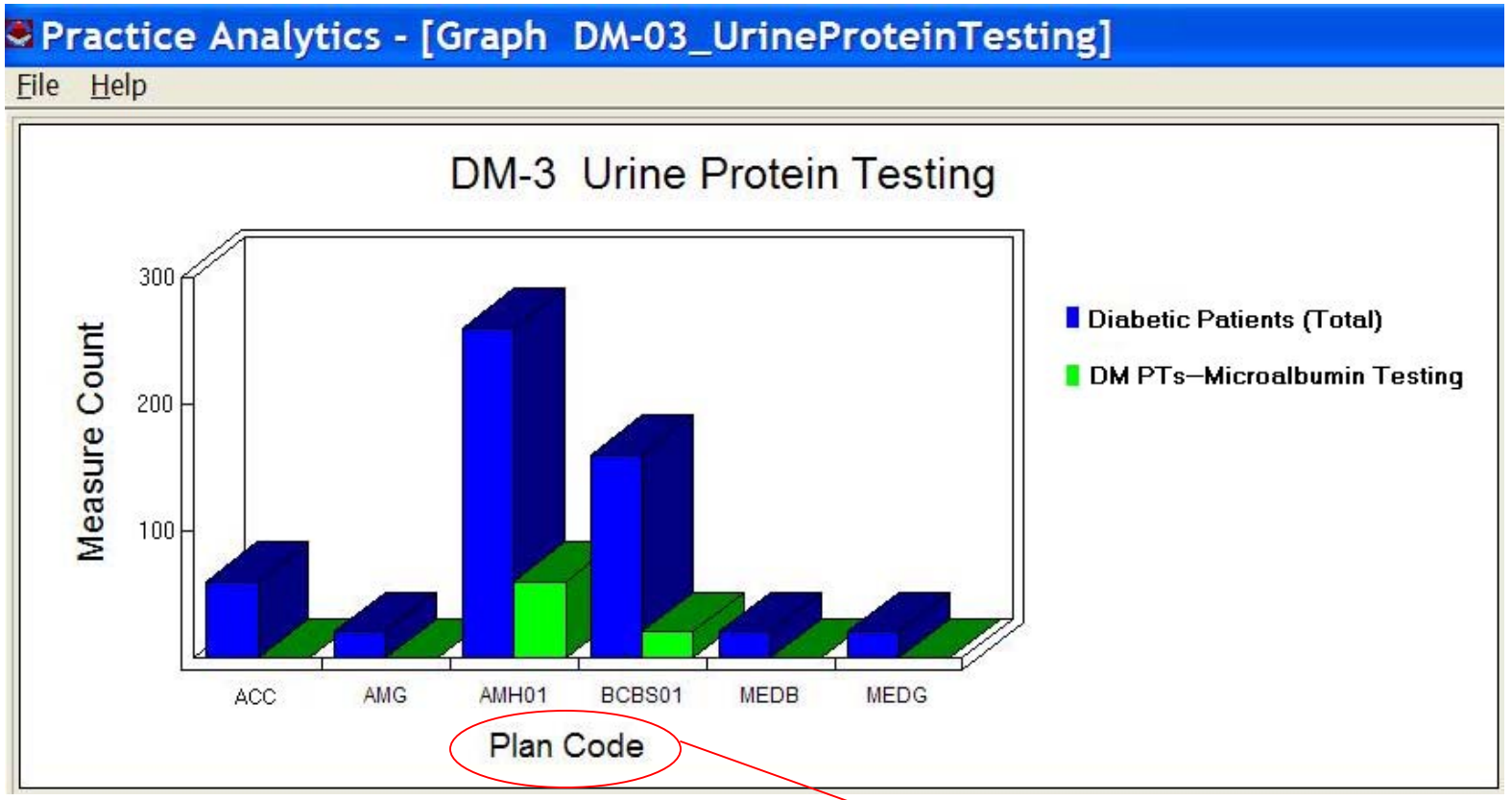


Example: HbA1c Management Graph



Results shown by Physicians

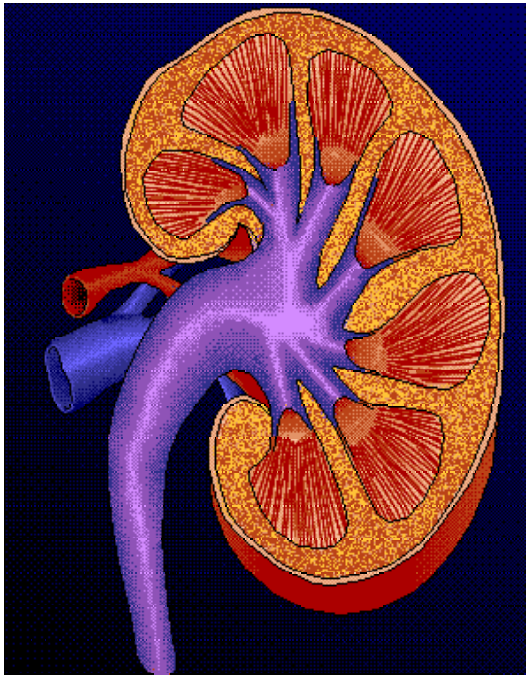
Example: Diabetic Urine Protein Testing



Results shown by Insurers

Quality Data Reporting: Nephrology Example

Used with Permission from:
David Simon, MD
Medical Director
Metabolism Associates
New Haven, Connecticut



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Quality Data Reporting: Nephrology Example

The Treatment of End-stage Renal Disease (Dialysis/Transplantation) Is an Enormous Burden on the U.S. Health Care System

End Stage Renal Disease: Scope of the Problem

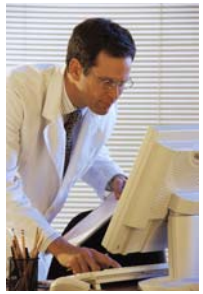
Medicare spending alone on ESRD care for exceeds 12 billion dollars annually.

Focus has shifted to patients with pre-dialysis chronic kidney in order to decrease progression to ESRD

Nephrology: a focus of CMS Quality Measures

- "The ESRD program has a long history of concern for quality of care. Medicare, the National Institutes of Health, the National Kidney Foundation, the American Society of Nephrology, the Renal Physicians Association and others have actively participated in efforts to develop data systems that support the measurement and improvement of quality.
- The history of quality improvement efforts, the availability of data systems and quality standards, and consensus on opportunities for quality improvement combine to make ***ESRD a good candidate for possible P4P initiatives***. ***ESRD is, in fact, the focus of a CMS Break-through Initiative in the area of quality."***

Capture of Clinical Data: Byproduct of Patient Visits



Care Guidelines: Nephrology Clinical Guidelines

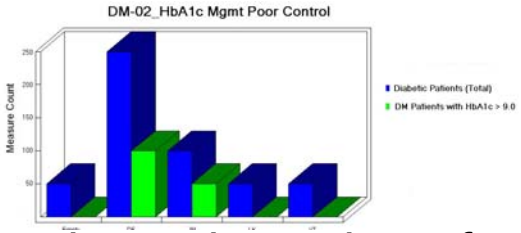
Show Guidelines | Work Pane | Due Only

Pri	Reminder	Frequency	Status	Guideline	Recommended	Last Recorded	Comments
2	Hemoglobin A1c	q3months	**Overdue**	Diabetes Control	06/01/2002	03/03/2002	Ordered
2	Hemoglobin	monthly	Due	Epogen Management			
2	Nutritional Assessment	q3months	Due	Nutritional Management			
2	Serum Potassium	weekly	Due	Potassium Management			
2	Serum Calcium	monthly	Due	Calcium Management			
2	Blood Pressure Measurement	q3months	Current	Blood Pressure Control	11/06/2004	08/08/2004	
2	Assessment of Symptom of Chest Pain	q3months	Current	Coronary Artery Disease Screening	10/27/2005	07/29/2005	

EHR: Efficient and Informative Patient Care

Structured Data Stored in EHR System

Extraction into Data Mining Repository



Quality Data Reporting as byproduct of Patient Visits

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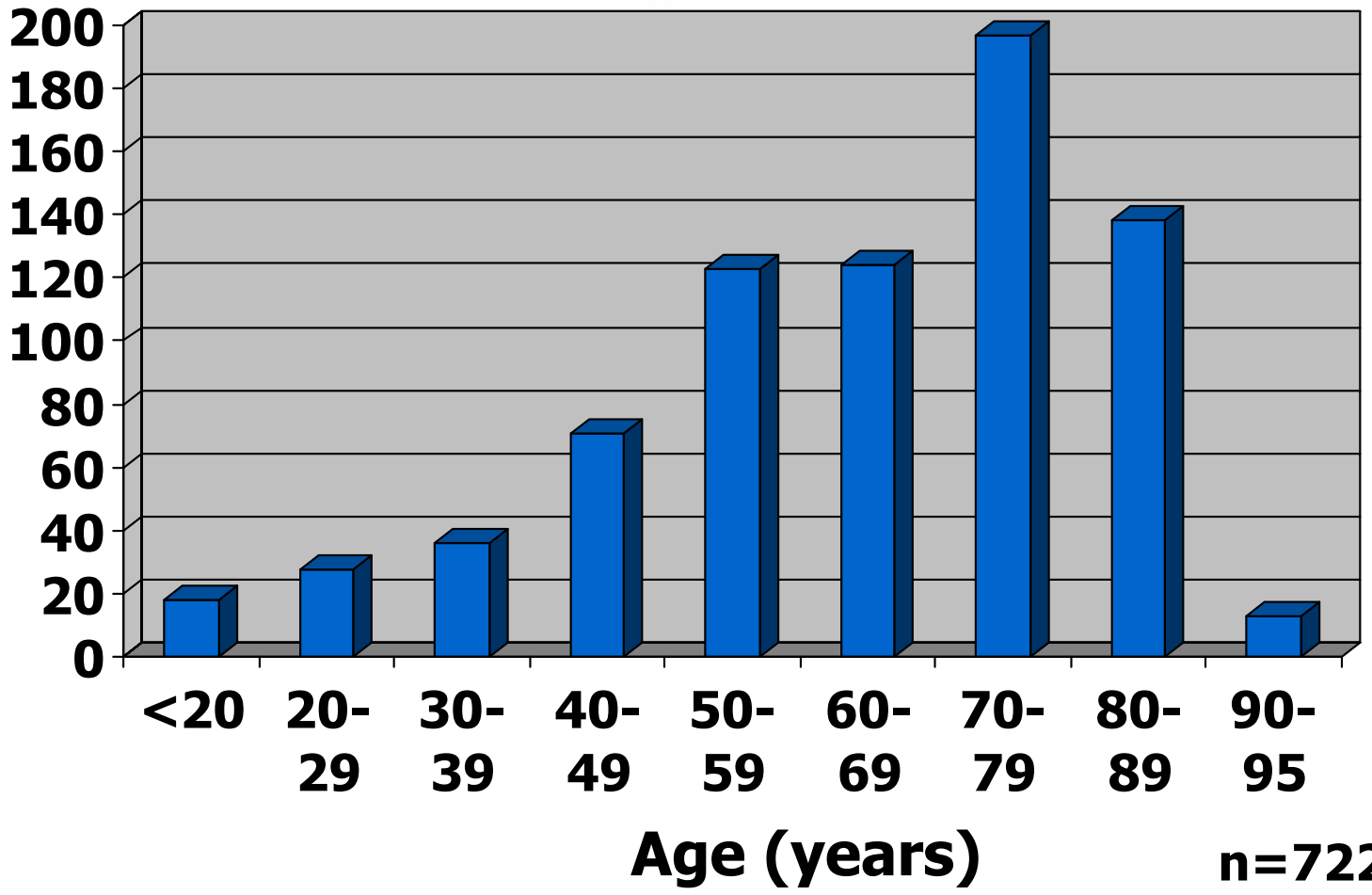
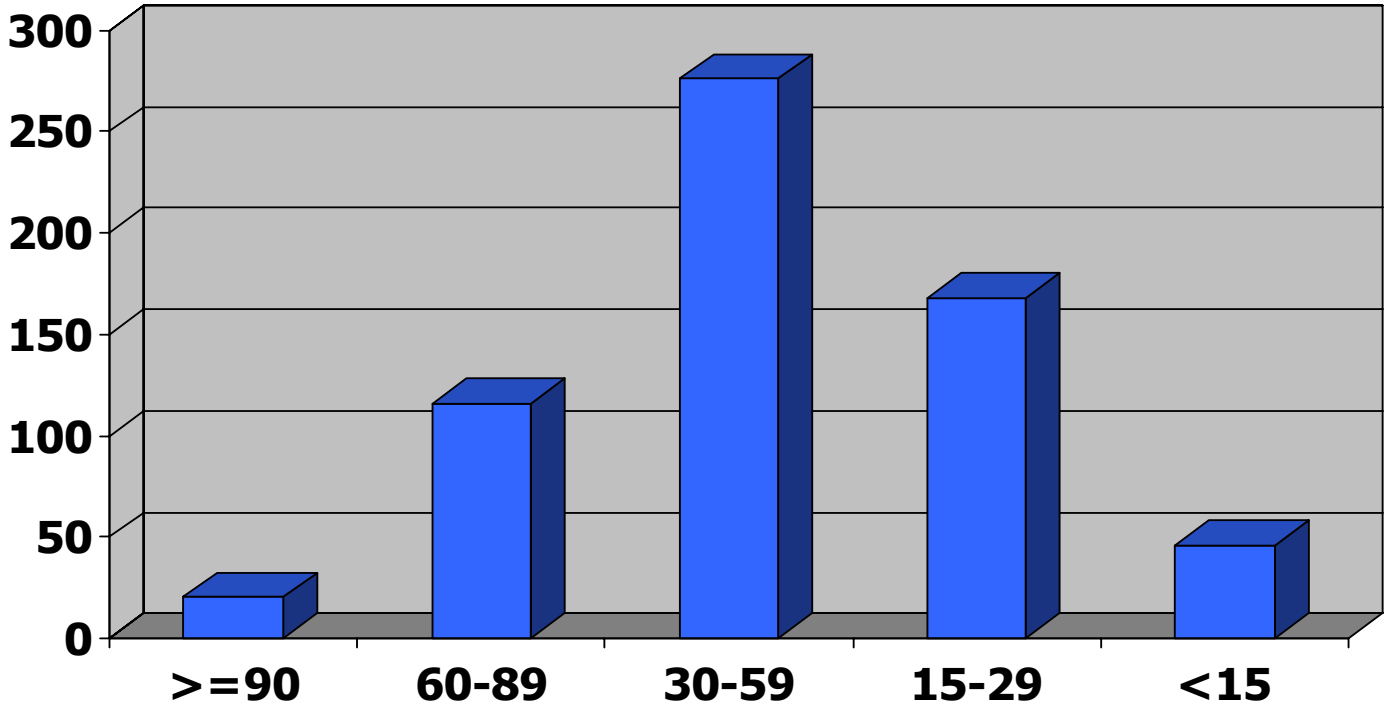
Chronic Kidney Disease Disease Age Distribution (Metabolism Associates)



Severity of CKD using GFR: Age, Creatinine, Weight



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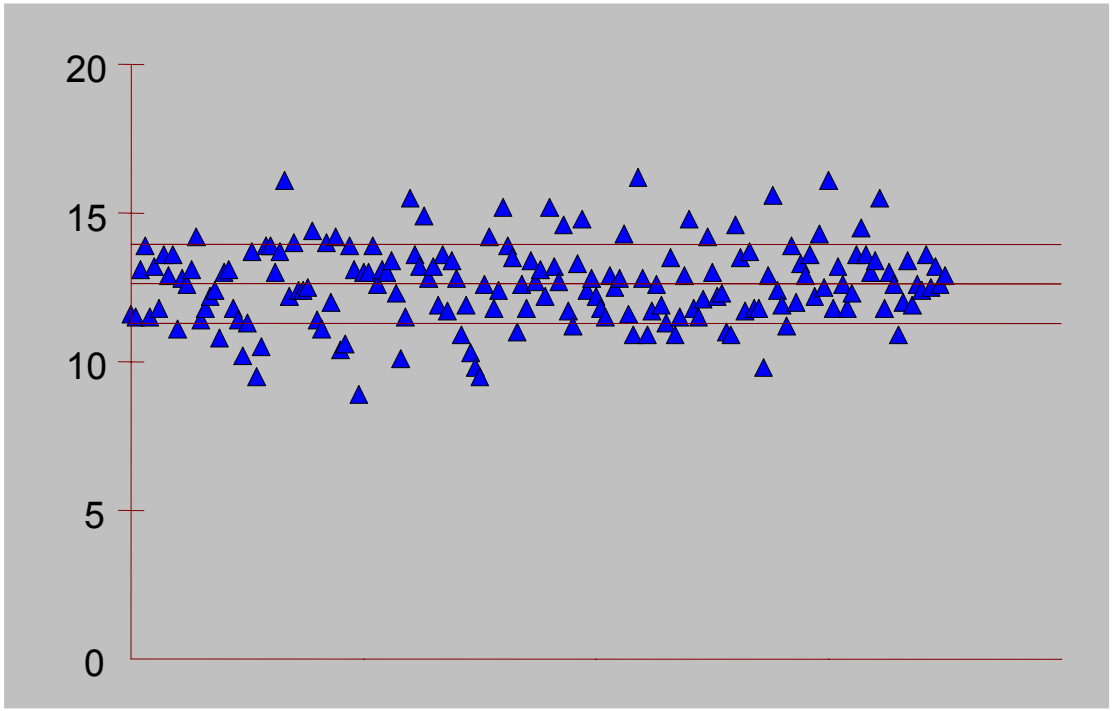
Epogen Patients and Hemoglobin

Hemoglobin



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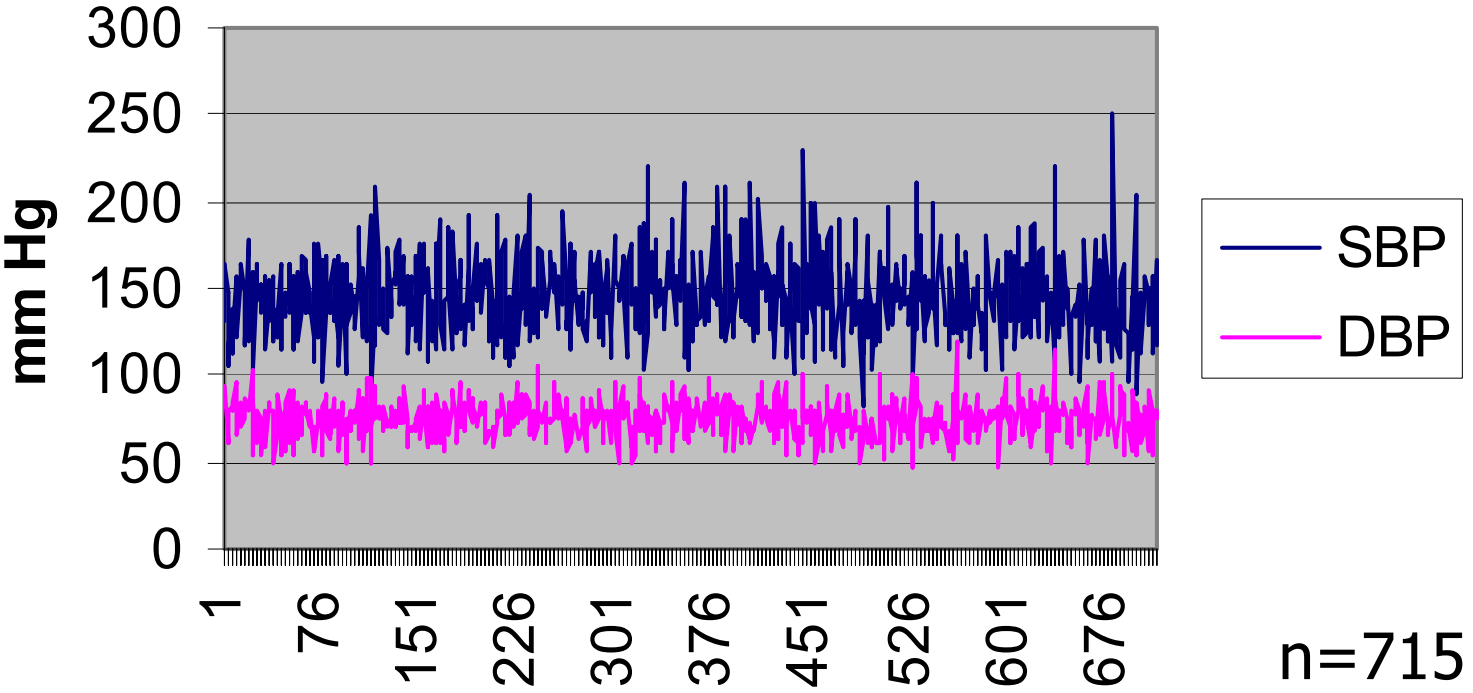
Blood Pressure Reporting



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Mean BP 146±23/75±11
Anti-HTN meds 2.8±1.3

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Summary: Nephrology Quality Data (Metabolism Associates)

- Structured clinical data is being captured as a ***byproduct of patient care.***
- Chronic Kidney Disease (CKD) is focus of quality reporting.
- Quality Measures being captured currently at Metabolism Associates:
  - Age distribution of CKD
  - Severity of CKD (via serum creatinine)
  - Epogen efficacy (via Hemoglobin levels)
  - Blood Pressure Control (via vital signs)

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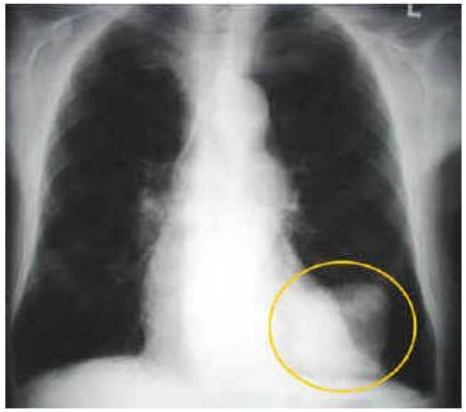
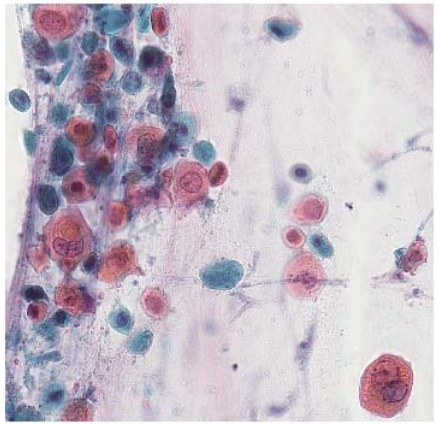
Quality Reporting in Medical Oncology

Osceola Cancer Center





CMS 2006 Oncology Demonstration Project

- CMS' 2006 demonstration project will gather information relevant to the quality of care for cancer patients.
- Reporting will be associated with physician evaluation and management (E & M) visits.
- 13 target cancers: breast cancer, chronic myelogenous leukemia, colon cancer, esophageal cancer, gastric cancer, head and neck cancer, multiple myeloma, non-Hodgkin's lymphoma, non-small cell/small cell lung cancer, ovarian cancer, pancreatic cancer, prostate cancer, or rectal cancer.
- Participants will receive oncology demonstration payment of $23.
  - The physician must submit one G-code from each of three categories.

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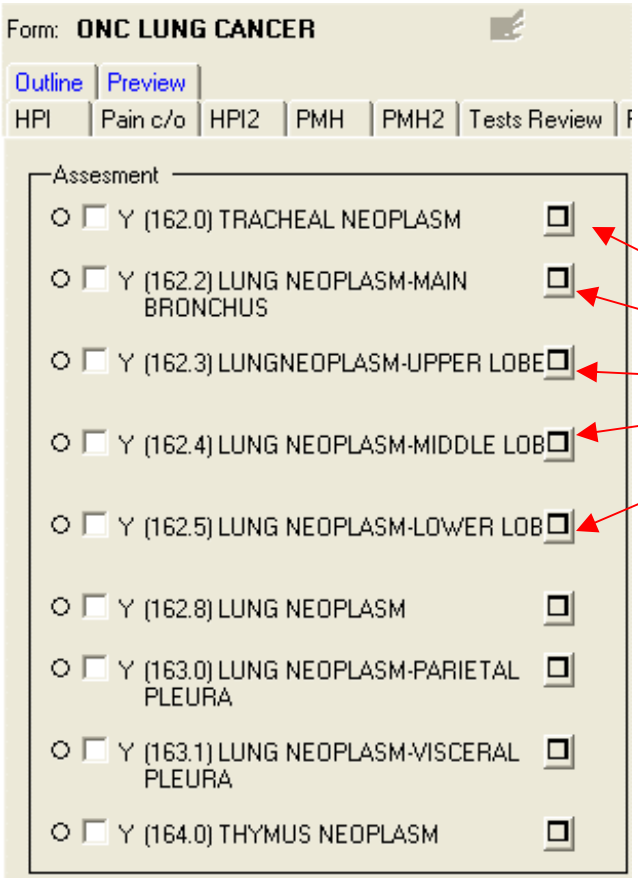
Rapid configuration of EHR to capture G-Codes.



G-Code Mapping to Encounter Note Form

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Summary: EHR Strategies for Pay for Performance

- The right EHR system will allow a practice to establish a workflow which assists the physicians in providing efficient patient care while capturing quality data as a *byproduct* of patient visits.
  - The physicians focus on patient care while the EHR captures the necessary information in the background.
- Vital signs, medications, lab results, diagnoses, and clinical findings all play a role in automating quality reporting.
- Once an EHR with structured data capture is adopted by a medical practice, it is straightforward to map specific quality codes (e.g. G-codes) into existing EHR tools.
- Pay for Performance will not be limited to primary care/Adult medicine, but will extend to a broad range of specialties.

Electronic Health Record Strategies for Pay for Performance

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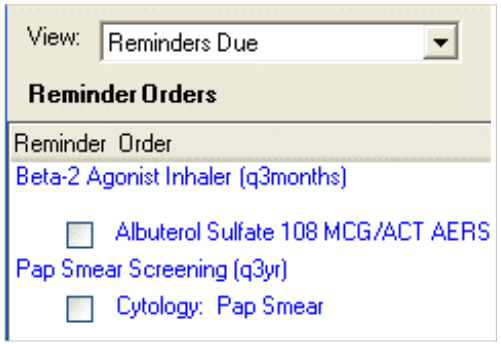

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