Cardiovascular Practice Quality Improvement : Role of ACC-NCDR and HIT

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Fort Wayne Cardiology
Medical Director : Parkview Research Center
Chair : ACC Health Informatics
Co-Chair: CCHIT Advanced Quality Work Group

Conflict of Interest : Disclosure

(research/consultant/speaker/ownership)

- Cambridge Heart
- iRhythm Technology
- LifeCor
- Medical Informatics Engineering
- McKesson
- St Jude Medical
- Silk Information Systems

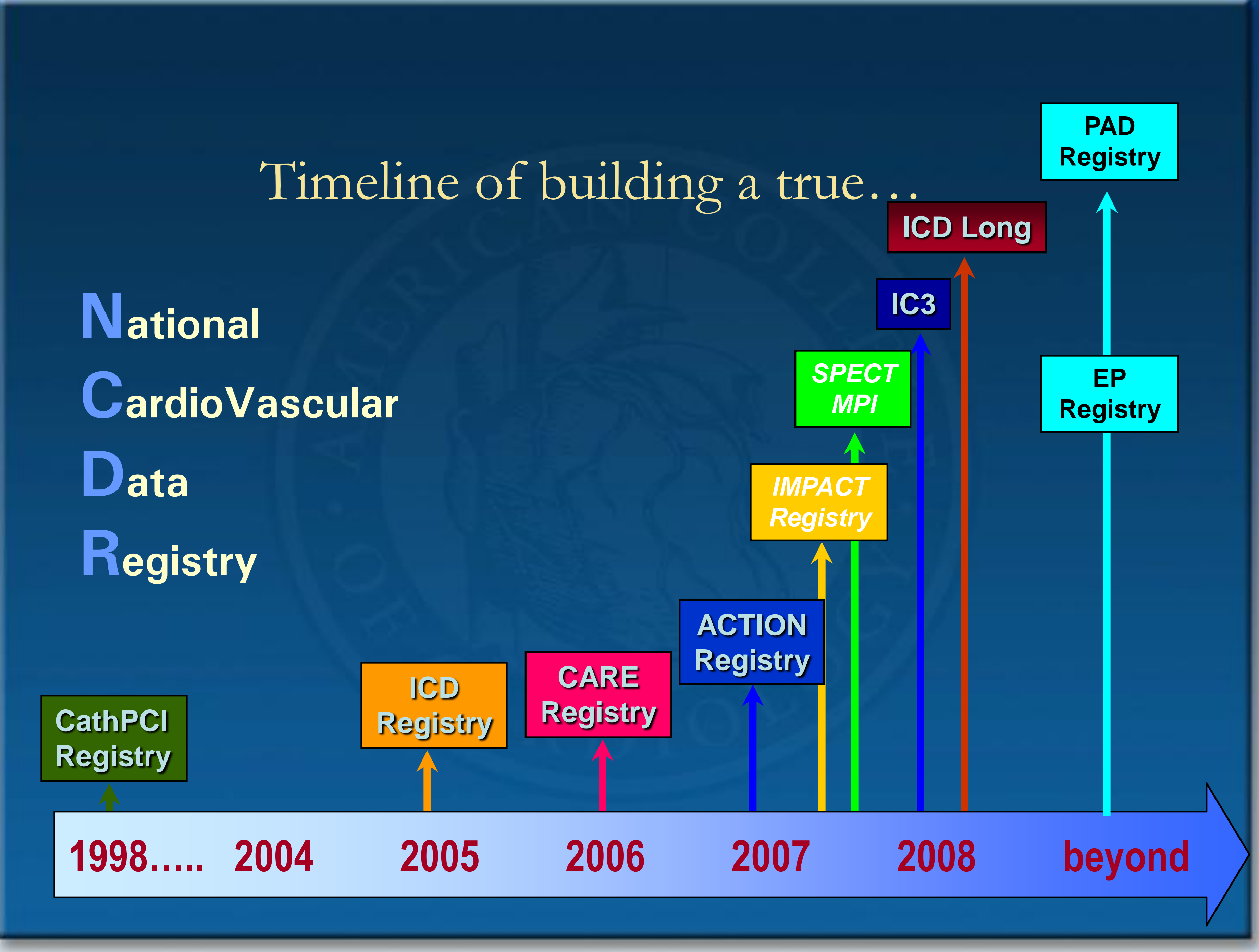
Agenda

- Overview of NCDR
- PCI and ACTION-GWTG Registry
- ICD Registry
- IC3 : Measurement of Quality in the office
- HIT Implementation

“Science tells us what we can do;

Guidelines what we should do;

Registries what we are actually doing.”


Timeline of building a true…
National
CardioVascular
Data
Registry
CathPCI Registry
ICD Registry
CARE Registry
ACTION Registry
IMPACT Registry
SPECT MPI
IC3
ICD Long
EP Registry
PAD Registry
1998…..
2004
2005
2006
2007
2008
beyond

Participants and Patient Records

	Name	# of Participants	# of Patient Records
Hospital	CathPCI	1200	10 million
	ICD	1500	400,000
	ACTION-GWTG	425	150,000
	CARE	160	15,000
	IMPACT	Under Development	--
Practice	IC3	600	160,000

Multispecialty Representation

CathPCI

- Society for Cardiovascular Angiography and Intervention

ICD

- Heart Rhythm Society

CARE

- Society for Cardiovascular Angiography and Intervention
- Society for Interventional Radiology
- American Academy of Neurology
- American Academy of Neurosurgery
- Society of Vascular Medicine and Biology

ACTION

- American Heart Association
- Chest Pain Centers Society

IMPACT

- American Academy of Pediatrics

Registry Can

- capture high quality clinical data efficiently
- be used for scientific discovery
  - track patients' longitudinal care
  - track drugs/devises
  - be linked to biological/imaging data
- complement/support RCTs
  - and perhaps be backbone for these
- helps drive new evidence into routine practice

Influence of NCDR Research

- Public Policy
- Quality Improvement: Guideline Adherence
  - Reducing D2B Times
  - Clinical Indications & Outcomes
- Quality Improvement: Translational Research
- Post Market Surveillance
  - Adverse Events in Closure Devices
- **New technologies and effectiveness**
  - **Diffusion of new technology**

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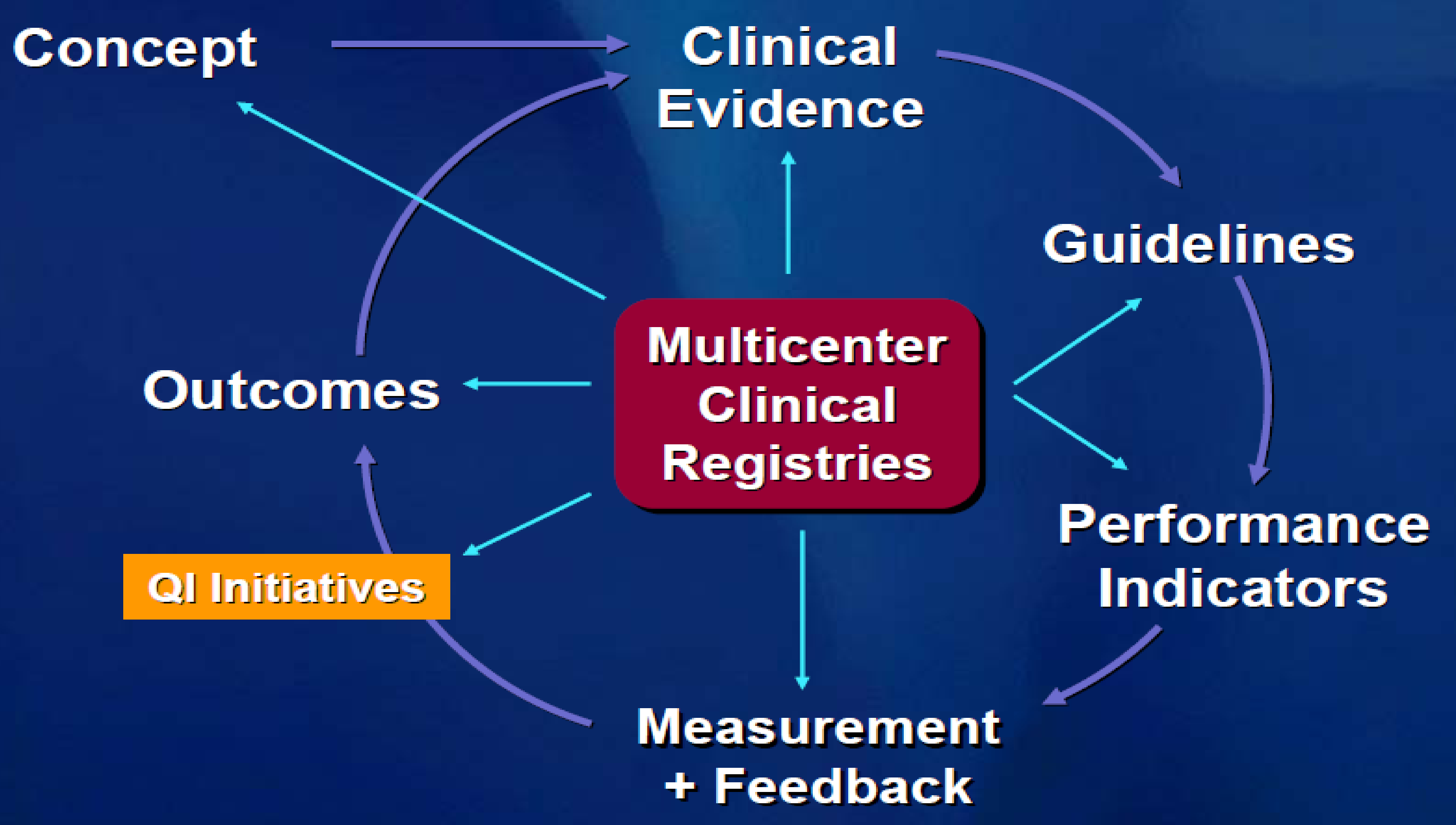
Registries for Evidence Development and Dissemination



In-Hospital PCI Mortality = 1.22%

Mortality (%)

3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0

Age

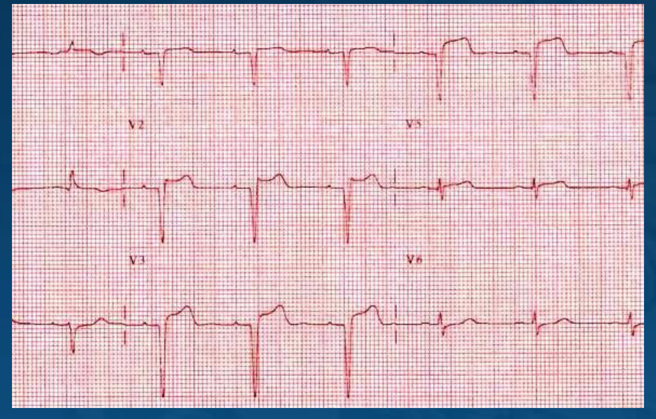
<40 | 40-59 | 60-79 | ≥80

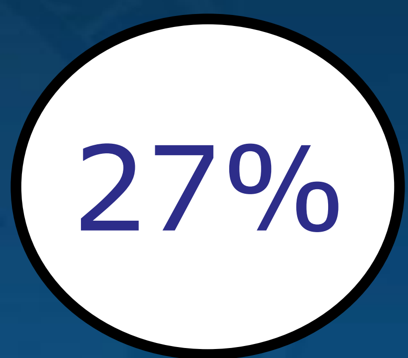
n=25,679 | n=496,204 | n=732,574 | n=155,612

Singh M et.al Circ Cardiovasc Intervent 2009;2:20-26

Registries Can Define QI Targets

J Am Coll Cardiol, 2009; 53:161-166





Pre-hospital ECG

↓ Door to reperfusion times

↓ Risk-adjusted mortality

Quality can save Money

U. M. Khot et. Al., Emergency Department Activation of the Catheterization Laboratory and Immediate Transfer to an Immediately Available Catheterization Laboratory to Reduce Door to Balloon Time in ST Elevation Myocardial Infarction. *Circulation. 2007; 116*

ED Activation of Cath Lab & Immediate Transfer by Care Team

- D2B decreased 113 min to 75 minutes
- Transfer in 147 minutes to 85 minutes
- Infarct size reduced (creatinine kinase)
- LOS 5 +/- 7 days to 3 +/- 2 days
- Cost $26K (+/- $29k) to $18K (+/- $9K)

NCDR - Elective PCI
PCI Volume with Mortality

NCDR Centers (n= 403) 2001 - 2004

Annual PCI Volume	# of Sites	Number of Patients (%)	Mortality (%)	Odds Ratio (95% CI) (vs. volume ≥801)
0-200	43	6,305 (1.3)	0.49	1.17 (0.81 - 1.71)
201-400	85	42,039 (8.7)	0.49	1.12 (0.96 - 1.31)
401-800	132	116,116 (24.0)	0.45	1.10 (0.99 - 1.22)
≥801	139	318,500 (65.9)	0.39	ref.

How to Transition from GWTG-CAD to ACTION Registry-GWTG

- Go to the ACTION Registry-GWTG "How to Join" page on www.ncdr.com to download the appropriate participation documents
  - If you do not currently participate in an NCDR registry (CARE Registry®, CathPCI Registry®, ICD Registry™), sign the NCDR Master Agreement and the ACTION Registry-GWTG Addendum
  - If you currently participate in an NCDR registry, sign the ACTION Registry-GWTG Addendum
  - Return your completed documents to NCDR as instructed on the forms

Certification and Outcomes with ICDs

Higher risks of adverse events and complications for patients treated by non-electrophysiologists

Complications Stratified by Physician Certification

	Total, No.	Physician Certification			
		EP	CVD	TS	Other
	n = 111,293	n = 78,857	n = 24,399	n = 1,862	n = 6,175
Adverse events (%)					
Any complication	3.5	3.3	3.8	5.5	3.8
Major Complication	1.3	1.2	1.5	2.2	1.5
Minor Complication	2.3	2.3	2.4	3.6	2.4

EP: Electrophysiologist, CVD: nonelectrophysiologist Cardiologist, TS; Thoracic Surgeon

Curtis et al. , JAMA 2009; 301 (16) 1661:1670

Conclusions

- NCDR data can be linked to claims data
- Data analysis allows a robust, longitudinal assessment of clinical effectiveness
- Comparing outcomes of DES to BMS at 30 months
  - No major DES safety concerns
  - Lower death and MI rates in DES patients
  - Slightly lower revascularization, bleeding rates
  - Similar stroke rates

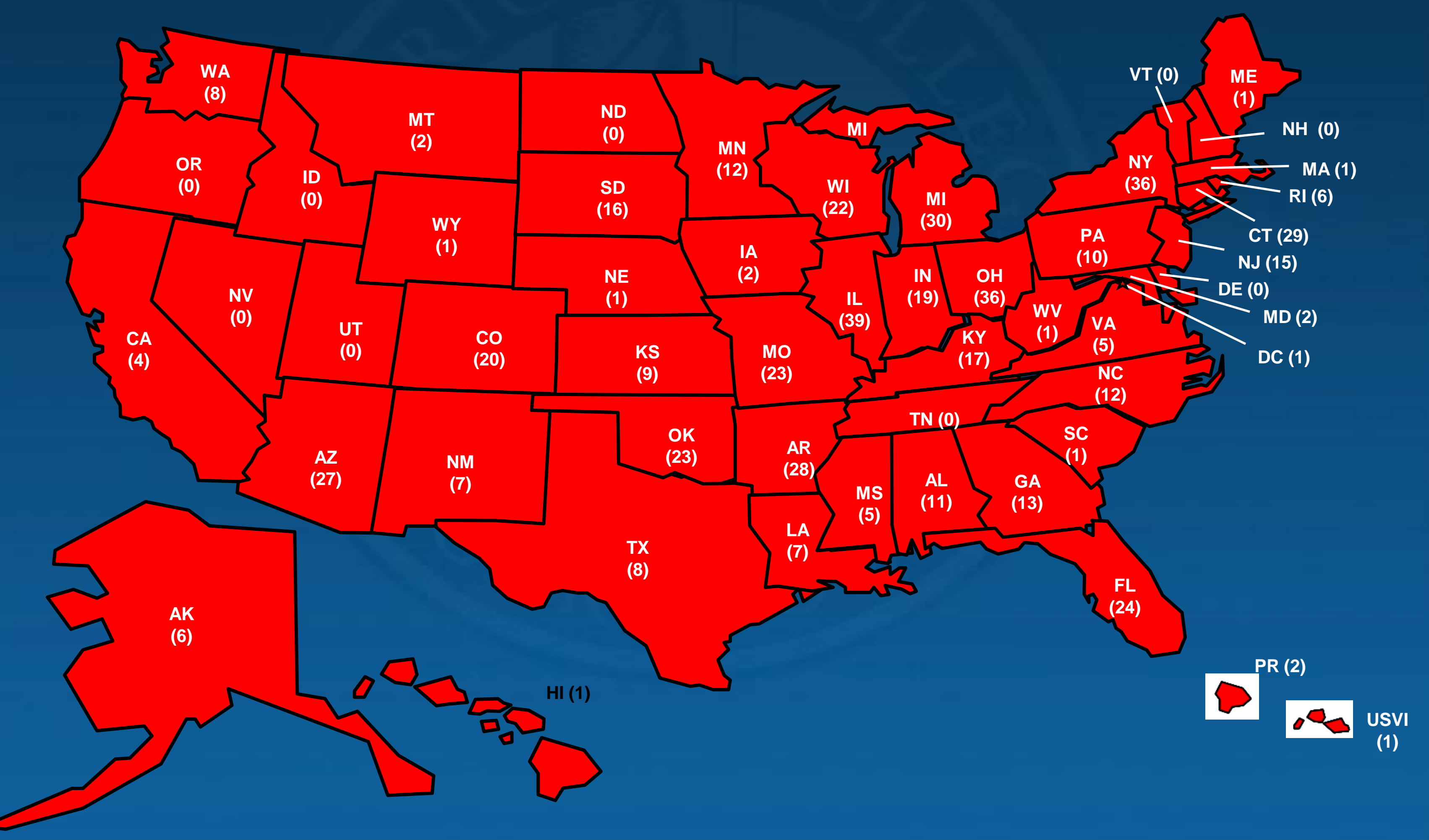
IC3 Program

- **Goal:** Help clinicians improve the quality of cardiovascular care and patient outcomes and thrive in a performance-based health care system
- **Tactics:**

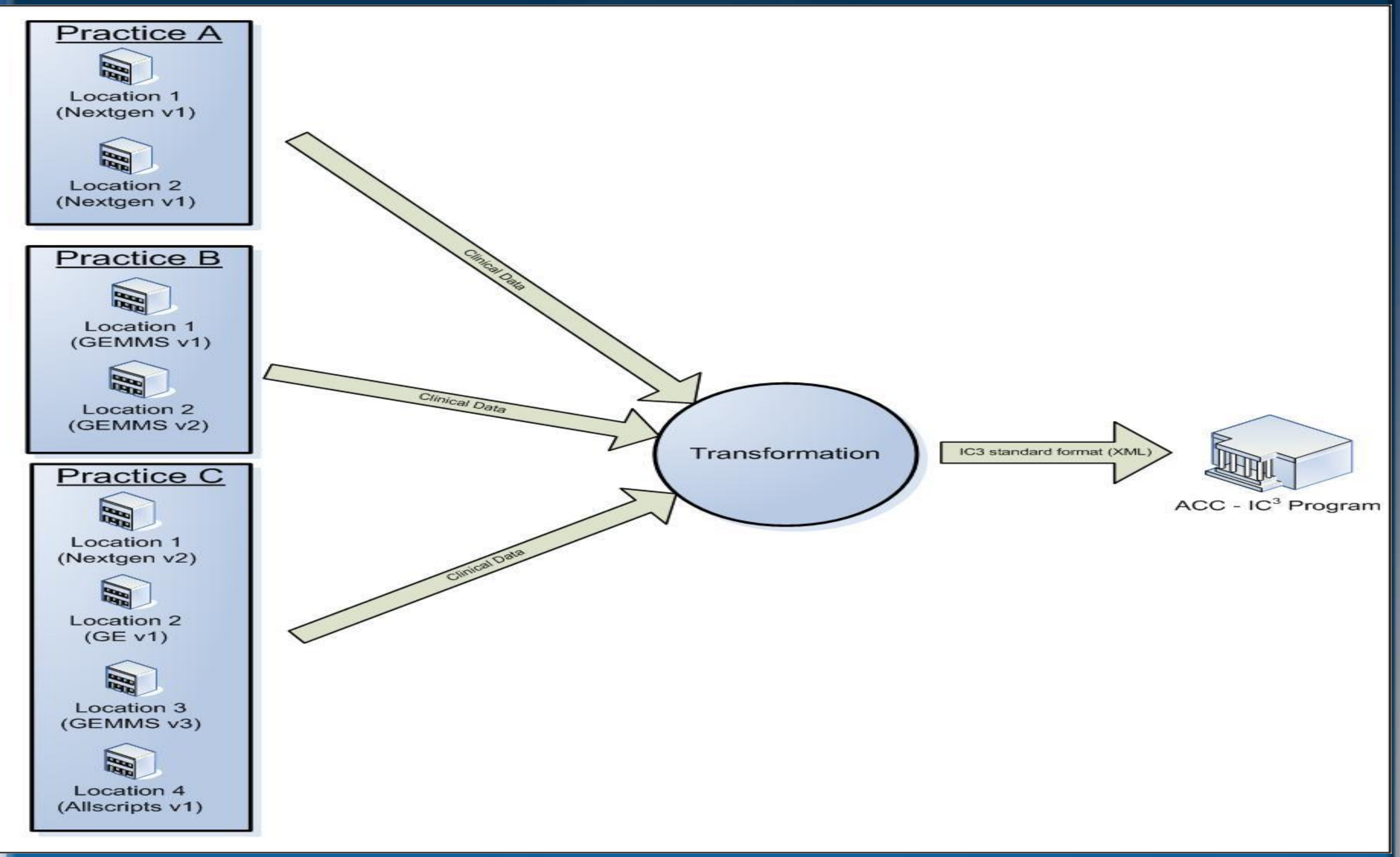
  Collect comprehensive, clinical ambulatory care data for performance benchmarking and scientific research. Data collection would link with other health care data sets for:
    - longitudinal analysis of patients' experience
    - support of administrative and payment systems (P4P, PQRI and other advantageous reporting)
    - support for quality improvement purposes

Geographic Distribution of Practices

- 169 Practices in 48 States & 2 US Territories



Data Collection: System Integration



IC^3 program

- Designed to help you collect, store and use patient data more effectively to:
  - Improve office visits
  - Coordinate care
  - Generate performance reports for quality improvement and Pay-for-Performance programs

IC³ Program

NCDR® IC³ Program® v1.0
Data Collection Form
Improving Continuous Cardiac Care

MRN: Encounter Date: mm / dd / yyyy Practice ID: Location ID:

Physician Name(Last, First MI): Physician NPI:

A. Patient Demographics

Patient Name(Last, First MI): SSN: ☐ Patient new to the Practice

Date of Birth: mm / dd / yyyy Sex: ○ Male ○ Female Patient Zip:

Race: (Check all that apply) ☐ White ☐ Black/African American ☐ Asian ☐ American Indian/Alaska Native ☐ Native Hawaiian/Pacific Islander ☐ Hispanic or Latino Ethnicity

Insurance Payers: (Check all that apply) Payer ID: ______
☐ Private Health Insurance ☐ Medicare (fee for service) ☐ Medicare (managed care) ☐ Medicaid ☐ Military Health Care
☐ State Specific Plan (non-Medicaid) ☐ Indian Health Service ☐ Non-US Insurance ☐ None

B. Diagnoses/Conditions/Co-Morbidities Note: Indicate if the patient has a history of any of the following.

☐ Coronary Artery Disease ☐ Atrial Fibrillation/Flutter ☐ Dyslipidemia ☐ Diabetes Mellitus
☐ Hypertension ☐ Systemic Embolism ☐ Peripheral Arterial Disease ☐ Prior Stroke/TIA
☐ Unstable Angina ☐ Heart Failure → (If Yes), ☐ New diagnosis (within 12 months)
☐ Stable Angina → (If Yes), ☐ New diagnosis (within 12 months)

C. Cardiac Events Note: Indicate if the patient has a history of any of the following.

☐ Myocardial Infarction (any history of) → (If Yes), ☐ Myocardial Infarction (within 12 months)
☐ Coronary Artery Bypass Graft (within 12 months) ☐ PCI - Bare Metal Stent Implant (within 12 months)
☐ Cardiac Valve Surgery (within 12 months) ☐ PCI - Drug Eluting Stent Implant (within 12 months)
☐ Heart Transplantation (within 12 months) ☐ PCI - Other (non-stent) Intervention (within 12 months)

D. Encounter Information Note: Complete only if assessed during today's encounter. If not assessed, leave blank.

Height: ______ ○ in ○ cm Blood Pressure: ______ / ______ mmHg Heart Rate: ______ bpm
Weight: ______ ○ lbs ○ kg ☐ Patient unable to be weighed
Tobacco Use: ○ Never ○ Current ○ Quit within past 12 months ○ Quit more than 12 months ago ☐ Patient asked, during any previous encounter in the past 24 months, about the use of Tobacco
→ If Current or Quit within 12 months, ☐ Cigarettes ☐ Cigars ☐ Pipe ☐ Smokeless
→ If Current or Quit within 12 months, Smoking Cessation Counseling: ○ No ○ Yes
Advance Care Plan OR Discussion of Advance Care Plan Documented: ○ No ○ Yes

Angina Symptoms and Activity Assessment(s)

CAD: CCS Class: ○ No angina ○ I ○ II ○ III ○ IV ☐ Other Tool/Method Used to Assess Angina Symptoms and Activity Completed
☐ Seattle Angina Questionnaire Completed

Heart Failure Activity Assessment(s)

HF: NYHA Class: ○ I ○ II ○ III ○ IV ☐ Chronic Heart Failure Questionnaire from Guyatt Completed
☐ Kansas City Cardiomyopathy Questionnaire Completed ☐ Other Tool/Method Used to Assess Heart Failure Activity Completed
☐ Minnesota Living with HF Questionnaire Completed

Heart Failure Symptoms Assessment(s)

HF: Dyspnea Present: ○ No ○ Yes Orthopnea Present: ○ No ○ Yes

Heart Failure Physical Assessment(s)

HF: Rales Present: ○ No ○ Yes Peripheral Edema Present: ○ No ○ Yes S_3 Gallop Present: ○ No ○ Yes
Ascites Present: ○ No ○ Yes Hepatomegaly Present: ○ No ○ Yes S_4 Gallop Present: ○ No ○ Yes
Jugular Venous Distention Present: ○ No ○ Yes

Plan of Care

HTN: Hypertension plan of care documented: ○ No ○ Yes Note: Required for patients that have been diagnosed with Hypertension.

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Sample

Encounter Date: mm / dd / yyyy Practice ID: Location ID:

...tion Referral or Plan for Qualifying ...n past 12 months: Note: Cardiac event/diagnoses includes Myocardial Infarction, Valve surgery, Heart Transplant, CABG, PCI or new Stable Angina diagnosis.
.../Plan Documented ○ No Qualifying Event/Diagnosis ○ Patient Already Participating in Rehab
...lan – Medical Reason ○ No Referral/Plan – Patient Reason ○ No Referral/Plan – System Reason

...ompleted/Documented
...F Education (Check all that apply): ☐ All of the following
...nitoring ☐ Diet (Sodium Restriction) ☐ Symptom Management ☐ Physical Activity
...essation ☐ Medication Instruction ☐ Minimizing or Avoiding use of NSAIDs ☐ Prognosis/end-of-life issues
...r visiting nurse or specific educational or management programs

Atrial Fibrillation/Flutter Assessment and Treatment

...ion: ○ First episode detected ○ Chronic – paroxysmal ○ Chronic – persistent/permanent
○ Non-Valvular ○ Valvular
...r, Etiology (Check all that apply): ☐ Transient/reversible cause (e.g., pneumonia, hyperthyroidism)
☐ Cardiac surgery within past 3 months
☐ Pregnancy

...lic Risk: ○ Yes (All risk factors assessed) ○ No – Medical Reason ○ No – Patient Reason ○ No – System Reason
Note: Thromboembolic risk factors include all of the following: 1.) Prior Stroke/TIA, 2.) Age ≥75, 3.) Hypertension, 4.) Diabetes Mellitus, 5.) HF or LVSD.

...ts Note: Enter most recent lab results and/or indicate the labs ordered during this encounter.

...te: mm / dd / yyyy (recent) LVEF: ____ % - OR - LV Qualitative Assessment:
Note: If a LVEF range is documented, take the average, round up and refer to the LVEF Status ranges (right) to code. →
○ Normal: ≥ 50 ○ Mildly reduced: 40 – 49 ○ Moderately reduced: 26 – 39 ○ Severely reduced: ≤ 25

...ed Date: mm / dd / yyyy ☐ Fasting ☐ Serum Glucose Ordered (If not known Diabetic)
...rol: ______ mg/dL Glucose Date: mm / dd / yyyy Glucose: ______ mg/dL
...Lipoprotein (HDL): ______ mg/dL Glucose timing: ○ Fasting ○ 2hr-post prandial
...ipoprotein (LDL): ______ mg/dL ○ Random ○ Unknown
______ mg/dL HbA1c Date: mm / dd / yyyy HbA1c: ______ %
...ered
...red for newly diagnosed Heart Failure (within past 12 months) or patient new to the practice
...HF include Serum Electrolytes (including Ca+ and Mg+), CBC, UA, TSH, Liver Function tests, BUN, Creatinine and Glucose.

Note: If no documentation exists as to if a medication was prescribed/continued, then leave blank.

Medication	Yes (Prescribed)	No (Medical Reason)	No (Patient Reason)	No (System Reason)
...E Inhibitor	○	○	○	○
...lopidogrel	○	○	○	○
...iclopidine	○	○	○	○
...rasugrel	○	○	○	○
...renox	○	○	○	○
...s	○	○	○	○
...rin	○	○	○	○
...a Blocker	○	○	○	○
...ium Channel Blockers	○	○	○	○
Diuretics	○	○	○	○
Lipid Lowering Non-Statin	○	○	○	○
Lipid Lowering Statin	○	○	○	○
Warfarin	○	○	○	○

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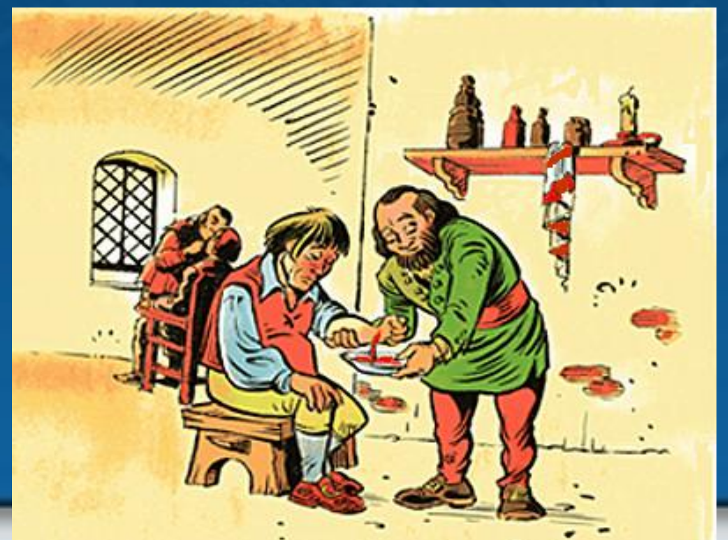
You could do this on paper

- Requiring valuable FTE time and introducing the opportunity for error
- And sending it to the ACC where it will be entered into a database (again introducing the opportunity for error)



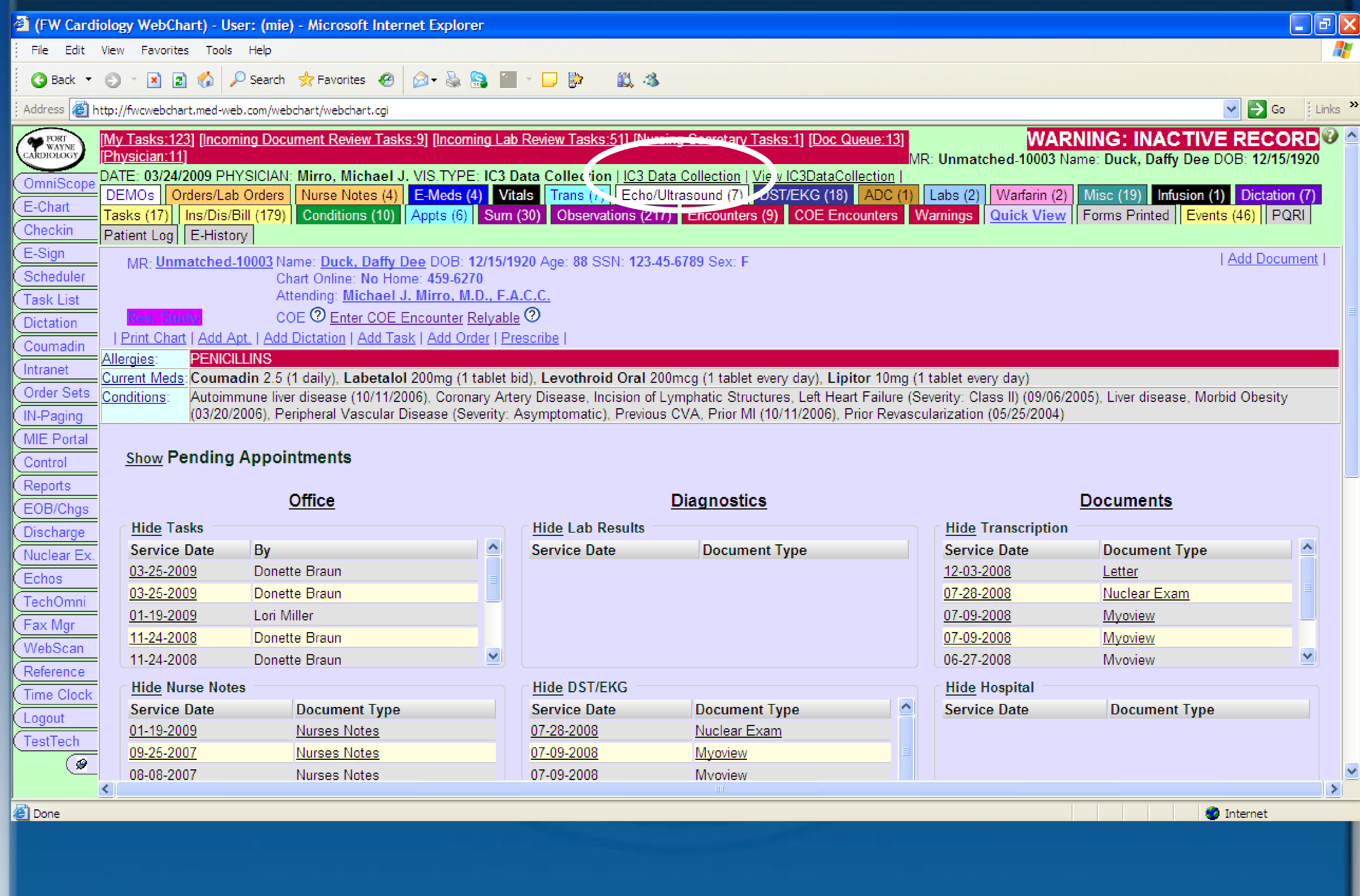
TRADITION

JUST BECAUSE YOU'VE ALWAYS DONE IT THAT WAY
DOESN'T MEAN IT'S NOT INCREDIBLY STUPID.

www.despair.com

Or you could do this electronically…

- The timing is ideal
  - Select EHR vendors now certified for IC3
  - IC3 satisfies PQRI requirements
  - EHR vendors also incorporate e-prescribing
  - Current CMS bonus payments help offset EHR investment costs
  - EHR adoption incentives start in 2011 and total $44,000 per physician
    - FOR IMPLEMENTED AND MEANINGFUL EHR USE
    - START NOW!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File Edit View Favorites Tools Help
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Address http://fwcwebchart.med-web.com/webchart/webchart.cgi
Go Links
[My Tasks:123] [Incoming Document Review Tasks:9] [Incoming Lab Review Tasks:51] [Nursing Secretary Tasks:1] [Doc Queue:13] [Physician:11]
WARNING: INACTIVE RECORD
MR: Unmatched-10003 Name: Duck, Daffy Dee DOB: 12/15/1920
DATE: 03/24/2009 PHYSICIAN: Mirro, Michael J. VIS.TYPE: IC3 Data Collection | IC3 Data Collection | View IC3DataCollection |
DEMOs Orders/Lab Orders Nurse Notes (4) E-Meds (4) Vitals Trans (7) Echo/Ultrasound (7) DST/EKG (18) ADC (1) Labs (2) Warfarin (2) Misc (19) Infusion (1) Dictation (7)
Tasks (17) Ins/Dis/Bill (179) Conditions (10) Appts (6) Sum (30) Observations (217) Encounters (9) COE Encounters Warnings Quick View Forms Printed Events (46) PQRI
Patient Log E-History
OmniScope
E-Chart
Checkin
E-Sign
Scheduler
Task List
Dictation
Coumadin
Intranet
Order Sets
IN-Paging
MIE Portal
Control
Reports
EOB/Chgs
Discharge
Nuclear Ex.
Echos
TechOmni
Fax Mgr
WebScan
Reference
Time Clock
Logout
TestTech
MR: Unmatched-10003 Name: Duck, Daffy Dee DOB: 12/15/1920 Age: 88 SSN: 123-45-6789 Sex: F
Chart Online: No Home: 459-6270
Attending: Michael J. Mirro, M.D., F.A.C.C.
| Add Document |
Res. Study
COE Enter COE Encounter Relyable
| Print Chart | Add Apt. | Add Dictation | Add Task | Add Order | Prescribe |
Allergies: PENICILLINS
Current Meds: Coumadin 2.5 (1 daily), Labetalol 200mg (1 tablet bid), Levothroid Oral 200mcg (1 tablet every day), Lipitor 10mg (1 tablet every day)
Conditions: Autoimmune liver disease (10/11/2006), Coronary Artery Disease, Incision of Lymphatic Structures, Left Heart Failure (Severity: Class II) (09/06/2005), Liver disease, Morbid Obesity (03/20/2006), Peripheral Vascular Disease (Severity: Asymptomatic), Previous CVA, Prior MI (10/11/2006), Prior Revascularization (05/25/2004)
Show Pending Appointments
Office
Diagnostics
Documents
Hide Tasks
Service Date By
03-25-2009 Donette Braun
03-25-2009 Donette Braun
01-19-2009 Lori Miller
11-24-2008 Donette Braun
11-24-2008 Donette Braun
Hide Lab Results
Service Date Document Type
Hide Transcription
Service Date Document Type
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07-28-2008 Nuclear Exam
07-09-2008 Myoview
07-09-2008 Myoview
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07-09-2008 Myoview
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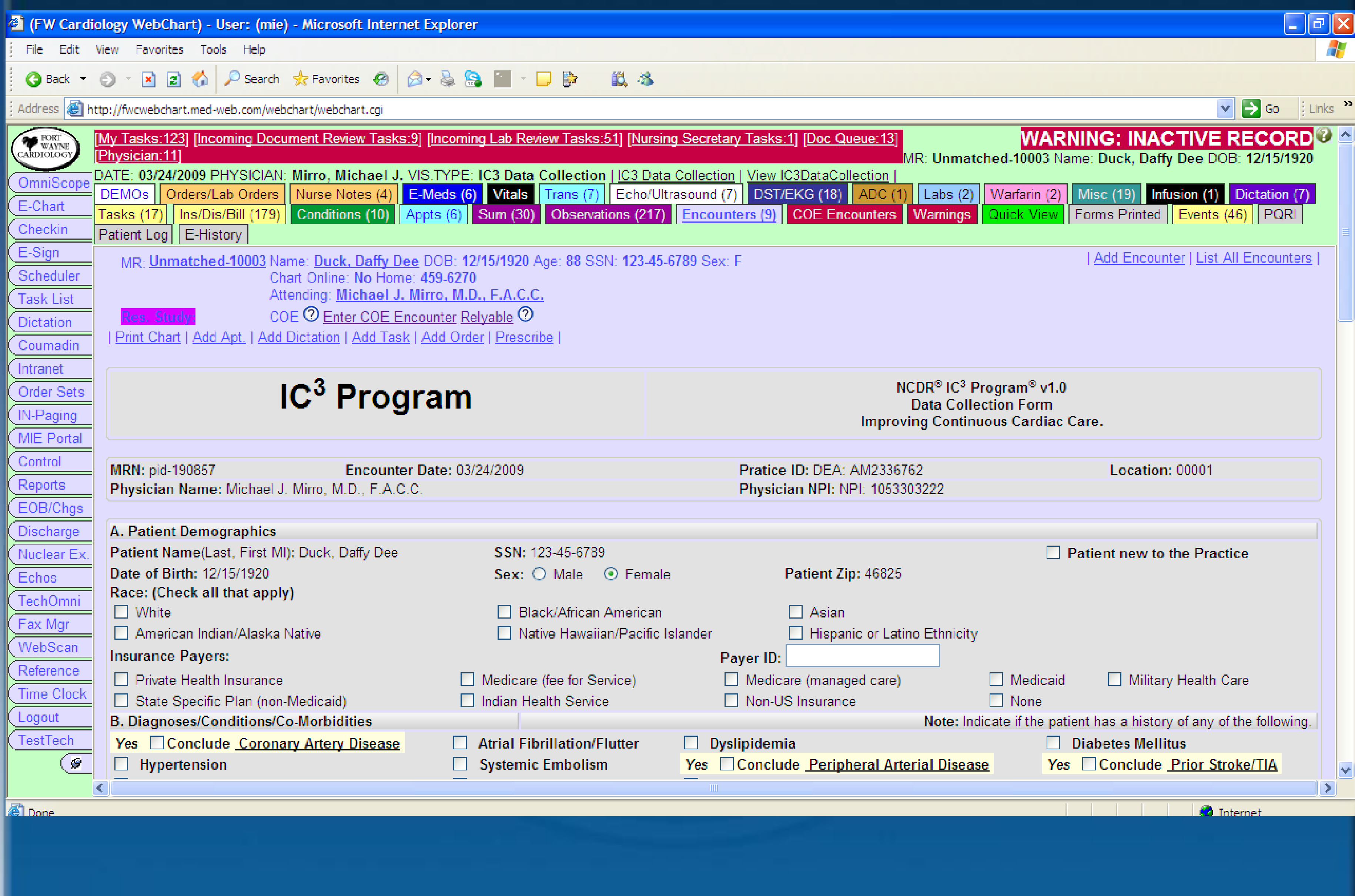

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Chart Online: No Home: 459-6270
Attending: Michael J. Mirro, M.D., F.A.C.C.
COE Enter COE Encounter Relyable
| Add Encounter | List All Encounters |
| Print Chart | Add Apt. | Add Dictation | Add Task | Add Order | Prescribe |
IC3 Program
NCDR® IC3 Program® v1.0
Data Collection Form
Improving Continuous Cardiac Care.
MRN: pid-190857
Encounter Date: 03/24/2009
Pratice ID: DEA: AM2336762
Location: 00001
Physician Name: Michael J. Mirro, M.D., F.A.C.C.
Physician NPI: NPI: 1053303222
A. Patient Demographics
Patient Name(Last, First MI): Duck, Daffy Dee
SSN: 123-45-6789
Patient new to the Practice
Date of Birth: 12/15/1920
Sex: Male Female
Patient Zip: 46825
Race: (Check all that apply)
White
Black/African American
Asian
American Indian/Alaska Native
Native Hawaiian/Pacific Islander
Hispanic or Latino Ethnicity
Insurance Payers:
Payer ID:
Private Health Insurance
Medicare (fee for Service)
Medicare (managed care)
Medicaid
Military Health Care
State Specific Plan (non-Medicaid)
Indian Health Service
Non-US Insurance
None
B. Diagnoses/Conditions/Co-Morbidities
Note: Indicate if the patient has a history of any of the following.
Yes Conclude Coronary Artery Disease
Atrial Fibrillation/Flutter
Dyslipidemia
Diabetes Mellitus
Hypertension
Systemic Embolism
Yes Conclude Peripheral Arterial Disease
Yes Conclude Prior Stroke/TIA
Done
Internet

(FW Cardiology WebChart) - User: (mie) - Microsoft Internet Explorer

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B. Diagnoses/Conditions/Co-Morbidities — Note: Indicate if the patient has a history of any of the following.

- Yes ☐ Conclude Coronary Artery Disease
- ☐ Hypertension
- ☐ Unstable Angina
- ☐ Atrial Fibrillation/Flutter
- ☐ Systemic Embolism
- ☐ Heart Failure --> (If Yes), ☐ New diagnosis (within 12 months)
- ☐ Stable Angina --> (If Yes), ☐ New diagnosis (within 12 months)
- ☐ Dyslipidemia
- Yes ☐ Conclude Peripheral Arterial Disease
- ☐ Diabetes Mellitus
- Yes ☐ Conclude Prior Stroke/TIA

C. Cardiac Events — Note: Indicate if the patient has a history of any of the following.

- ☐ Myocardial Infarction
- ☐ Yes ☑ No Coronary Artery Bypass Graft
- ☐ Yes ☑ No Cardiac Valve Surgery
- ☐ Yes ☑ No Heart Transplantation
- ☐ Yes ☑ No PCI - Bare Metal Stent Implant
- ☐ Yes ☑ No PCI - Drug Eluting Stent Implant
- ☐ Yes ☑ No PCI - Other (non-stent) Intervention

D. Encounter Information — Note: Complete only if assessed during today's encounter. If not assessed, leave blank.

Height: 60 in Blood Pressure: / mmHg Heart Rate: 66 bpm

Weight: 145 lbs ☐ Patient unable to be weighed

Tobacco Use: ○ Never ○ Current ○ Quit within past 12 months ○ Quit more than 12 months ago ☐ Patient Asked, during any previous encounter in the past 24 months, about the use of Tobacco.

--> If Current or Quit within 12 months, ☐ Cigarettes ☐ Cigars ☐ Pipe ☐ Smokeless

--> If Current or Quit within 12 months, Smoking Cessation Counseling: ○ No ○ Yes

Advance Care Plan OR Discussion of Advance Care Plan Documented: ○ No ○ Yes

Angina Symptoms and Activity Assessment(s)

CAD

CCS Class: ○ No Angina ○ I ○ II ○ III ○ IV ☐ Other Tool/Method Used to Asscess Angina Symptoms and Activity Completed.

☐ Seattle Angina Questionnaire Completed.

Plan of Care

CAD

Cardiac Rehabilitation Referral or Plan for Qualifying Event/Diagnosis in past 12 months:

Note: Cardiac event/diagnoses includes Myocardial Infarction, Valve surgery, Heart Transplant, CABG, PCI or new Stable Angina diagnosis.

○ Yes-Referral/Plan Documented ○ No Qualifying Event/Diagnosis ○ Patient Already Participating in Rehab

Internet

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[My Tasks:123] [Incoming Document Review Tasks:9] [Incoming Lab Review Tasks:51] [Nursing Secretary Tasks:1] [Doc Queue:13] [Physician:11]

WARNING: INACTIVE RECORD

MR: Unmatched-10003 Name: Duck, Daffy Dee DOB: 12/15/1920

DATE: 03/24/2009 PHYSICIAN: Mirro, Michael J. VIS.TYPE: IC3 Data Collection | IC3 Data Collection | View IC3DataCollection |

OmniScope | E-Chart | Checkin | E-Sign | Scheduler | Task List | Dictation | Coumadin | Intranet | Order Sets | IN-Paging | MIE Portal | Control | Reports | EOB/Chgs | Discharge | Nuclear Ex. | Echos | TechOmni | Fax Mgr | WebScan | Reference | Time Clock | Logout | TestTech

DEMOs | Orders/Lab Orders | Nurse Notes (4) | E-Meds (4) | Vitals | Trans (7) | Echo/Ultrasound (7) | DST/EKG (18) | ADC (1) | Labs (2) | Warfarin (2) | Misc (19) | Infusion (1) | Dictation (7)
Tasks (17) | Ins/Dis/Bill (179) | Conditions (10) | Appts (6) | Sum (30) | Observations (217) | Encounters (9) | COE Encounters | Warnings | Quick View | Forms Printed | Events (46) | PQRI
Patient Log | E-History

B. Diagnoses/Conditions/Co-Morbidities — **Note:** Indicate if the patient has a history of any of the following.

- Yes ☐ Conclude Coronary Artery Disease
- ☐ Atrial Fibrillation/Flutter
- ☐ Dyslipidemia
- ☐ Diabetes Mellitus
- ☐ Hypertension
- ☐ Systemic Embolism
- Yes ☐ Conclude Peripheral Arterial Disease
- Yes ☐ Conclude Prior Stroke/TIA
- ☐ Unstable Angina
- ☑ Heart Failure --> (If Yes), ☐ New diagnosis (within 12 months)
- ☐ Stable Angina --> (If Yes), ☐ New diagnosis (within 12 months)

C. Cardiac Events — **Note:** Indicate if the patient has a history of any of the following.

- ☐ Myocardial Infarction
- ☐ Yes ☑ No Coronary Artery Bypass Graft
- ☐ Yes ☑ No Cardiac Valve Surgery
- ☐ Yes ☑ No Heart Transplantation
- ☐ Yes ☑ No PCI - Bare Metal Stent Implant
- ☐ Yes ☑ No PCI - Drug Eluting Stent Implant
- ☐ Yes ☑ No PCI - Other (non-stent) Intervention

D. Encounter Information — **Note:** Complete only if assessed during today's encounter. If not assessed, leave blank.

Height: 60 in Blood Pressure: ___ / ___ mmHg Heart Rate: 66 bpm

Weight: 145 lbs ☐ Patient unable to be weighed

Tobacco Use: ○ Never ○ Current ○ Quit within past 12 months ○ Quit more than 12 months ago ☐ Patient Asked, during any previous encounter in the past 24 months, about the use of Tobacco.

--> If Current or Quit within 12 months, ☐ Cigarettes ☐ Cigars ☐ Pipe ☐ Smokeless

--> If Current or Quit within 12 months, **Smoking Cessation Counseling:** ○ No ○ Yes

Advance Care Plan OR Discussion of Advance Care Plan Documented: ○ No ○ Yes

Angina Symptoms and Activity Assessment(s)

CAD

CCS Class: ○ No Angina ○ I ○ II ○ III ○ IV ☐ Other Tool/Method Used to Assess Angina Symptoms and Activity Completed.

☐ Seattle Angina Questionnaire Completed.

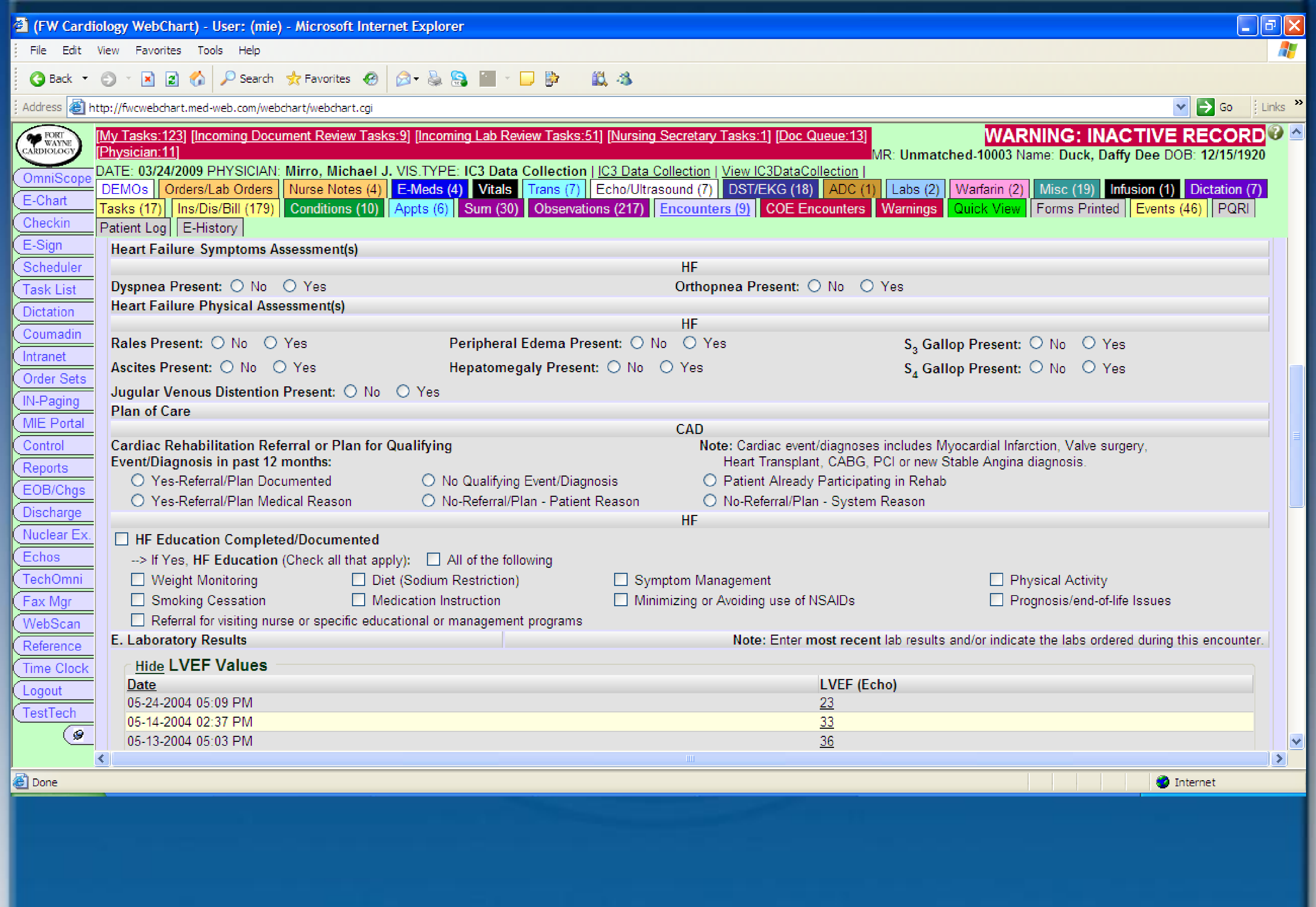
Heart Failure Activity Assessment(s)

HF

NYHA Class: ○ I ○ II ○ III ○ IV ☐ Chronic Heart Failure Questionnaire from Guyatt Completed.

☐ Kansas City Cardiomyopathy Questionnaire Completed. ☐ Other Tool/Method Used to Assess Heart Failure Activity Completed.

Done Internet



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Address http://fwcwebchart.med-web.com/webchart/webchart.cgi
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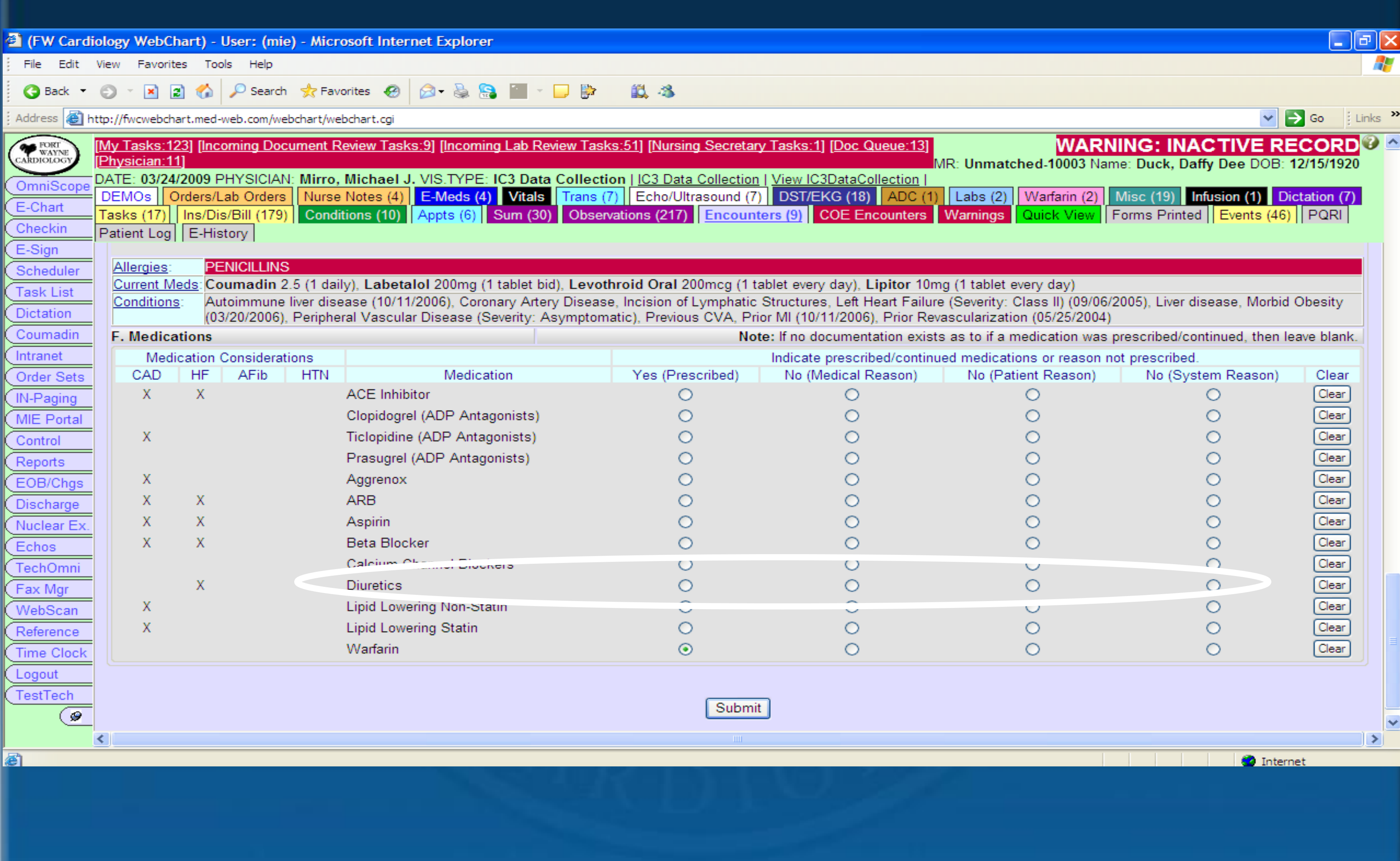
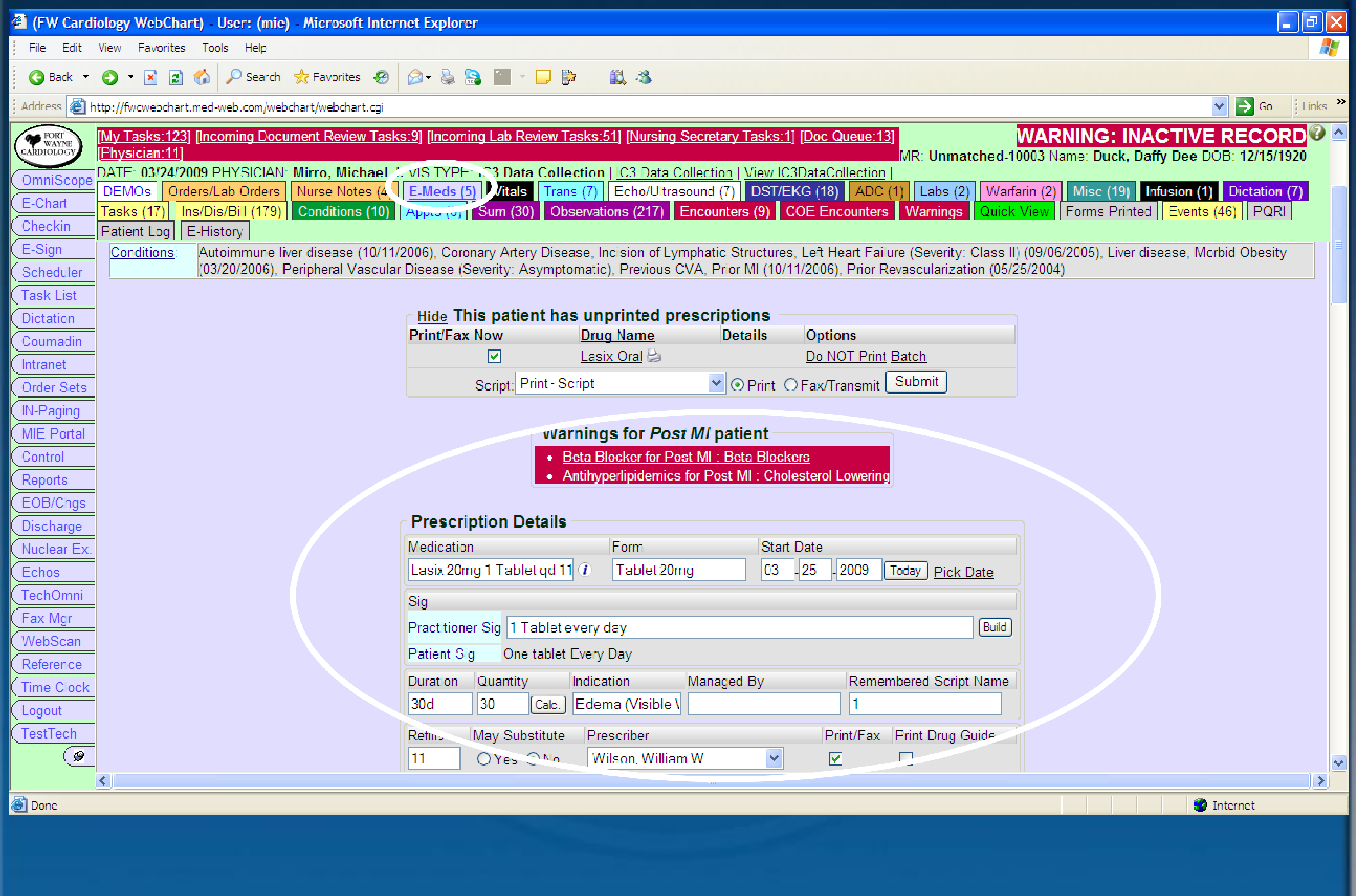
[My Tasks:123] [Incoming Document Review Tasks:9] [Incoming Lab Review Tasks:51] [Nursing Secretary Tasks:1] [Doc Queue:13] [Physician:11]
WARNING: INACTIVE RECORD
MR: Unmatched-10003 Name: Duck, Daffy Dee DOB: 12/15/1920
DATE: 03/24/2009 PHYSICIAN: Mirro, Michael J. VIS.TYPE: IC3 Data Collection | IC3 Data Collection | View IC3DataCollection |
DEMOs Orders/Lab Orders Nurse Notes (4) E-Meds (4) Vitals Trans (7) Echo/Ultrasound (7) DST/EKG (18) ADC (1) Labs (2) Warfarin (2) Misc (19) Infusion (1) Dictation (7)
Tasks (17) Ins/Dis/Bill (179) Conditions (10) Appts (6) Sum (30) Observations (217) Encounters (9) COE Encounters Warnings Quick View Forms Printed Events (46) PQRI
Patient Log E-History
OmniScope
E-Chart
Checkin
E-Sign
Scheduler
Task List
Dictation
Coumadin
Intranet
Order Sets
IN-Paging
MIE Portal
Control
Reports
EOB/Chgs
Discharge
Nuclear Ex.
Echos
TechOmni
Fax Mgr
WebScan
Reference
Time Clock
Logout
TestTech
Heart Failure Symptoms Assessment(s)
HF
Dyspnea Present: No Yes
Orthopnea Present: No Yes
Heart Failure Physical Assessment(s)
HF
Rales Present: No Yes
Peripheral Edema Present: No Yes
S_3 Gallop Present: No Yes
Ascites Present: No Yes
Hepatomegaly Present: No Yes
S_4 Gallop Present: No Yes
Jugular Venous Distention Present: No Yes
Plan of Care
CAD
Cardiac Rehabilitation Referral or Plan for Qualifying Event/Diagnosis in past 12 months:
Note: Cardiac event/diagnoses includes Myocardial Infarction, Valve surgery, Heart Transplant, CABG, PCI or new Stable Angina diagnosis.
Yes-Referral/Plan Documented
No Qualifying Event/Diagnosis
Patient Already Participating in Rehab
Yes-Referral/Plan Medical Reason
No-Referral/Plan - Patient Reason
No-Referral/Plan - System Reason
HF
HF Education Completed/Documented
--> If Yes, HF Education (Check all that apply): All of the following
Weight Monitoring
Diet (Sodium Restriction)
Symptom Management
Physical Activity
Smoking Cessation
Medication Instruction
Minimizing or Avoiding use of NSAIDs
Prognosis/end-of-life Issues
Referral for visiting nurse or specific educational or management programs
E. Laboratory Results
Note: Enter most recent lab results and/or indicate the labs ordered during this encounter.
Hide LVEF Values
Date
LVEF (Echo)
05-24-2004 05:09 PM
23
05-14-2004 02:37 PM
33
05-13-2004 05:03 PM
36
Done
Internet


(FW Cardiology WebChart) - User: (mie) - Microsoft Internet Explorer
http://fwcwebchart.med-web.com/webchart/webchart.cgi
WARNING: INACTIVE RECORD
MR: Unmatched-10003 Name: Duck, Daffy Dee DOB: 12/15/1920
DATE: 03/24/2009 PHYSICIAN: Mirro, Michael J. VIS.TYPE: IC3 Data Collection
Allergies: PENICILLINS
Current Meds: Coumadin 2.5 (1 daily), Labetalol 200mg (1 tablet bid), Levothroid Oral 200mcg (1 tablet every day), Lipitor 10mg (1 tablet every day)
Conditions: Autoimmune liver disease (10/11/2006), Coronary Artery Disease, Incision of Lymphatic Structures, Left Heart Failure (Severity: Class II) (09/06/2005), Liver disease, Morbid Obesity (03/20/2006), Peripheral Vascular Disease (Severity: Asymptomatic), Previous CVA, Prior MI (10/11/2006), Prior Revascularization (05/25/2004)
F. Medications
Note: If no documentation exists as to if a medication was prescribed/continued, then leave blank.
Medication Considerations
Indicate prescribed/continued medications or reason not prescribed.
CAD
HF
AFib
HTN
Medication
Yes (Prescribed)
No (Medical Reason)
No (Patient Reason)
No (System Reason)
Clear
ACE Inhibitor
Clopidogrel (ADP Antagonists)
Ticlopidine (ADP Antagonists)
Prasugrel (ADP Antagonists)
Aggrenox
ARB
Aspirin
Beta Blocker
Calcium Channel Blockers
Diuretics
Lipid Lowering Non-Statin
Lipid Lowering Statin
Warfarin
Submit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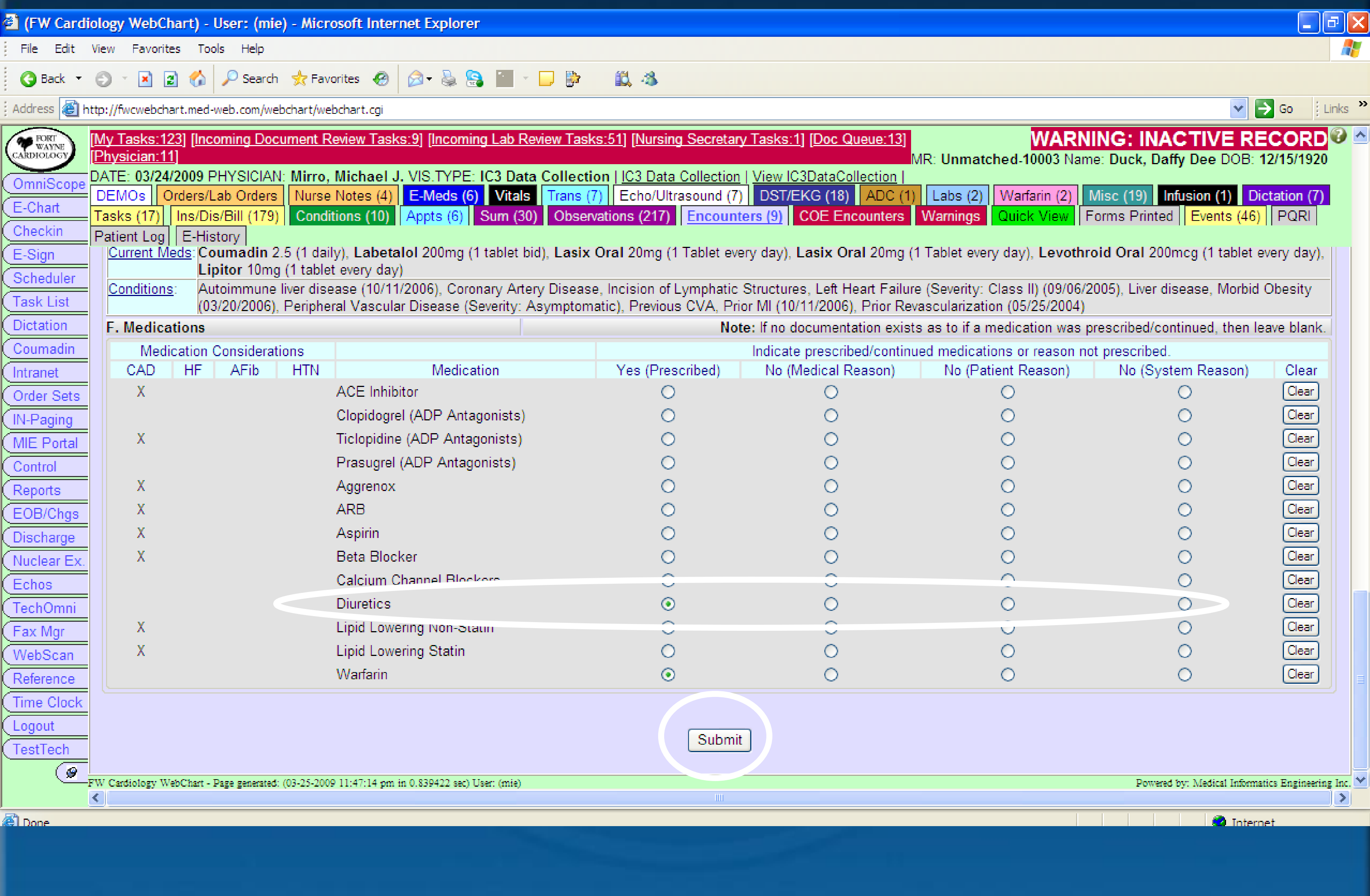
This patient has unprinted prescriptions
Lasix Oral
Warnings for Post MI patient
Beta Blocker for Post MI : Beta-Blockers
Antihyperlipidemics for Post MI : Cholesterol Lowering
Prescription Details
Lasix 20mg 1 Tablet qd 11
Tablet 20mg
Practitioner Sig 1 Tablet every day
Patient Sig One tablet Every Day
Edema (Visible
Wilson, William W.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DATE: 03/24/2009 PHYSICIAN: Mirro, Michael J. VIS.TYPE: IC3 Data Collection | IC3 Data Collection | View IC3DataCollection |
Current Meds: Coumadin 2.5 (1 daily), Labetalol 200mg (1 tablet bid), Lasix Oral 20mg (1 Tablet every day), Lasix Oral 20mg (1 Tablet every day), Levothroid Oral 200mcg (1 tablet every day), Lipitor 10mg (1 tablet every day)
Conditions: Autoimmune liver disease (10/11/2006), Coronary Artery Disease, Incision of Lymphatic Structures, Left Heart Failure (Severity: Class II) (09/06/2005), Liver disease, Morbid Obesity (03/20/2006), Peripheral Vascular Disease (Severity: Asymptomatic), Previous CVA, Prior MI (10/11/2006), Prior Revascularization (05/25/2004)
F. Medications
Note: If no documentation exists as to if a medication was prescribed/continued, then leave blank.
Medication Considerations
Indicate prescribed/continued medications or reason not prescribed.
CAD HF AFib HTN Medication Yes (Prescribed) No (Medical Reason) No (Patient Reason) No (System Reason) Clear
ACE Inhibitor
Clopidogrel (ADP Antagonists)
Ticlopidine (ADP Antagonists)
Prasugrel (ADP Antagonists)
Aggrenox
ARB
Aspirin
Beta Blocker
Calcium Channel Blockers
Diuretics
Lipid Lowering Non-Statin
Lipid Lowering Statin
Warfarin
Submit
FW Cardiology WebChart - Page generated: (03-25-2009 11:47:14 pm in 0.839422 sec) User: (mie)
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EHR with integrated IC^3

- Simplified data collection and reporting
  - Existing data in EHR can populate collection forms
  - As you document encounters in EHR, that data can also populate collection form
  - At conclusion of encounter, completed collection form is submitted and transmitted to ACC for entry into IC^3 database

Initial EHR Adoption Steps

- Organizational Change Assessment
- Implementation Plan
- Develop HIT Implementation Teams
- Identify Physician Champions
- Workflow : Focus on resistant users
- HIT Vendor Selection (CCHIT & IHE)
- Incremental Approach

Minimally Invasive Investment

- Web-based EMR
  - Minimal up-front investment
  - Accessible from any PC with a Web browser, anywhere, anytime
- Incremental, scalable EMR
  - Pay for what you need, when you need it
  - Don't pay for what you don't need
- Interoperable EMR
  - No/low cost integration – Require IHE Certification and *proof* of interoperability.

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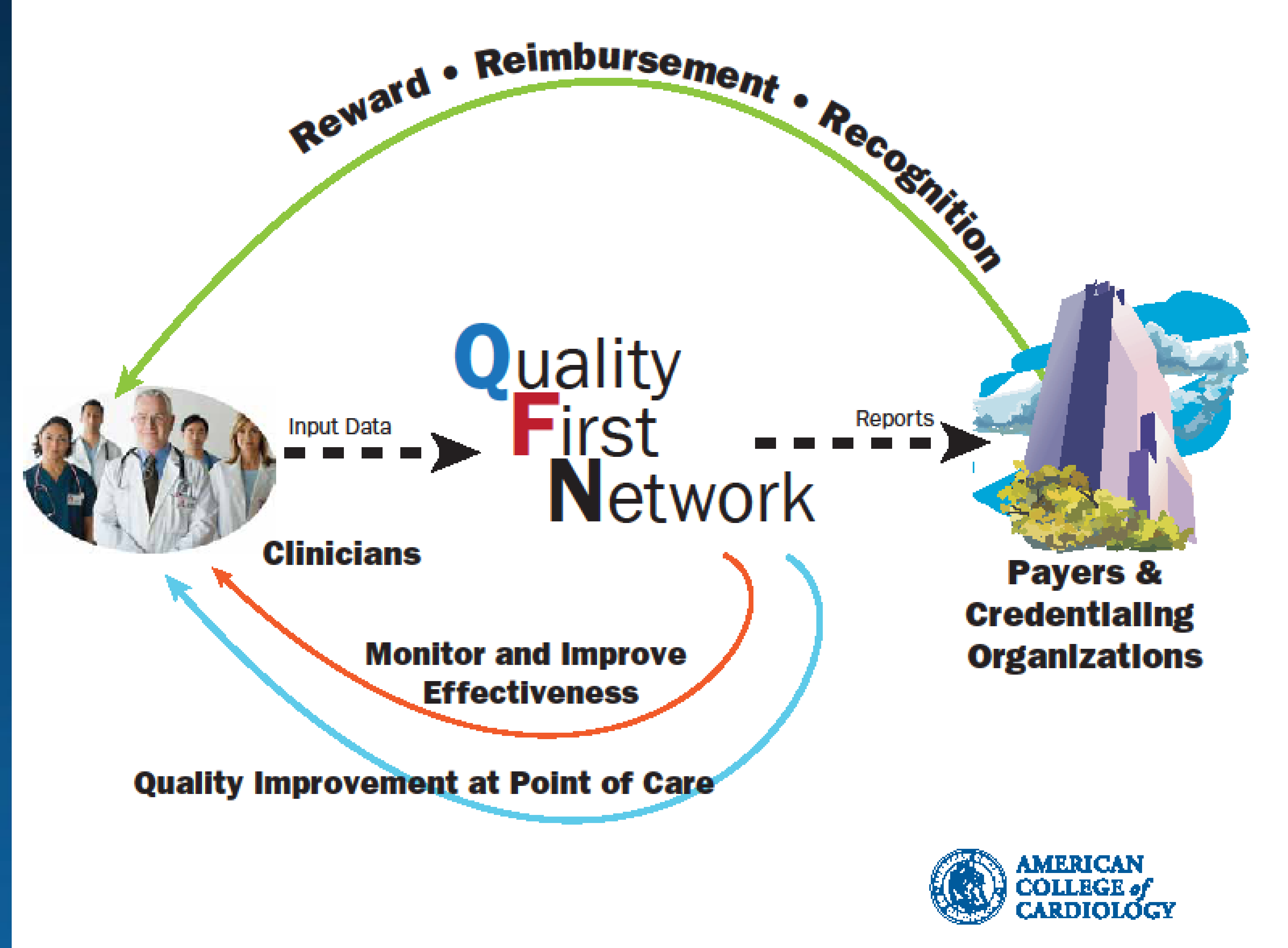
HIT and Aviation

- Complex Tool Sets
- Training Essential to Success
- Implementation Plan Key
- Good Technology cannot Succeed without Infrastructure Support
- Technology Upgrades require Retraining
- Good and Poor Technology Design Exist


Reward • Reimbursement • Recognition
Input Data
Quality
First
Network
Reports
Clinicians
Payers &
Credentialing
Organizations
Monitor and Improve
Effectiveness
Quality Improvement at Point of Care
AMERICAN
COLLEGE of
CARDIOLOGY

Data Collection and Reporting (NCDR)

Research

Cardiovascular Recognition Program

Professional Success

Community

Performance Improvement Programs

Practice Transformation

Life Long Learning

Members

Member Value and Practice Viability

- Position practices to thrive in payment models that reward quality, equity and value
- Platform to influence national, regional, and local decision-makers
- Foster effectiveness, innovation, and sharing of best practices