EHR-Enhanced QI:
Insights from the NYC DOHMH experience
The Primary Care Information Project

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PCPCC Presentation
July 8th, 2010

AGENDA

- **EHR Characteristics that Support QI**
- Brief Overview of the PCIP & Suite of Services
- Insights from the Quality Improvement Team
- Lessons Learned – Preliminary Observations
- PCIP's next steps

A brief history: NYC DOHMH & primary care interventions

NYC Department of Health & Mental Hygiene (DOHMH)
- Mission: To improve the health of all New Yorkers
- One strategy: Improve the delivery of clinical services

Primary Care in NYC
- 7500+ primary care doctors
- >20 multiple site FQHCs
- 77 primary care residency programs (IM/PEDS/FM)

Two DOHMH programs focused on improving clinical care
- Clinical Systems Improvement
- Primary Care Information Project (PCIP)

Clinical Systems Improvement

- Established 2002
- Mission – To improve clinical management & delivery of preventive services in primary care by sharing the best available scientific knowledge on evidence-based care & introducing methods and tools that support delivery of care which is consistent with best practice standards
- Methods
  - Quality Improvement Collaboratives (40+ practices)
  - Public Health Detailing (>1500 practices)
  - Practice staff training – SM support, CCM, MFI
  - Developing the business case for quality

Primary Care Information Project

- Established 2005
- Mission – To improve the quality of care in medically underserved areas through health information technology (HIT)
- Methods (initial)
  - Develop an electronic health record (EHR) for public health
  - Establish routine, automated, confidential quality indicator reporting
  - Support EHR adoption & EHR use for quality improvement (>1500 providers)

The Opportunity

Apply lessons learned from QI work in primary care to EHR development process to:

- address barriers to implementing best practices
- improve workflows and staff utilization
- support adoption of population management
- enhance patient education and SM support

QI Principles Supported by the EHR

Give the right care at the right time
- Point of care reminders / alerts
- Evidence-based treatment options for measures / order sets

Everyone gets the care they need (population management)
- Detailed "patient panel" reports

Performance feedback is credible and timely
- Primary care giver (responsible party) clearly identified
- Reports based on current clinical data
- Flexible query function for getting more specific data within a measure
- Citywide data available for benchmarking

Care is reliable and efficient
- Standardized workflow
- Clinical practice expectations clear

EHR characteristics that support QI

- Role-based access
- Structured data collection fields
- Clinical decision support tools
- Registry function
- Standardized reporting
- Query tools for ad hoc reporting

Role-Based Access

- Identify “what needs to be done and by whom”
- Facilitate all staff members working to the maximum capacity of their licensure and “frontloading” care
- Support team based care

eClinicalWorks (Willis,Sam , MD)

File Patient Schedule EMR Billing Reports Fax Tools Community Lock Workstation Help

eClinicalWorks 7.0

S 0 D 0 R 0 T 1 L 0 M 3

Admin
Practice
Resource Sche...
Willis,Sam
Office Visits
Progress Notes
Telephone/We...
Labs/Imaging
Out of Office Vi...
Lookup Encoun...
Review Progre...
Recalls
Referrals
Messages

Progress Notes

test test, 36 Y, M Sel Info Hub

Allergies | Appt(L): 09/21/07 PCP: Willis, Sam | Ins: Self Pay Acc Bal: $0.00 | CLICK TO EDIT | SECURE NOTES | ADV DIRECTIVE

Medical Summa...

SF Tobacco Co...

Patient: test
Phone: Prim...
Address:
Encounter D...

Subjective
Chief Con...
HPI:
Depressi...
PHQ-...
Feeling down ... they would b... Depression.
Current M...
Medical H...
Allergies/...
Gyn Histo...
OB Histor...
Surgical H...
Hospitaliz...
Family Hi...
Social His...
Tobacco...
- Smokir...
Drug/Alc...
- Alcoho...
ROS:

Objective:
Vitals:
Past Order(s):
Examination:
Physical Examination:

Assessment:

Speciality Forms - Patient : (test, test) - ID : (9102)

Test Facility

Ph: Fax:

Tobacco Control(TCNY 2)

Name: test test   Date: 09/21/2007

Are you a:

- [x] current smoker
- [ ] former smoker
- [ ] never smoker

If 'current smoker' : How often do you smoke cigarettes?

- [ ] every day
- [ ] some days, but not every day

If 'current smoker' : How many cigarettes a day do you smoke?

- [ ] 5 or less
- [ ] 6-10
- [ ] 11-20
- [ ] 21-30
- [ ] 31 or more

If 'current smoker' : How soon after you wake up do you smoke your first cigarette?

- [ ] within 5 min
- [ ] 6-30 min
- [ ] 31-60 min
- [ ] after 60 min

Print Preview... | Print... | Fax | Save | Close

09/21/2007

Labs|DI

...ding]

	Days Left
...on	+2
...ablet	+5
...capsule	+25

eClinicalWorks (Willis,Sam , MD)

File Patient Schedule EMR Billing Reports Fax Tools Community Lock Workstation Help

Progress Notes

test test, 36 Y, M

Speciality Forms - Patient : (test, test) - ID : (9102)

Test Facility

Ph: Fax:

Fax-to-Quit

Fax Referral Form

Name: test test Today's Date: 09/25/2007

Account No: 9102 DOB: 12/13/1970

TOBACCO TREATMENT CHECKLIST

ADVISE smoker to stop smoking. Recommended stop-smoking advice:

"I strongly advise you to quit smoking and can help you."

ASSESS readiness to quit:

☐ Ready to quit ☐ Thinking about quitting ☐ Not ready to quit

ASSESS smoker to quit:

☐ Brief Counseling ☐ Medications if appropriate:

Nicotine Replacement: ☐ patch ☐ gum ☐ lozenge ☐ inhaler ☐ nasal spray

Other: ☐ bupropion (Zyban or Wellbutrin) ☐ varenicline (Chantix)

ARRANGE Follow-up: ☑ Refer to NYS Smokers' Quitline by faxing this page (toll-free) to **1-866-QUIT-FAX (1-866-784-8329)**

REFERRAL SOURCE

NAME: Sam Willis MD PHONE:

INSTITUTION/ORGANIZATION: Test Facility FAX:

ADDRESS:

DO NOT CALL PATIENT UNTIL AFTER (MM/DD/YYYY)

CITY/STATE/ZIP CODE:

Send progress report to (If different from above)

NAME: PHONE:

INSTITUTION/ORGANIZATION: FAX:

Print Preview... Print... Fax Save Close

Patient: test
Phone: Prim
Address:
Encounter D

Subjective
Chief Con
HPI:
Depressi
PHQ-
Feeling down
they would b
Depression.
Current M
Medical H
Allergies
Gyn Histo
OB Histor
Surgical H
Hospitaliz
Family Hi
Social His
Tobacco
- Smokir
Drug/Alc
- Alcoho
ROS:

Objective:
Vitals:
Past Order(s):
Examination:
Physical Examination:

Assessment:

Print Fax Record Lock Details Scan Templates Claim Letters Ink

1:08 PM

Structured Data Collection

What

- Entering patient information in a predetermined (not free text) format, i.e. Boolean, pick list, numeric, and date.

Why

- Structured data entry makes it possible to retrieve data and generate reports easily. Information entered in the narrative section only cannot be aggregated for reports.

Example:

- MA takes vitals of patient with hypertension
- MA enters BP of 142/82 in designated BP field
- MD repeats BP reading and enters new BP of 128/78 in comments section of physical exam screen
- When registry report of patients with uncontrolled hypertension (BP **not** less than 130/80) is run, this pt is listed on the report
- When performance feedback report is run, this patient is **not** counted as having BP<130/80

eClinicalWorks (Willis,Sam , MD)

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eClinicalWorks 7.0

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Admin
Practice
Resource Sche...
Willis,Sam
Office Visits
Progress Notes
Telephone/We...
Labs/Imaging
Out of Office Vi...
Lookup Encoun...
Review Progre...
Recalls
Referrals
Messages
Documents
Billing

Progress Notes

test test, 36 Y, M(T) Sel Info Hub

DOB:12/13/1970

Allergies
Billing Alert

Wt: 179 lbs.
Appt(L): 10/10/07
PCP: Willis, Sam
Language:
Translator: No

Ins: NY medicaid
Acc Bal: $0.00
Guar: test test
Gr Bal: $0.00
Ren: Willis, Sam

CLICK TO EDIT

SECURE NOTES

ADV DIRECTIVE

Medical Summary | Alerts | Labs | DI | Growth Chart | Immunization | Encounters | Patient Docs | Flowsheets | Notes

SF

no Diminished vision.

PSYCHOLOGY

no Depression. no S

RESPIRATORY

no Cough. no Troubl

UROLOGY

no Blood in urine. no

Objective:

Vitals:

BP 142/81, 129/79

Past Order(s):

Examination:

Physical Examination:

Assessment:

Assessment:

- ROUTINE MEDICAL EX

Plan:

Treatment:

ROUTINE MEDICAL EXAM

Start Tenormin tablet

Start Atacand tablet

Procedures:

Immunizations:

Diagnostic Imaging:

Lab Reports:

Lab:LFT

Preventive Medicine:

Next Appointment:

Billing Information:

Visit Code:

Vitals (test, test 2007-10-10 15:30:00 ANN) *

Pt. Info Physical

Date	*HR(/min)	*BP(mm Hg	*RR(/min)	*Temp(F)	*Pain scale(	*Ht(in)	*Wt(lbs)	*BI
10/10/2007 *		142/81, 129						
10/10/2007			12		7	68	179	27.
10/04/2007								
10/04/2007	100	1						
10/04/2007								
10/03/2007								
10/03/2007								
09/26/2007								
09/26/2007								
09/24/2007								
09/21/2007								
09/21/2007								

Vitals

*BP(mm Qualifier

Delete Default

142/81
128/78

1 2 3 4 5
6 7 8 9 0
. C / Bkspc

< Prev Next > Billable Apply Cancel

Note: Please do not use units of measurement as qualifiers

ROS Vitals Taken Growth Charts Graph Ht/Wt Physical Exam

Encounters 10/10/2007

History Alerts Labs|DI

ce Directive

m List

NIDDM [w/u pending]

Diabetes mellitus type 1 [w/u pending]

t Medications Days Left

mg tablet +29

00 mg tablet +29

es

itors

muslce aches

Nasal - anaphylaxis

ization

(adult)

(20 and more)

ccal

Print Fax Record Lock Details Scan Templates Claim Letters Ink Tx

Start 191... RA... 1_0... HIP... RDP... Q:\... Inb... Nur... Ast... eCli... My ... Micr... Vital... 6:31 PM

Clinical Decision Support System (CDSS)

Clinical Decision Support Systems are active knowledge systems which use patient data (e.g. sex, age, diagnoses) to generate case specific recommendations

Point of Care Reminders (alerts, highlighting, etc.)

- Mammogram coming due
- A1c >9
- Smoking cessation counseling recommended

Interactive forms (“Smart forms”)

- Initial Visit (pictured to the right)
- PHQ 9
- Asthma Severity Assessment
- AUDIT- C

Order Sets

- Smoking cessation (e.g. assessment, educational materials, referral, prescribe cessation med)
- Asthma (e.g. prescribe appropriate med, education, referral for specialty care, spirometry)

Registry reports

- Patients overdue for colonoscopy
- Patients with diabetes who will need a flu shot

TEST Test, 58 Y, M Sel Info Hub

DOB:01/01/1950

Allergies
Billing Alert

Appt(L): 04/23/08
Language:
Translator: No

Ins: Self Pay
Acc Bal: $0.00
Guar: John Test
Gr Bal: $0.00

CLICK TO EDIT

SECURE NOTES

ADV DIRECTIVE

Medical Summary | CDSS | Labs | DI | Procedures | Growth Chart | Immunization | Encounters | Patient Docs | Flowsheets | Notes

SF Rel Bulleted Encounters 04/23/2008

Allergies/Intolerance:
Gyn History:
OB History:
Surgical History:
Hospitalization:
Family History:
Social History:

Tobacco Use:

- Smoking: Are you a:: never smoker .

Sexual Hx:

- Sexual Hx: Had sex in the past 12 months (vaginal, oral, or anal): Yes, with: Women only, Use protection?: Yes, How often?: All of the time, STD prevention strategies discussed: Abstinence, Have you ever had an STD?: Yes, Chlamydia?: Yes.

Drug/Alcohol:

- Alcohol Screen: Points: 4, Interpretation: Positive.

ROS:

Objective:

Vitals:
Past Results:
Examination:
Physical Examination:

Overview History CDSS OS Labs|DI

CDSS Alerts

- Colorectal cancer screening
- HIV screening
- LDL testing (high risk)
  - LIPID PROFILE Other Actions
- A1C testing
- BP control in DM (130/80)
  - DM - BP Control
- Body Mass Index updated
- Antithrombic tx (IVD or DM)

Actionable, non-intrusive alert will show on the right-pane.

Print Fax Record Lock Details Scan Templates Claim Letters Ink Tx

CDSS Example – Order Set

Order Sets

ORDER SET: DM - HgA1C < 7% | New | Update | Delete | **MEASURE:** 361 | **QUICK ORDER SET:** NO | Release Modifications

COMMUNITY ADMINISTRATOR

DIAGNOSES (TRIGGER):

250.00 Diabetes mellitus type II

DIAGNOSES (LINKED):

Rx (Browse)

Name	Strength	Take	Frequency	Duration	Refills	Route	Formulation	Dispense	Delete
acarbose		1 tab(s)				orally	tablet	90	
rosiglitazone		1 tab(s)				orally	tablet	60	
glyburide-metformin		1 tab(s)				orally	tablet	60	
glyburide		1 tab(s)				orally	tablet	30	
metformin		1 tab(s)				orally	tablet, extended release	30	
metformin-rosiglitazone		1 tab(s)				orally	tablet	60	
pioglitazone		1 tab(s)				orally	tablet	30	
glipizide		1 tab(s)				orally	tablet	30	
insulin regular		0.1 units/kg				subcutaneously	solution		
insulin aspart		0.5 units/kg/day				subcutaneously	solution		
insulin glulisine		0.15 units/kg				subcutaneously	solution		
insulin lispro		15 units				subcutaneously	injection		
Insulin syringe 1 CC		1 tab				Oral			
insulin glargine		0.3 units/kg				subcutaneously	solution		
insulin aspart-insulin aspart protamine		7 units				subcutaneously	suspension		

Labs (Browse)

Type	Description	Delete
C	Hgb A1c with MBG Estimation	
C	Microalb/Creat Ratio, Randm Ur	
C	Hepatic Function Panel (7)	
C	Basic Metabolic Panel (8)	

Diagnostic Imaging (Browse)

Type	Description	Delete

Procedures (Browse)

Type	Description	Delete
C	REAGENT STRIP/BLOOD GLUCOSE	

Immunizations (Browse)

Name	Dose	Delete
Influenza		
Pneumococcal		

Smart Forms (Add)

Name	Delete

Appointments (Add Follow-Up)

Referrals (Add)

- Outgoing Referral for: Endocrinology
- Outgoing Referral for: Ophthalmology
- Outgoing Referral for: Podiatry

Physician Education

Patient Education

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SHARING

eClinicalWorks (Willis,Sam D, Jr.)

File Patient Schedule EMR Billing Reports CCR Fax Tools | Lock Workstation Help

eClinicalWorks 7.0

N 0 E 13 S 2 D 181 R 90 T 206 L 3 M 7

Admin

Practice

Progress Notes

Mary Smith, 39 Y, F Sel Info Hub

Alerts

Show All Alerts

Id	Name	Freq
360-CE	Measure 360-CE	12 M
361-CT	Measure 361-CT	12 M
362-CE	Measure 362-CE	12 M
359-CM	DM A1C Control	6 M
363-CM	Measure 363-CM	12 M
364-CE	Measure 364-CE	12 M
101-OI	PCP Visit	12 M
310-CX	BMI Monitor	24 M
350-CE	DM - LDL Control	12 M

Order

Order

Order

Historical Data

Historical Data

Mary Smith, 112 T

Sex: female

Suppress Alert

Suppress Until

Never Remind

RESET...

10/11/2007

1W	2W	3W	4W
6W	2M	3M	4M
6M	1Y	2Y	3Y

- MEDICAL REASON
- PATIENT REASON
- SYSTEM REASON
- ERRONEOUS DIAGNOSIS

Reason* Browse... Time Stamp

OK Cancel

Resource

JONES,M

Testino,

Willis,Sa

Office V

Test, L

M,ELAI

Recalls

Referrals

Messages

Documents

Lab:HbA1C

7.5.

Preventive Medicine:

Next Appointment:

Start | Inbox - Microsoft O... | WebEx Client Entry ... | eCW-custom-meeti... | You are viewing: Ch... | 10:40 AM

Registry

What

- A system for collecting and maintaining relevant clinical data for patients to be used to monitor and improve the care of the population

Why

- Anticipate (who will need a flu shot)
- Prepare (who is coming in for hypertension planned visit and what will they need during the visit)
- Recall (who is overdue for mammogram)
- Stratify (who is in greatest need of outreach and support)

How

- Run standard set of reports on predetermined schedule
- Review and formulate recommendations for follow up (e.g. order test, schedule appt.)
- Develop systems for follow up (phone outreach, mail merges for batched reminder letters, care management)

Who

- Designated panel manager
- Functions delegated to different members of the care team with one individual responsible for oversight and coordination of registry functions

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eClinicalWorks 7.0

S 0 D 9 R 14 T 11 L 9 M 0

Admin
Practice
Recalls
Patient Recall
Lookup Encoun...
Registry
Registry Reports
Quality Measures
Define Measure
Referrals
Messages
Documents
Billing

Registry

Medical History | Immunization | Encounters / Visits | Structured Data | Saved Reports | Referrals | Generate Reports
Demographics | Vitals | **Labs / DI** | ICD | CPT | Rx | Alerts

Labs | Lipid Profile | Sel

Attribute	Lower Limit	Upper Limit
RISK RATIO (CHOLHDL)		
CHOLESTEROL	150	
CALCULATED LDL CHOL		

Results Date Range 7 /26/2005 to 7 /26/2007
Fasting status
Number of tests >= Include tests with no results
Query Attributes ☑

Save Queries | Run Subset (NOT) | Run Subset | Run New

☑	Patient Name	DOB	Sex	Age	Tel. No	Acc #
☑	ABBOTT, MONICA	11/03/1964	F	42Y	508-836-3663	
☑	ADAIR, LINDA	12/17/1946	F	60Y	508-836-3663	
☑	ADAM, JEFFREY	01/01/1976	M	31Y	508-836-3663	
☑	ADAMS, ART	12/02/1957	M	49Y	508-836-3663	
☑	ADAMS, MARK	08/30/1955	M	51Y	508-836-3663	
☑	AKE, DIANNE	03/12/1958	F	49Y	508-836-3663	
☑	ALDERETE, AUGUSTINA	07/23/1951	F	56Y	508-836-3663	
☑	ALDERETE, PATRICIA	09/07/1958	F	48Y	508-836-3663	
☑	ALEMAN, JOHN	01/22/1954	M	53Y	508-836-3663	
☑	ALKIER, MICHAEL	08/07/1959	M	47Y	508-836-3663	
☑	ALLEN, GEORGIA	06/17/1967	F	40Y	508-836-3663	
☑	ALMAZAN, HECTOR	06/26/1950	M	57Y	508-836-3663	
☑	ALTMAN, JAMES	07/02/1943	M	64Y	508-836-3663	
☑	AMMONS, CHANTEL	04/27/1972	F	35Y	508-836-3663	
☑	ANDERSON, JAMES	07/24/1945	M	62Y	508-836-3663	
☑	ANDERSON, ROBERT	09/24/1942	M	64Y	508-836-3663	

Demographics :: Age >=18 AND Age <=65 AND Sex = Both
ICD :: 401.9
Labs :: Lipid Profile AND CHOLESTEROL >=150 AND Date >= 07/26/2005 AND Date <= 07/26/2007 AND Search Lab Attributes

Choose Letter ... | Run Letter | < Prev | Next > | 1-25 | of 1039 records

25 | Patient Hub | New Appointment | Copy | Send eMessage | Flowsheet | Exclude From Search | DOQ-IT

Start | eClinicalWorks - Microsof... | eClinicalWorks (WILLIS,S... | Tomcat

Start | Inbox - Microsoft O... | WebEx Client Entry ... | eCW-custom-meeti... | You are viewing: Ch... | 10:48 AM

You are viewing: Cheryl Bombard's Desktop

eClinicalWorks 7.0

S 0 D 9 R 14 T 11 L 9 M 0

Admin
Practice
Recalls
Patient Recall
Lookup Encoun...
Registry
Registry Reports
Quality Measures
Define Measure
Referrals
Messages
Documents
Billing

Registry

Medical History | Immunization | Encounters / Visits | Structured Data | Saved Reports | Referrals | Generate Reports
Demographics | Vitals | Labs / DI | ICD | CPT | Rx | Alerts

Drug Class | Sel

Prescribed As

Current Medica

Drug Class Selection

Search By Drug Name | lipitor

Drug Class Name	Drug Name
HMG-CoA reductase inhibitors	Lipitor

25 | << Prev | Next >> | Show Drugs | OK | Cancel

(NOT) | Run Subset | Run New

Patient					Acc #
ABBOTT, MONI					
ADAIR, LINDA					
ADAM, JEFFREY					
ADAMS, ART					
ADAMS, MARK					
AKE, DIANNE					
ALDERETE, AUG					
ALDERETE, PAT					
ALEMAN, JOHN					
ALKIER, MICHA					
ALLEN, GEORGI					
ALMAZAN, HEC					
ALTMAN, JAMES					
AMMONS, CHAN					
ANDERSON, JAMES	07/24/1945	M	62Y	508-836-3663	
ANDERSON, ROBERT	09/24/1942	M	64Y	508-836-3663	

Demographics :: Age >=18 AND Age <=65 AND Sex = Both
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Choose Letter ... | Run Letter | < Prev | Next > | 1-25 | of 1039 records

25 | Patient Hub | New Appointment | Copy | Send eMessage | Flowsheet | Exclude From Search | DOQ-IT

Start | eClinicalWorks - Microsof... | eClinicalWorks (WILLIS,S... | Tomcat

Start | Inbox - Microsoft O... | WebEx Client Entry ... | eCW-custom-meeti... | You are viewing: Ch... | 10:49 AM

Performance Feedback

Performance Feedback reports can be used to:

- Identify systems issues in need of remediation or duplication
- Identify variation: learn from top performers & provide support to providers who may be struggling
- Identify areas for focused QI work
- Identify gaps in knowledge and skills
- Drive and assess ongoing quality improvement work at the provider, practice, and site levels

Effective feedback depends on:

- Clear understanding of what the measures represent
- Accuracy of reports
- Regular and routine dissemination
- Availability of meaningful comparison and benchmark data
- The spirit in which feedback is provided
- The support that is provided for QI work

Quality Measures

eClinicalWorks (Willis,Sam , MD)

File Patient Schedule EMR Billing Reports CCR Fax Tools Community Lock Workstation Help

eClinicalWorks 8.0

P 0 E 0 S 0 D 19 R 84 T 109 L 0 M 90

Admin
Practice
Registry

Patient Recall
Lookup Encount...
Registry
Registry Reports
Quality Measures

QualityMeasures

Quality Measure Reports

Run Date 06/09/2010

Measure Dictionary Quality Measures

Measure Name (330-CT)Cholesterol control (g

Reporting Interval Annually

Reporting End Date 06/09/2010

Reporting Begin Date 06/09/2009

☐ **Exclusions**

Submit Clear

Numerator:
Number of patients in denominator having {total cholesterol <240 and no LDL recorded} OR {LDL<160} on their most recent measurement

Denominator:
Number of male patients at least 35 years of age, and female patients, at least 45 years of age, AND who do not have a diagnosis of IVD or diabetes, AND having a documented visit in the reporting period, and having both HDL and total cholesterol levels recorded anytime in the past 60 months (Numerator of 322)

To generate quality measure for historical dates, run migrate vitals utility for the specific date range. To migrate vitals click on tools menu -> Migrate vital or go to registry band -> vitals tab -> click on Migrate Vitals

Cross Tabs ☐ **Facility** ☐ **PCP** ☐ **PCG** ☐ **Insurance** ☐ **Race/Ethnicity** Refine

Numerator	Denominator	Percentage
9	13	69.23

Patient List - Windows Internet Explorer

PatientId	Patient Name	Sex	DOB	PCP	Insurance Name
10451	test, vicky	FEMALE	01/13/1963	Willis, Sam	UNKNOWN
10461	Test, PM6	FEMALE	11/11/1960	Willis, Sam	self-pay test
10480	Deck, Emma	FEMALE	05/01/1964	Willis, Sam	UNKNOWN
10481	Deck, Jacob	MALE	06/01/1949	Willis, Sam	UNKNOWN
10483	Deck, Logan	MALE	08/01/1939	Willis, Sam	UNKNOWN
10484	Deck, Sophia	FEMALE	09/01/1939	Willis, Sam	UNKNOWN
10498	One, B	FEMALE	11/11/1960	Willis, Sam	UNKNOWN
10542	Goode, Matthew	MALE	11/02/1967	Willis, Sam	HEALTH FIRST
10592	test, Y3	FEMALE	11/11/1960	UNKNOWN	Medicare
10595	test, Y6	FEMALE	11/11/1960	UNKNOWN	Medicare
10597	test, Y7	FEMALE	11/11/1960	UNKNOWN	Medicare
10644	Anthony, 4	FEMALE	11/11/1960	UNKNOWN	AFFINITY
10938	Torino, Lab	FEMALE	01/01/1950	Willis, Sam	UNKNOWN

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eClinicalWorks

Admin
Practice
Recalls
Patient Recall
Lookup Enc...
Registry
Registry Re...
Quality Mea...
Define Meas...
Summary R...
Referrals
Messages
Documents
Billing

QualityMeasures

Quality Measure Reports

Run Date

Measure Name Measure 350-CE

Reporting Interval Quarterly

Reporting Date Range 5/29/2006 to 08/29/2007

☑ **Exclusions**

Submit Clear

Cross Tabs ☑ Facility ☑ Provider ☐ Insurance ☐ Race Refine

Measure Definiton:

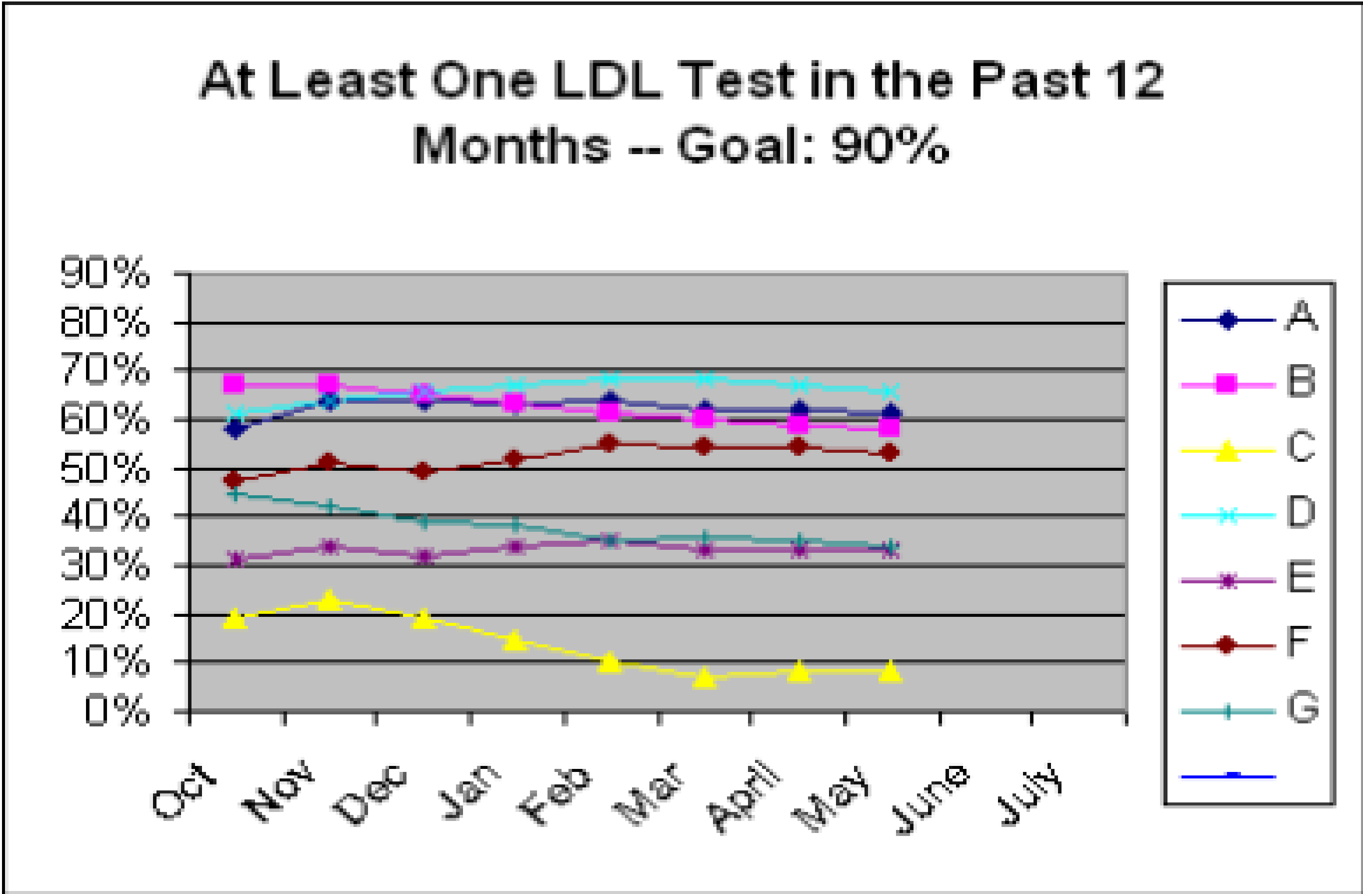
Patient 18-75 years of age with diabetes who have a poorly controlled lipid panel with LDL > 100.

Facility	Provider	Numerator	Denominator	Percentage
Westborough Medical Associates	BERG, PAUL	0	5	0.00%
Westborough Medical Associates	BOHMFALK, THOMAS	0	29	0.00%
Westborough Medical Associates	DONOVAN, JIM	0	14	0.00%
Westborough Medical Associates	LAB/IMMUNIZATIONS,	0	2	0.00%
Westborough Medical Associates	PADGETT, JR, LARRY	0	46	0.00%
Westborough Medical Associates	PEARCE, RICHARD	0	50	0.00%
Westborough Medical Associates	VOSS, DANIEL	0	27	0.00%
Westborough Medical Associates	WILLIS, SAM	1	32	3.12%

Start Tomcat ecw64 - Re... eClinicalWo... base_build.i... 2 Visual B... Comm...

Start Inbox - ... WebEx ... eCW-cu... weeklys... NYC.gov... RE: Web... You are ... 1:28 PM

Example – Provider performance report



What Will Make the EHR Work as a Quality Improvement Tool?

A well articulated QI Plan

- **Quality Improvement Goals**
- **List of current QI measures that you want to generate (this may affect data entry requirements post go-live)**
- **Identification of clinical training needs**
- **Identification of clinical workflows that need to be revised or designed for conversion from paper to EHR**
- **Up-to-date policies and procedures, e.g. rules for “inactivating” patients in EHR**
- **Identified QI champion(s)**

What Will Make the EHR Work as a Quality Improvement Tool?

Pre-implementation

- **Careful assessment of current practice followed by workflow redesign for key processes-** ***to avoid using a new tool to do everything the old way***
- **Practice consensus on clinical guidelines and expectations**
- **Clear assignment of responsibility and a plan for producing and using registry reports**
- **Clear assignment of responsibility and a plan for producing and using performance feedback reports**

What Will Make the EHR Work as a Quality Improvement Tool?

Post-implementation

- Consistent use of structured fields for documentation
- Accurate primary care giver/rendering provider assignment
- Running consistent Quality Assurance checks on the integrity of data being entered into the EHR
- Charting during the patient visit
- Responding to point of care alerts
- Using Clinical Decision Support tools (e.g. order sets, right pane)
- Follow-through on registry and performance feedback plans
- Dedicated time for Quality Improvement work

AGENDA

- EHR Characteristics that Support QI
- **Brief Overview of the PCIP & Suite of Services**
- Insights from the Quality Improvement Team
- Lessons Learned – Preliminary Observations
- PCIP's Next Steps

Primary Care Information Project (PCIP) Overview

A bureau of NYC DOHMH, founded in 2005

Mission

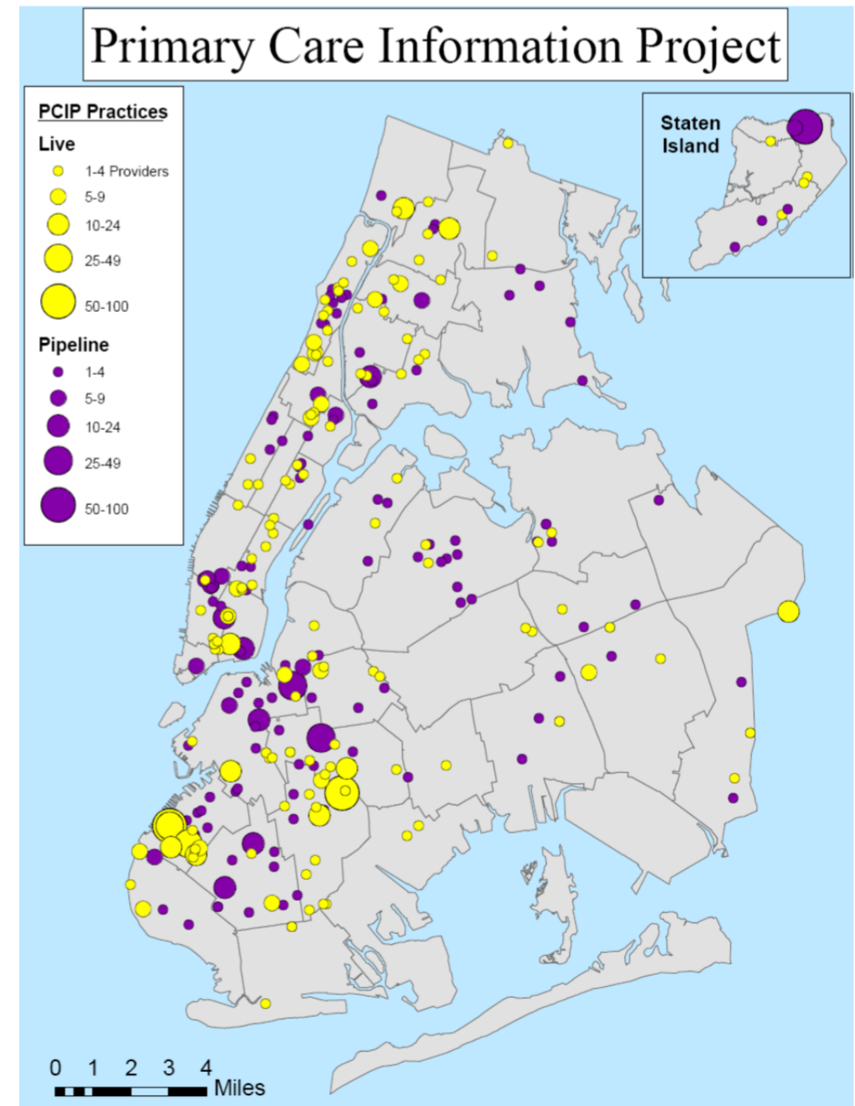
- Improve the quality of care in medically underserved areas through health information technology (HIT)

Resources

- Current funding: NYC, NY State, Federal, private

Success

- Over **2500 providers** are using the EHR at
  - •37 CHCs
  - •5 hospital outpatient
  - •433 small practices



Our Vision

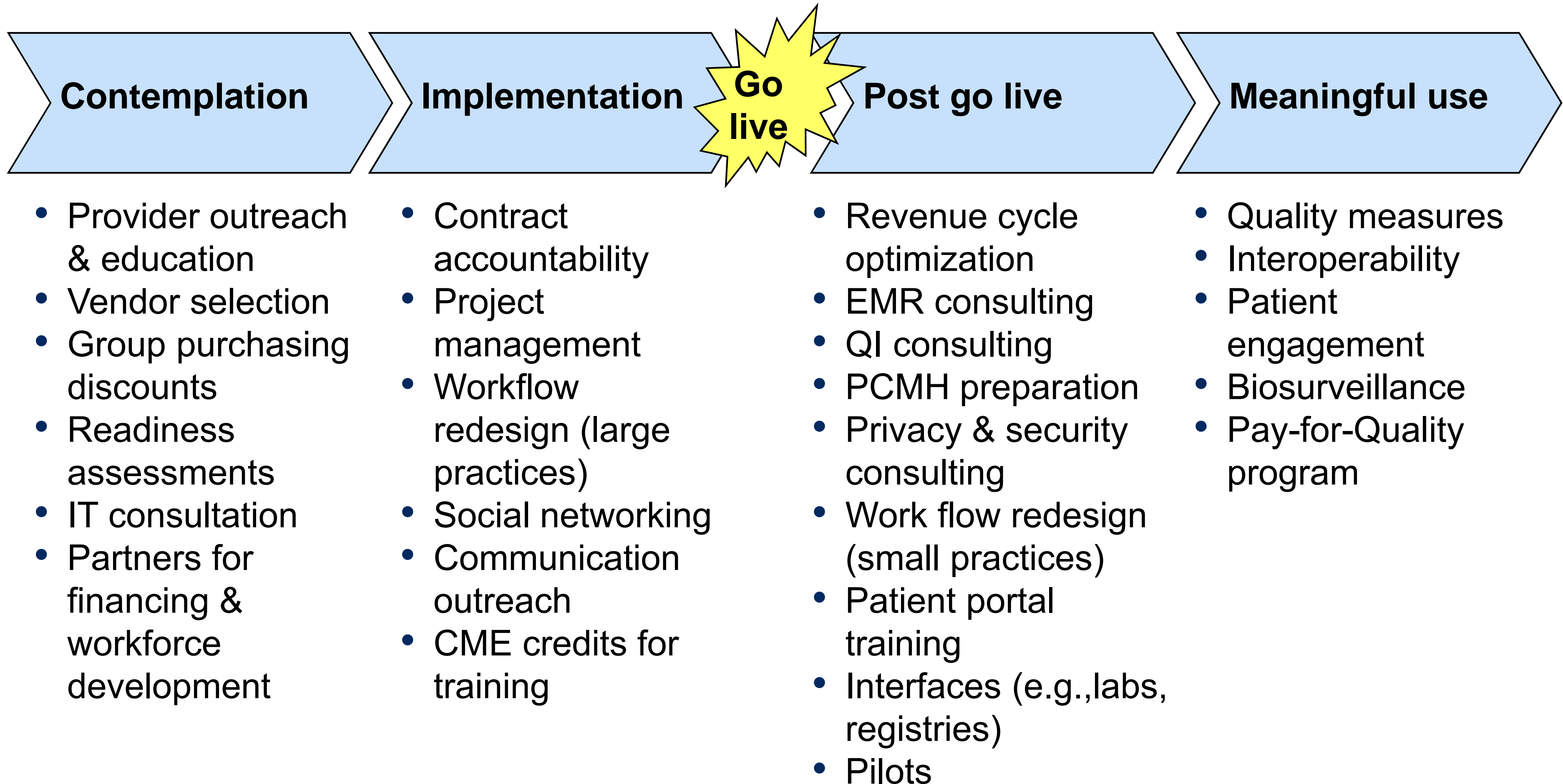
ELECTRONIC HEALTH RECORDS oriented to *prevention*

Healthcare that maximizes health

CARE MANAGEMENT and practice workflows to support *prevention*

PAYMENT that rewards *disease prevention* & chronic disease management

Overview of PCIP Services:

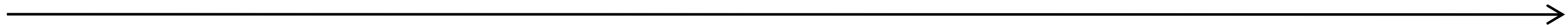


Timeline for Suite of Services

eCW project management ... eCW account management

PCIP Outreach

PCIP implementation management ... PCIP integration management



PCIP Billing consulting

PCIP EMR consulting

PCIP QI consulting

PCIP Pay for Quality

Panel Management

PCIP BILLING CONSULTANT OVERVIEW – WHAT DO WE DO?

- Provide up to **5 on-site visits** from our Billing Consultants, including an Initial Practice Assessment
- Provide **technical assistance** to help practices improve their billing processes working with front desk staff, billers, physicians, and other medical staff as needed
- Provide **training to physicians on E/M coding guidelines**
- **Identify universal issues** and bring them to the attention of PCIP and eCW
- Conduct free **group trainings** to reach as many physicians as possible
  - Billing Improvement Classes held at multiple sites and times

PCIP SUPER-USER CONSULTANT OVERVIEW– WHAT DO WE DO?

- Provide **technical assistance** to physicians to help them configure the record as needed to improve documentation, minimize “slowness”, improve reimbursement and overall, decrease frustrations
- Identify areas where physicians are struggling and **strategically configure record** to preserve functionality while improving user experience
- **Identify “bugs”** and raise them to the appropriate development teams
- Provide **support during lab interface set up** for practices
- Help **create training materials** to provide additional support to practices
- Provide **feedback to the teams at PCIP** on what we observe during site visits (Development, IS, Billing, QI)

PCIP QUALITY IMPROVEMENT OVERVIEW – WHAT DO WE DO?

- Provide **technical assistance** to physicians to help them improve the health outcomes of patients,
  - Focus on 4 priority TCNY areas (ABCS)
  - Help providers get to **meaningful use**
  - **Provide CME/CNE credits** for participating with QI

- Provide **support for office redesign** (e.g., workflows, documentation, standard processes) to improve office efficiency
  - if desired, prepare for **NCQA Patient Centered Medical Home (PCMH)**

- Provide **additional coaching on preventive-health features** & how to use them for QI

- Provide a **forum for discussing performance feedback** and sharing best practices for QI efforts

- Provide **feedback to the teams at PCIP** on what we observe during site visits (Development, IS, Billing, EMR)

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Patient Centered Medical Home (PCMH)

Technical Support

A QI Specialist will:

- Help practices understand the PCMH standards
- Assess practices and suggest ways to implement PCMH techniques (proactive, preventive and follow up care)
- Develop an individualized project plan and timeline
- Provide guidance on submitting the application and supporting materials to NCQA

Multisite survey

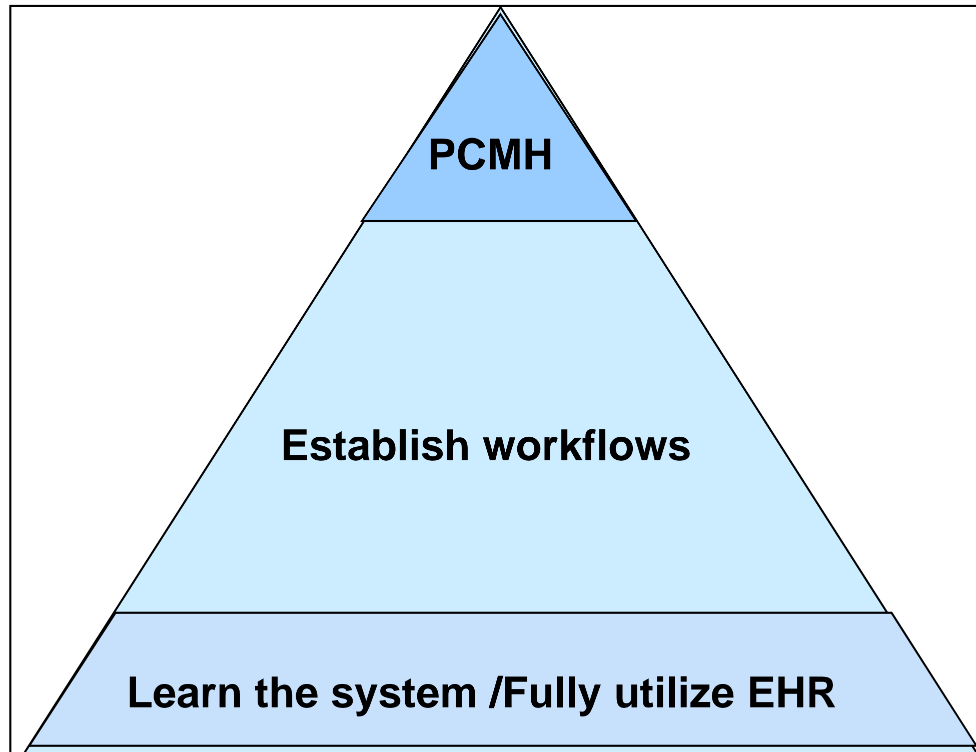
PCIP has arranged for eligible practices to receive 36.75 points towards the PCMH survey for Quality Improvement work:

- Decrease administrative burden of application

Application fee

PCIP practices pay half of the sponsored rate – a significant discount

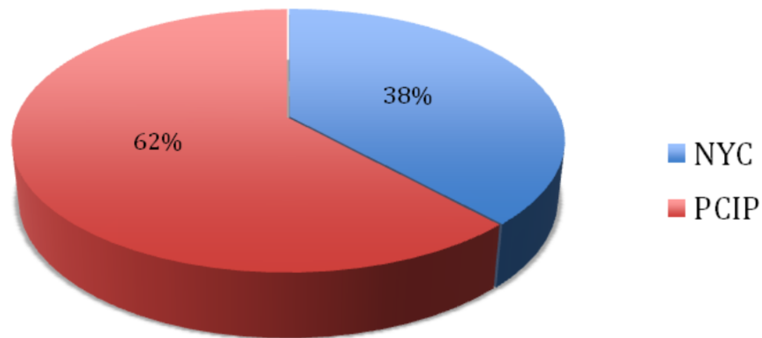
Identifying Practices for PCMH

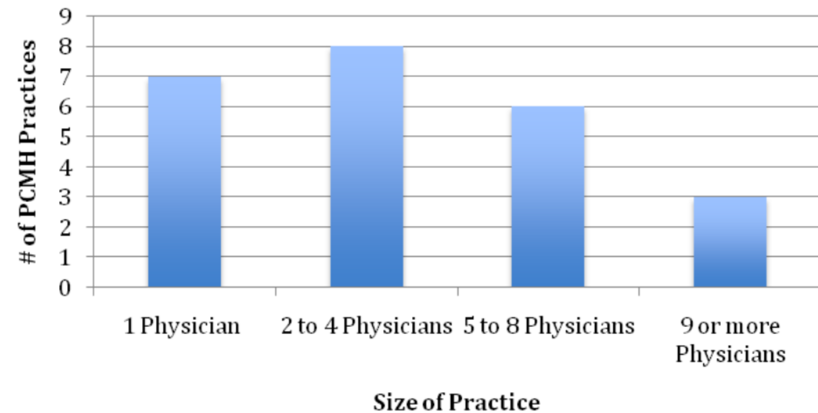


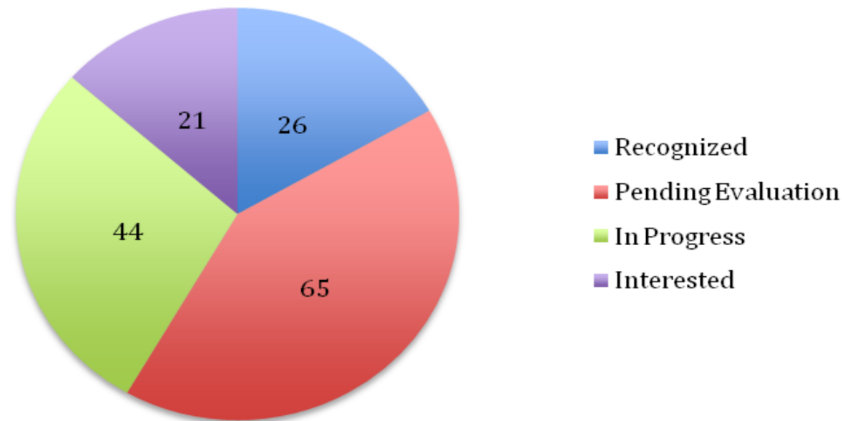
- Practices need to be proficient on the basic system functions before thinking about advanced concepts such as PCMH
- Establish workflows, apply customizations, configure billing and fix system bugs before deploying QI
- Teach practices QI techniques to apply after on-site visits end

Practices are assessed during a Quality Improvement site visit -- the QI Specialist performs a gap analysis using the NCQA PCMH standards. If eligible, a project plan is established and the application process begins.

PCMH: Success of PCIP Practices







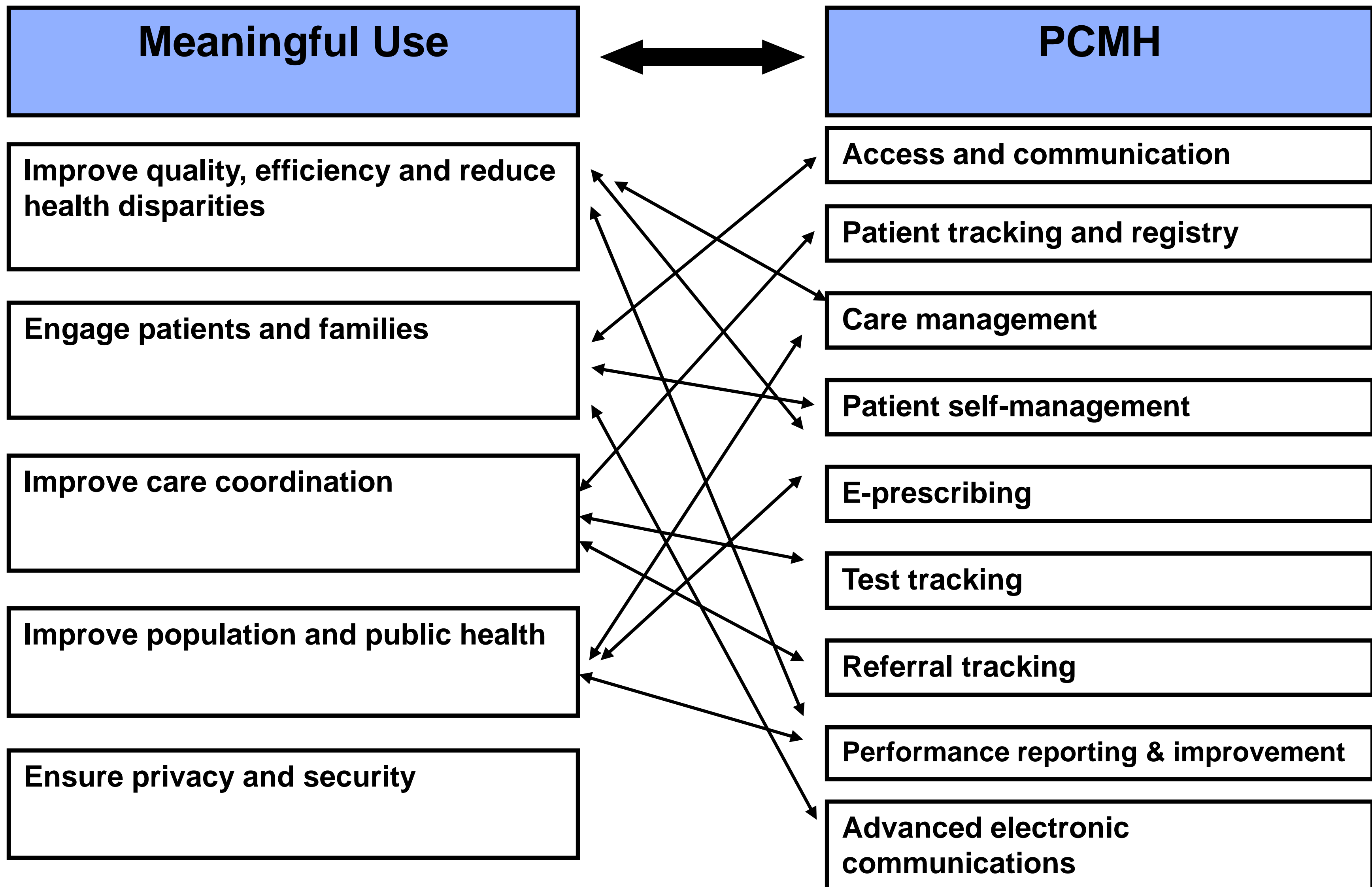
Overview of MEANINGFUL USE

- **The American Recovery and Reinvestment Act (ARRA) authorizes the Centers for Medicare & Medicaid Services (CMS) to offer a financial incentive to physician and hospital providers who demonstrate the "meaningful use" of an electronic health record (EHR).**

According to the CMS, a provider uses an EHR "meaningfully" when he or she:

1) Improves quality, safety, efficiency, and reduces health disparities
2) Engages patients and families
3) Improves care coordination
4) Improves population and public health
5) Ensures adequate privacy and security protections for personal health information

A Basic Comparison



What to Focus on: Stage 1 Meaningful Use Measures (2011-12)

<table>
<tr><th>Improve Quality</th><th>Coordinate Care</th><th>Public Health</th></tr>
<tr>
<td rowspan="3">
• Computer Physician Order Entry
• Implement drug-drug, drug-allergy, drug-formulary checks
• Maintain an up-to-date problem list and active diagnoses
• Generate and transmit permissible prescriptions electronically (eRx)
• Maintain active medication and allergy list
• Record key demographics for 80% of patients
• Record and chart changes in vital signs for 80% of patients
• Record smoking status for pts > 13 years
• Incorporate structured lab-test results into EHR
• Generate lists of patients by specific condition for outreach
• Report selected quality measures to CMS
• Send patients reminders for routine care
• Implement five clinical decision rules relevant to clinical quality measures
• Check insurance eligibility electronically
• Submit claims electronically to payers
</td>
<td>
• Establish exchange of clinical information
• Perform medication reconciliation for relevant encounters and transitions of care
</td>
<td>
• Transmit data to immunization registries
• Transmit syndromic surveillance data to public health agencies
</td>
</tr>
<tr><th>Engage Patients</th><th>Privacy and Security</th></tr>
<tr>
<td>
• Provide patients with electronic access to their health information within 96 hours upon request
• Provide clinical summaries for office visits
</td>
<td>
• Conduct routine security risk analyses of procedures for privacy and security
</td>
</tr>
</table>

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PCMH CHALLENGES

- **Good guide for office transformation, but practices have to buy into the concept first**

- **Sometimes, the transformation is the easiest part. Proving it is the challenge**
  - Care coordination efforts are rarely documented
  - EMRs not yet ready to facilitate capture of that information
  - Hard to get aggregate look (many fields are not queriable)
  - How do you prove something was given or printed?

- **Some things are not yet feasible, e.g.,**
  - Notification if patient is in the ER or hospitalized
  - Referral system that alerts you if preauthorization is necessary
  - Patient education materials available in all languages

- **Small Practices differ greatly, making it hard to standardize and generalize**
  - Need to find what physicians and staff will engage on
    - Attempt to make standard curriculum based on disease failed and evolved to workflow and PCMH
  - Staff varies: size, skill, training, and will – need to adjust QI approach to meet staff

- **Health Plans have been slow to follow suit**
  - Many are in the pre-contemplative stage (aka pilots)
  - Concerns that we are missing out on an unprecedented time in history

LESSONS LEARNED

- Recognize the **limited resources** (time and money) small-practice physicians have to do QI work
- Define and clearly communicate the scope of the QI activities and how they all fit together in **an organizing framework**
- Focus early on **making sure the quality data can be trusted**
- Leverage **best-practices** from people who have done this before
- **Respect provider preferences** while still being able to focus on the areas we think matter the most
- **Pace the interventions** as providers can only absorb a set amount of information in one sitting
- Find ways to deliver **concrete value to the provider**
- **Help providers get paid** for the work they do

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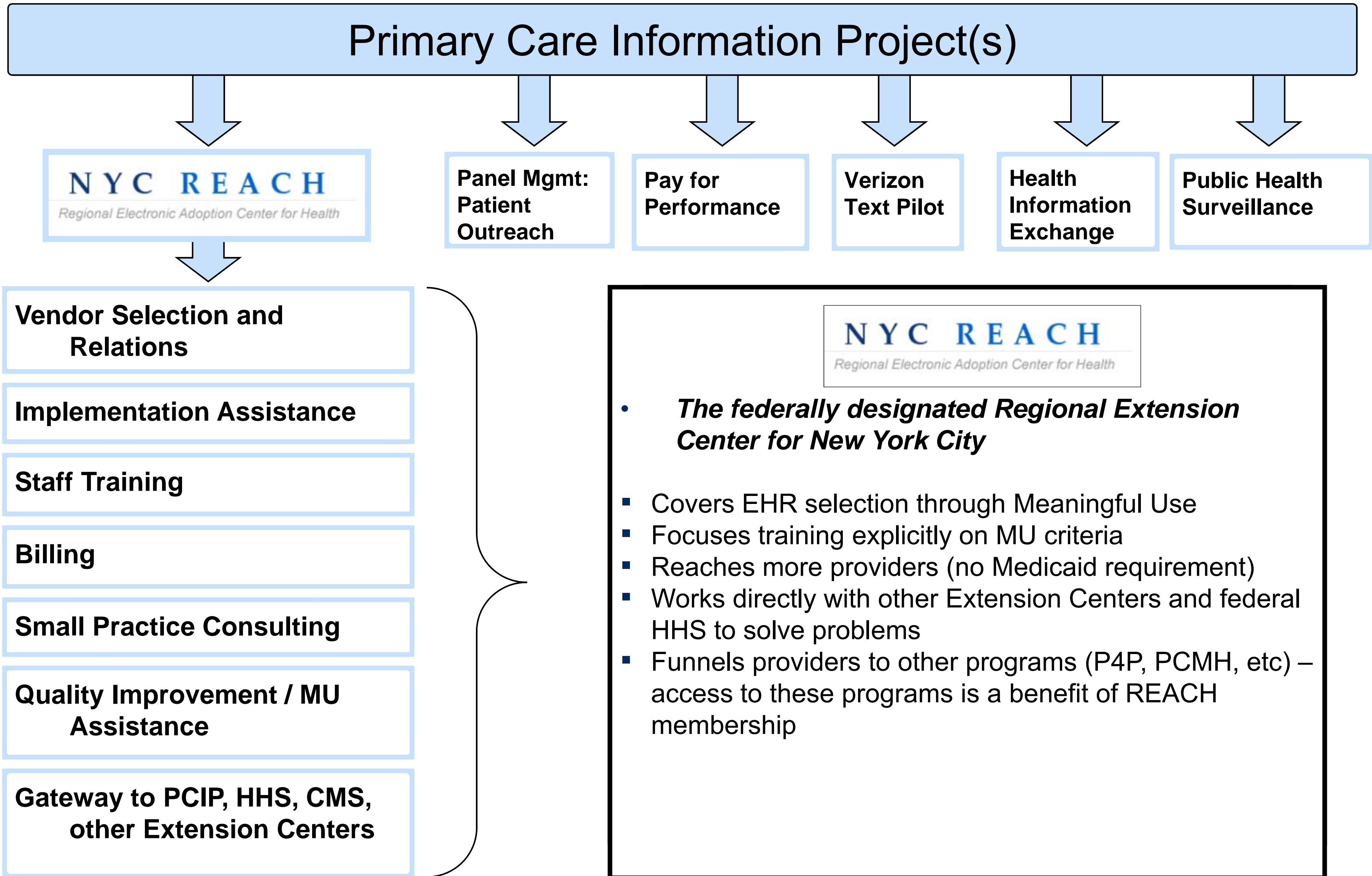
NYC REACH: A New Project of PCIP



NYC REACH SERVICES: How we will help providers

Education

- On-site staff training
- Billing
- Lab Interfaces
- Community classes

Vendor Selection and Group Purchasing

- Assessing practice IT needs
- Negotiating vendor contracts
- Holding vendors accountable
- Support a "choice of offerings"

Project Management

- On-site staff training
- Billing
- Lab Interfaces
- Community classes

Health Information Exchange

Help practices connect to HIE infrastructures :

- Administrative transactions
- lab orders and results
- medication prescriptions
- quality and public health reports
- patient summaries

Practice and Workflow Redesign

- Mapping work processes to quality improvement initiatives
- Updating roles and responsibilities
- Supporting workflow to meat federal Meaningful Use criteria

Privacy and Security

- Physical security
- Access controls
- Back up and Recovery
- HIPAA compliance
- Best practices training

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