



Incorporating Performance Measurement and Quality Improvement into Clinical Practice: Turns Out it is Rocket Science

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Improving Organizational Performance

- Continuous quality improvement focus
- Informal and formal methods
 - Six Sigma
 - PDSA
- Includes:
 - Clinical process and outcome targets
 - Program operational development
 - Staff and faculty performance standards/reduce unhelpful variation
 - Perceptions of the processes of care by those participating in care
 - Financial efficiency
 - Recovery oriented and patient choice informed
 - Proactive care management
 - Clinical service standards and evidence based protocols

Selecting the Right Measurements

- Executive Management Group
- Executive Steering Committee for Quality & Performance Improvement
- Service Line Leadership
- Program based QA
- Care Management
- Registration
- Program, local, regional, state and national databases
- Clinical chart reviews
- Standards from regulatory agencies
- Surveys / Focus groups
- Community feedback
- Feedback from operational meetings minutes
- Statistics on programs
- Claims and quality information from insurers

Incorporating External Quality Measures into Practice

- **Required for compliance, public reporting and benchmarking**
- **Extensive use of non-automated resources to establish and maintain systems:**
 - Different standards from different sources, not coordinated
 - Same construct, different operational metric
 - Measures come on line in unpredictable cycles
 - Not coordinated with program specific paperwork and/or EMR programming cycles and fiscal/operational planning
 - May conflict with existing QA project cycles for competing regulatory or payer agencies across Counties, States and the Nation
 - Duplication of efforts to satisfy all is costly and fragments resources and long term strategies
 - Politically salient policies can be fast tracked and then abandoned or may not be equally applicable for all regions and service providers

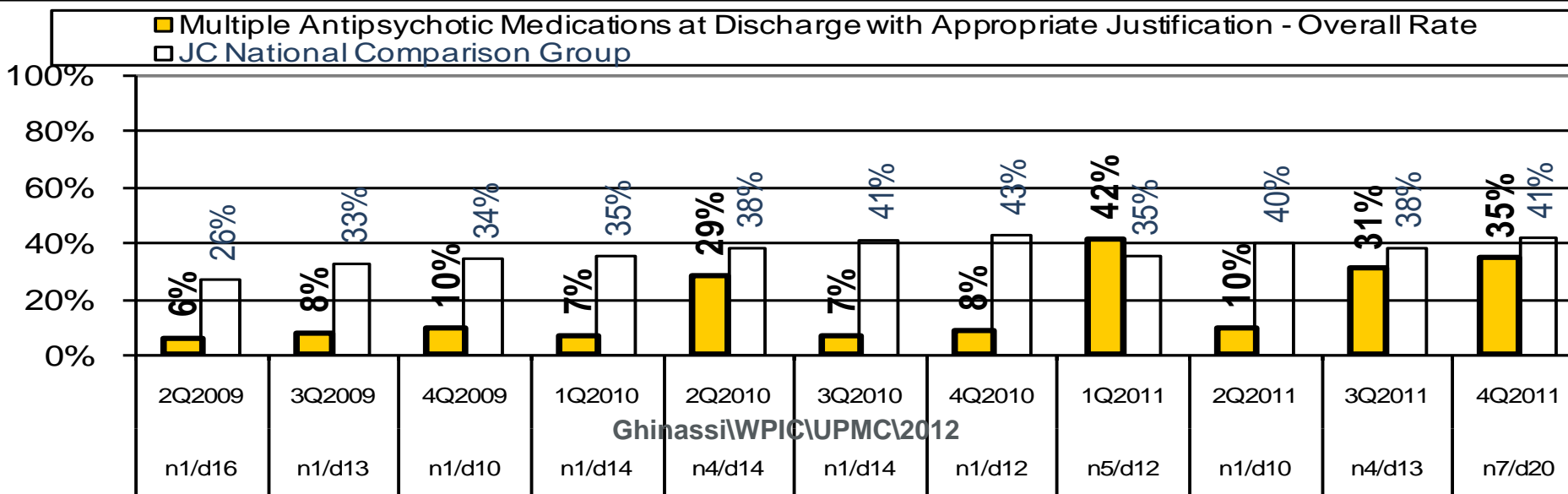
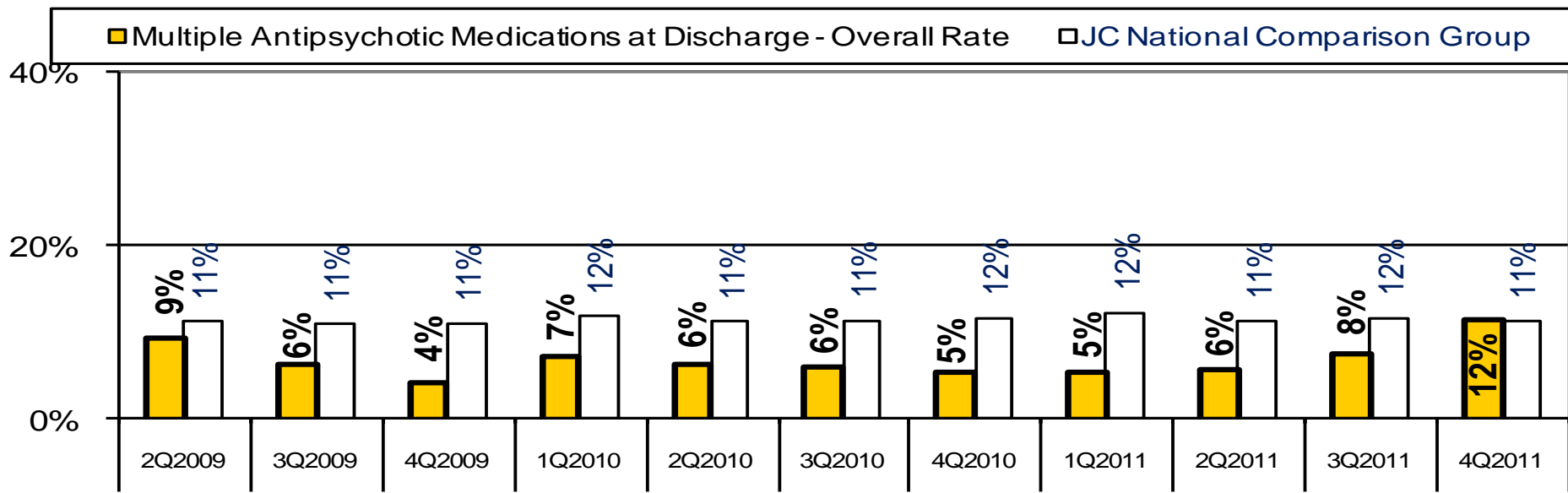
National External Standards

- **Hospital Based Inpatient Psychiatric Services (HBIPS)**
- **The Joint Commission**

HBIPS Measures

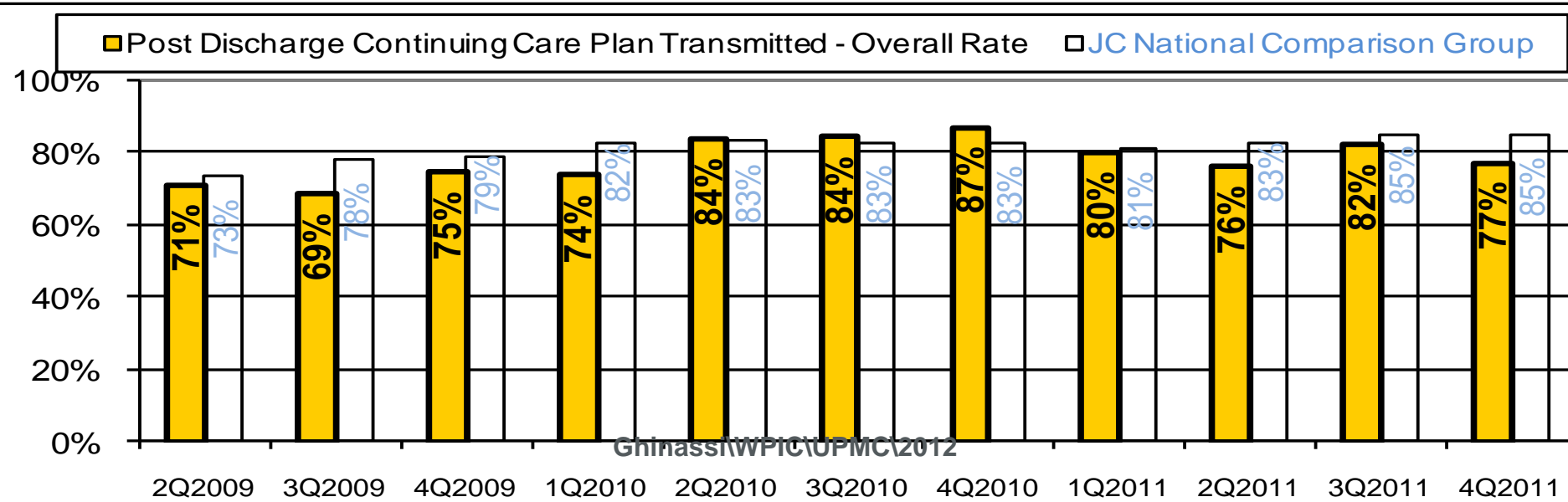
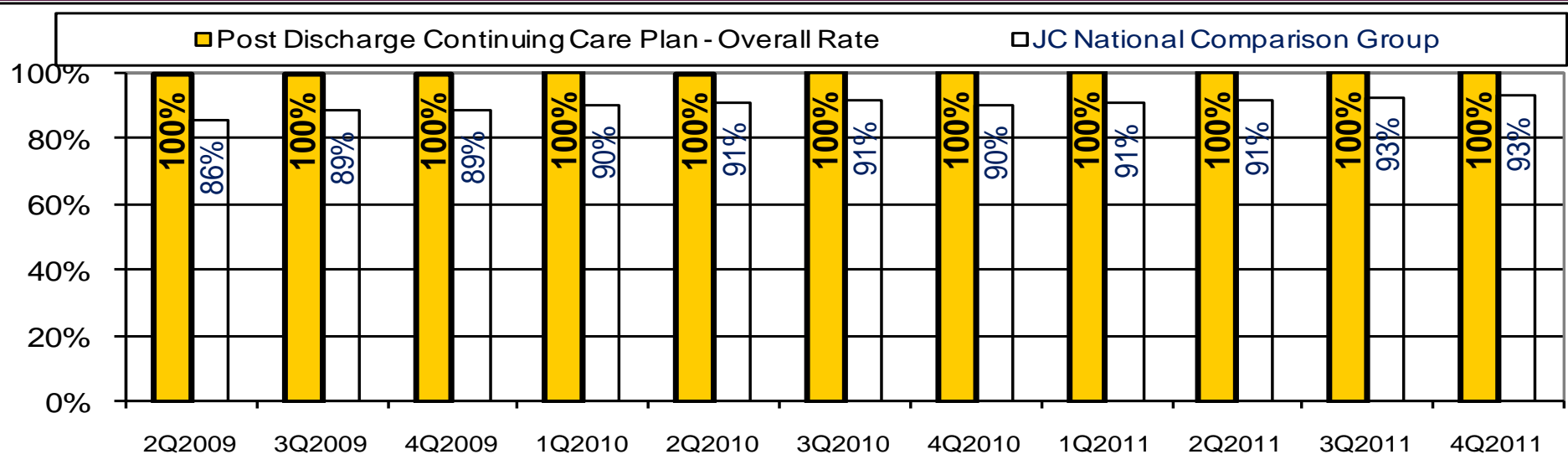
- HBIPS-1: Admission Screening
- HBIPS-2: Physical Restraint
- HBIPS-3: Seclusion
- HBIPS-4: Multiple Antipsychotic Medications at Discharge
- HBIPS-5: Multiple Antipsychotic Medications at Discharge with Appropriate Justification
- HBIPS-6: Post Discharge Continuing Care Plan
- HBIPS-7: Post Discharge Continuing Care Plan Transmitted

HBIPS – 4a, 5a



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HBIPS – 6a, 7a

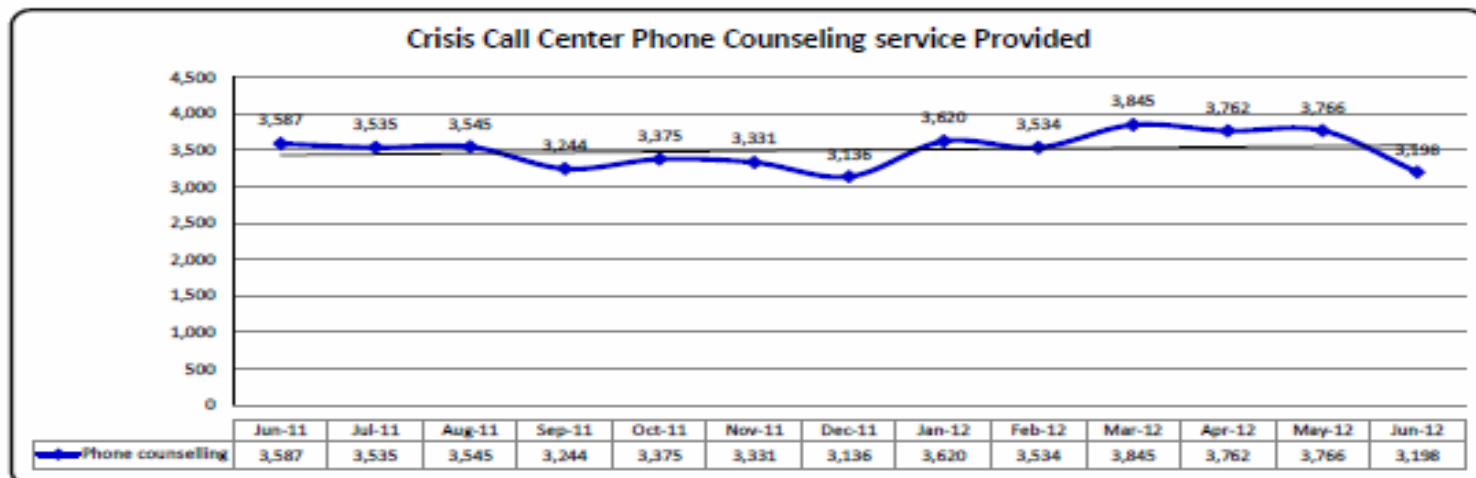
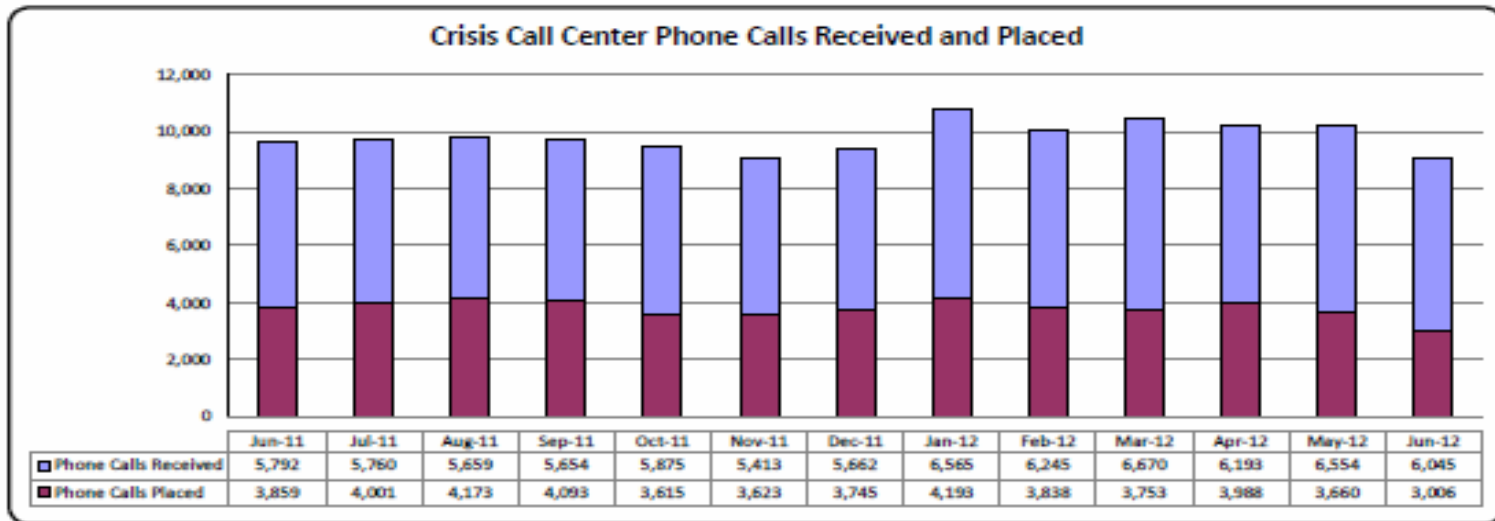


County Metrics

- Crises Programming in Allegheny County

re:solve crisis network – County Reporting

re:solve Crisis Network



Meaningful Use

- Stage one

Meaningful Use: Stage 1 quality measures specific to psychiatry

Number	Clinical quality measure title & description (Core)
*NQF 0013	<p>Title: Blood pressure measurement.</p> <p>Description: Percentage of patient visits with blood pressure measurement recorded among all patient visits for patients aged > 18 years with diagnosed hypertension.</p>
*NQF 0028 PQRI 114	<p>Title: Preventive Care and Screening: Inquiry Regarding Tobacco Use.</p> <p>Description: Percentage of patients aged 18 years and older who were queried about tobacco use one or more times within 24 months.</p>
*NQF 0421 PQRI 128	<p>Title: Adult Weight Screening and Follow-Up</p> <p>Description: Percentage of patients aged 18 years and older with a calculated BMI in the past six months or during the current visit documented in the medical record AND if the most recent BMI is outside parameters, a follow-up plan is documented.</p>

Meaningful Use: Stage 1 quality measures specific to psychiatry

Number	Clinical quality measure title & description (Menu)
*NQF 0004	<p>Title: Initiation and Engagement of Alcohol and Other Drug Dependence Treatment: (a) Initiation, (b) Engagement</p> <p>Description: The percentage of adolescent and adult patients with a new episode of alcohol and other drug (AOD) dependence who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis and who initiated treatment and who had two or more additional services with an AOD diagnosis within 30 days of the initiation visit.</p>
NQF 0027 PQRI 115	<p>Title: Smoking and Tobacco Use Cessation, Medical assistance: a. Advising Smokers and Tobacco Users to Quit, b. Discussing Smoking and Tobacco Use Cessation Medications, c. Discussing Smoking and Tobacco Use Cessation Strategies</p> <p>Description: Percentage of patients 18 years of age and older who were current smokers or tobacco users, who were seen by a practitioner during the measurement year and who received advice to quit smoking or tobacco use or whose practitioner recommended or discussed smoking or tobacco use cessation medications, methods or strategies.</p>
*NQF 0105 PQRI 9	<p>Title: Anti-depressant medication management: (a) Effective Acute Phase Treatment, (b) Effective Continuation Phase Treatment</p> <p style="text-align: center;">Ghinassi\WPIC\UPMC\2012</p> <p style="text-align: right;">UPMC LIFE CHANGING MEDICINE</p> <p>Description: The percentage of patients 18 years of age and older who were diagnosed with a new episode of major depression, treated with antidepressant medication, and who remained on an antidepressant medication treatment.</p>

Building Measures into EHR systems

- Standards of practice proposed by:
 - empirical evidence
 - national professional guilds
 - and regulatory organizations
- Creation of proactive clinical decision support, in real clinical time
- Assess feasibility of implementing EHR based measures
- Identify issues that may arise when contemplating integration into EHR

Building Measures into EHR systems

- **Challenges:**

- Many programs still rely on manual entry of key data
 - Manual data entry can cause unreliable coding
- Does the absence of manually entered codes actually mean that a screening or test did not occur
- Will the system pull billing information as well as patient record clinical data
- What about lab results
- Limitations of EHR systems from different providers to track patient care coordination across providers
- Expenses for EHR installation, user education and updating are high as many programs are experiencing funding cuts
- Critical step is establishing uniform measurement specifications for each indicator (e.g., NQF)
 - And utilizing the correct data manipulation statistical methods



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Building Measures into EHR systems

- **Once established these systems enable:**
 - process monitoring
 - decision support
 - outcomes measurement
 - prompting of follow-up over time
- **Clinical reminders can alert practitioners to:**
 - EBPs
 - Regulation
 - consensus best practices
 - reducing unhelpful variations
 - alert for missing screenings, abnormal findings and contraindicated treatments
- **Internal and external organizational performance reports:**
 - clinical and fiscal

Incorporating Quality Measures into Practice

- WPIC EHR Examples

Incorporating Quality Measures into Practice

Physical Health Form (PHF)

Patient Name: TEST, TEST

Patient ID: 00216596 Gender: Female

Medication:

Date when data was previously collected:

Since the last visit, has the consumer transferred between a different level of care or received services provided by a different physician?

Medication Reconciliation Completed:

Patient currently NOT taking any Medications:

Physical Health Indicators:

Date when data was previously collected:

Weight lbs

Self Reported: Refused:

Height Ft In

Self Reported: Refused:

Waist Measurement in

Refused:

BMI Value

BMI Level

Sitting Blood Pressure Values: Systolic

Refused:

Diastolic

Is Patient in Treatment with Anti-Hypertensive Drugs?

Did you provide a follow-up plan for BMI management?
(Consumer's BMI is outside of the parameters)

What was the plan?

Comments:

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Incorporating Quality Measures into Practice

Medication Management

- Current Clinical Status
- Current Medications
- Prescription History
- Mental Status Examination
- Diagnosis
- Medication Education
- Clinical Summary
- MD Tx Plan
- Screen
- Labs
- Summary**
- Print Preview

Physical Health Form (PHF)

Patient Name: TEST, TEST

Patient ID: 00216596 Gender: Female

Lab Values

Blood Sugar Date:	06/29/2012	Triglycerides Date:	06/29/2012
Blood Sugar Fasting?	No	Triglycerides Fasting?	No
Blood Sugar Value:	10. mg/dl	Triglycerides Value:	10. mg/dl
Is patient in treatment with anti-diabetic drugs / Insulin?	No	Is patient in treatment with cholesterol lowering drugs?	No

Cholesterol Date:	06/29/2012	HDL Value:	100. mg/dl
Cholesterol Fasting?	No	LDL Value:	100. mg/dl (optical)
Is Patient in Treatment with HDL Elevating Drugs? (Niacin, Fibrates, Fish Oil)	No	Total Cholesterol	190. mg/dl (optical)

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Refresh Metabolic Screen

Incorporating Quality Measures into Practice

Medication Management

- Current Clinical Status
- Current Medications
- Prescription History
- Mental Status Examination
- Diagnosis
- Medication Education
- Clinical Summary
- MD Tx Plan
- Screen
- Labs
- Summary
- Print Preview

Refresh

Physical Health Form (PHF)

Patient Name: TEST, TEST

Patient ID: 00216596

Gender: F

Metabolic Criteria for High Blood Pressure met:

Metabolic Criteria For Waist Circumference Met:

Metabolic Criteria for High Blood Sugar met:

Metabolic Criteria for High Triglycerides met:

Metabolic Criteria for Low HDL met:

Metabolic Syndrome Results

Criteria Not Met

Treatment Alerts

High Blood Sugar
High Triglycerides

Were Metabolic Syndrome Results and Treatment Alerts discussed with the consumer?

Additional Notes:

Patient will work to decrease the numbers of her sugar levels.

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Incorporating Quality Measures into Practice

Smoking / Tobacco: Refused: **Date when data was previously collected:**

Smoking / Tobacco Use: (Required for consumers age 13 or greater)

How many cigarettes do you smoke each day?

Would you like to quit within the next 30 days?

Has anyone ever guided you on quitting options?

If yes, which options?

Nicotine Replacement Varenicline

Bupropion Behavioral / Other

Was Cessation Counseling Provided:

Comments:

Incorporating Quality Measures into Practice

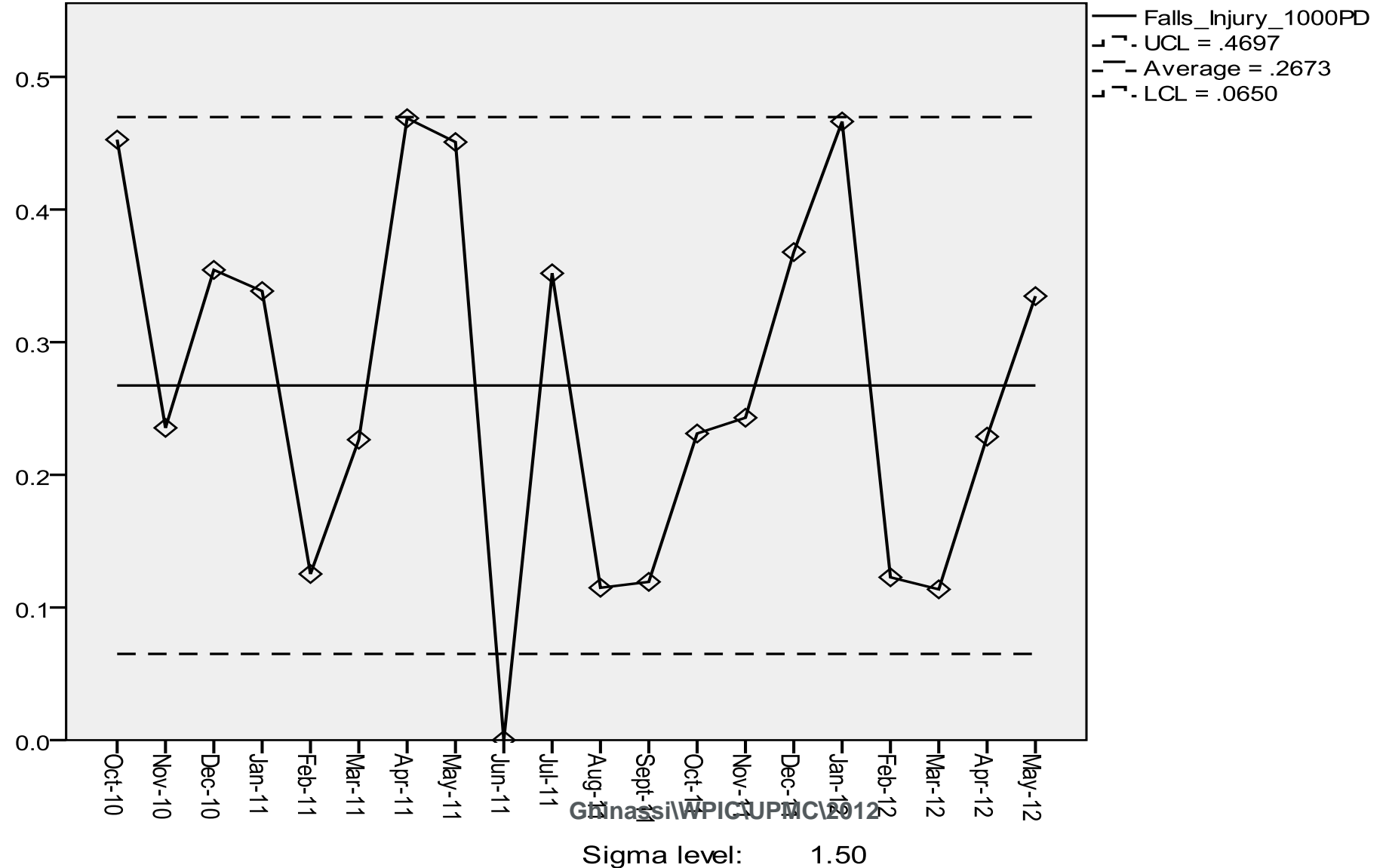
- Program Specific Measures

Incorporating Quality Measures into Practice

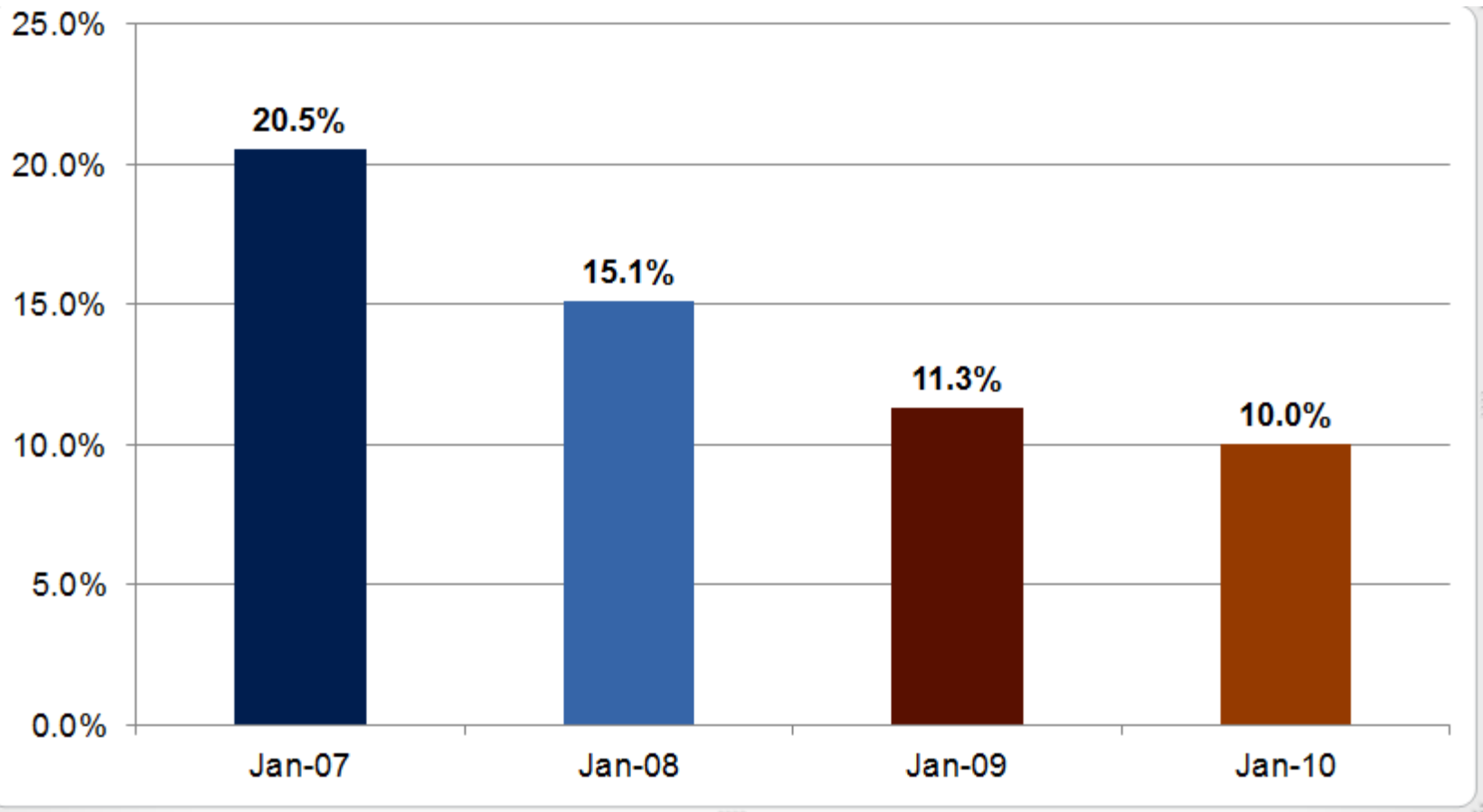
- Falls with Injuries

WPIC Indicators – Fall w Injury

Falls_Injury_1000PD



- Antipsychotic Polypharmacy Project

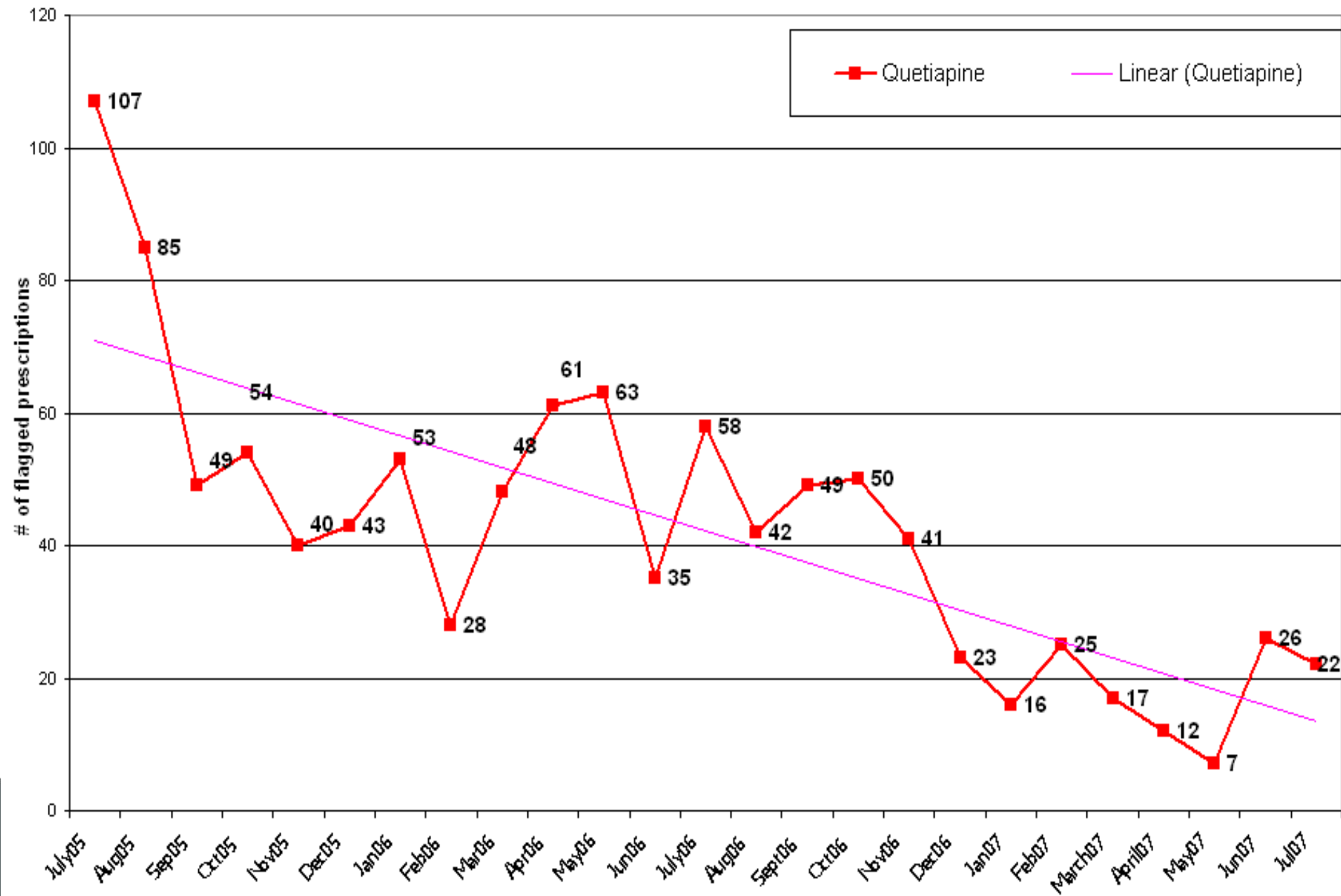


Percent of All Inpatients on Two or More Antipsychotics During their Inpatient Stay

- Quetiapine Intervention Outcomes

WPIC Monthly Overall Breakdown by Medication (JULY '05 -JULY '07)

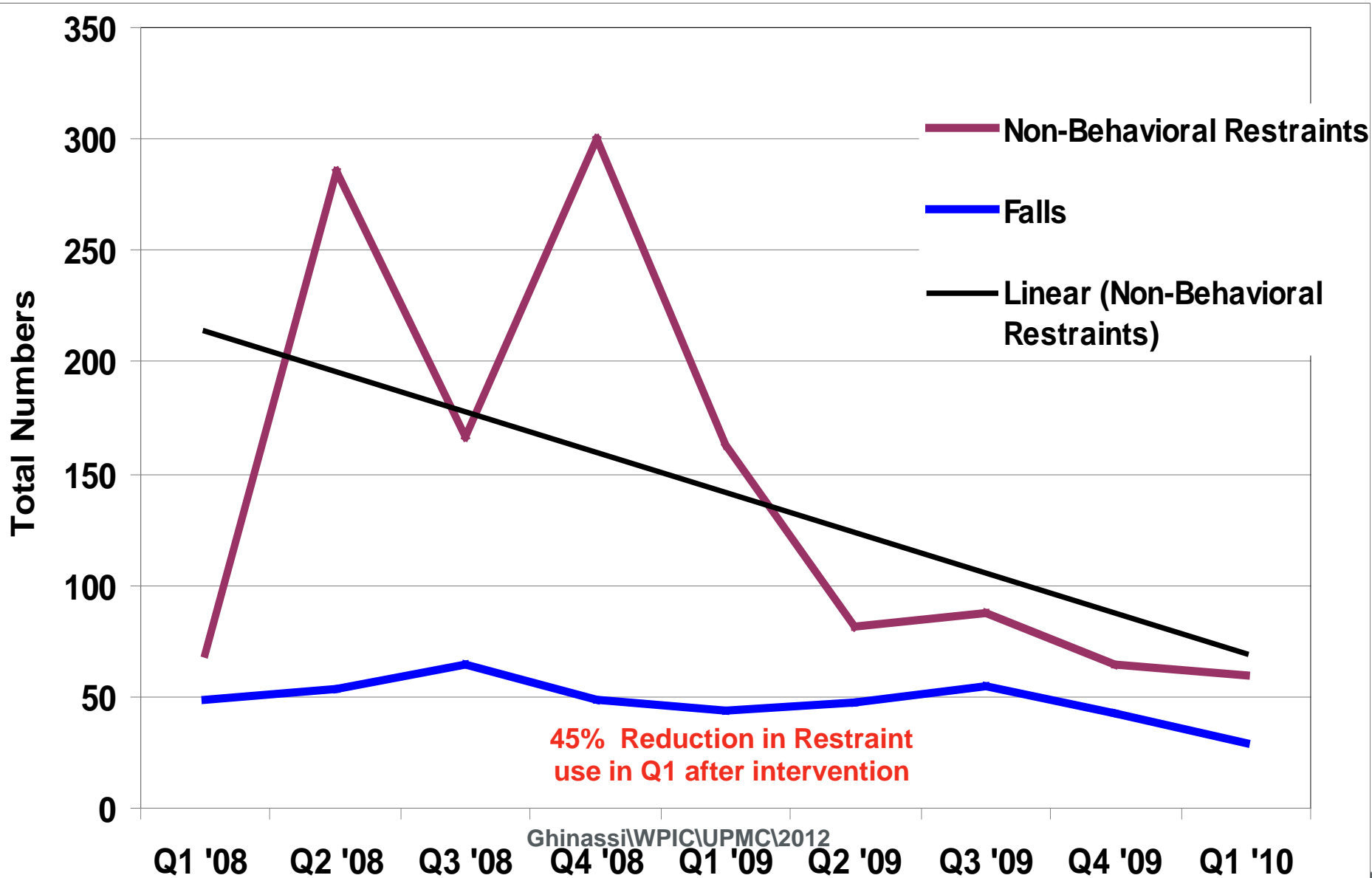
N = 1226



Incorporating Quality Measures into Practice

- Reducing medical restraints while monitoring fall rates

Restraint use and Fall Rate in 2008 & 2009



- Integrating CAFAS data (scores) entry into the HER
- Easy and instant access to CAFAS results and profiles
- Weekly report pulled from EHR noting individual cases of
 - statistically significant rapid deterioration
 - or improvement
- Notification received electronically by assigned clinician
- Treatment was altered upon receiving notice of CAFAS score change indicating decompensation

Matched Pairs Average CAFAS Scores Between T1, T2

Results shows lower impairment at T2

Lower Score = Less Impairment

Southside Acute Partial

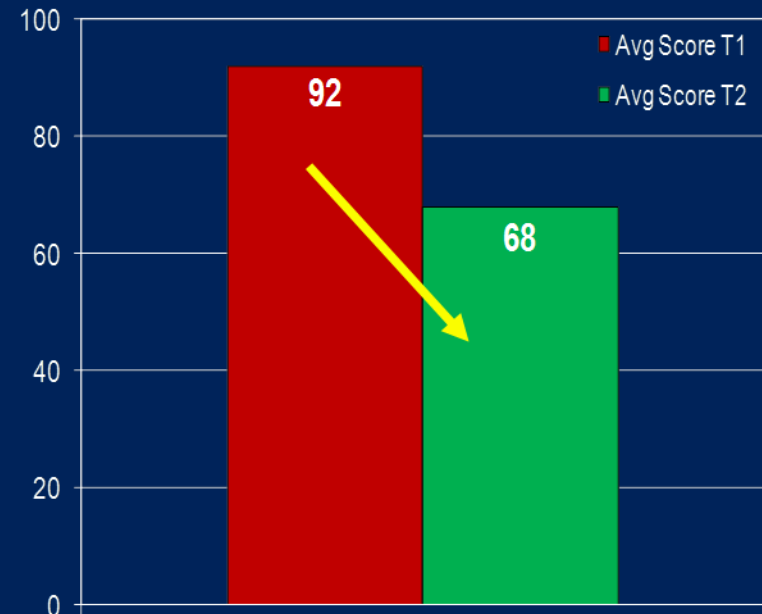
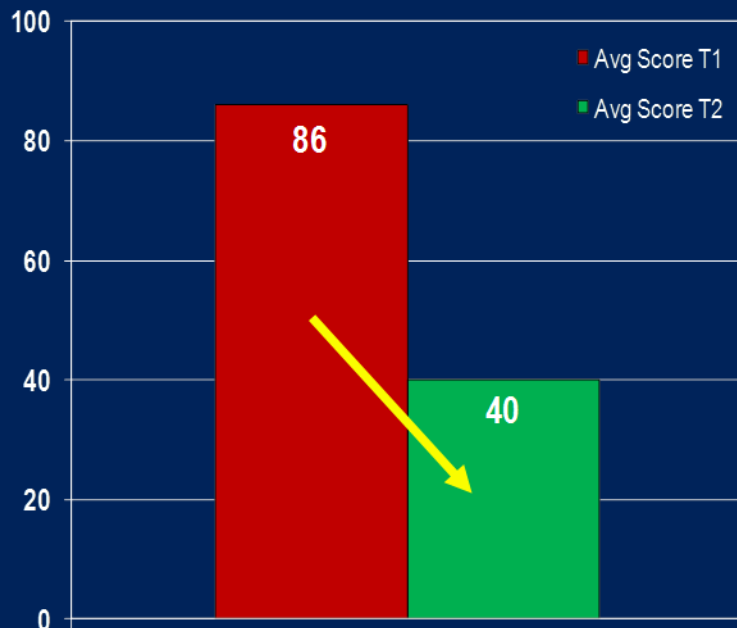
n=41

(Average drop of 46 points shows lower impairment at T2)

Family Based MH Services

n=18

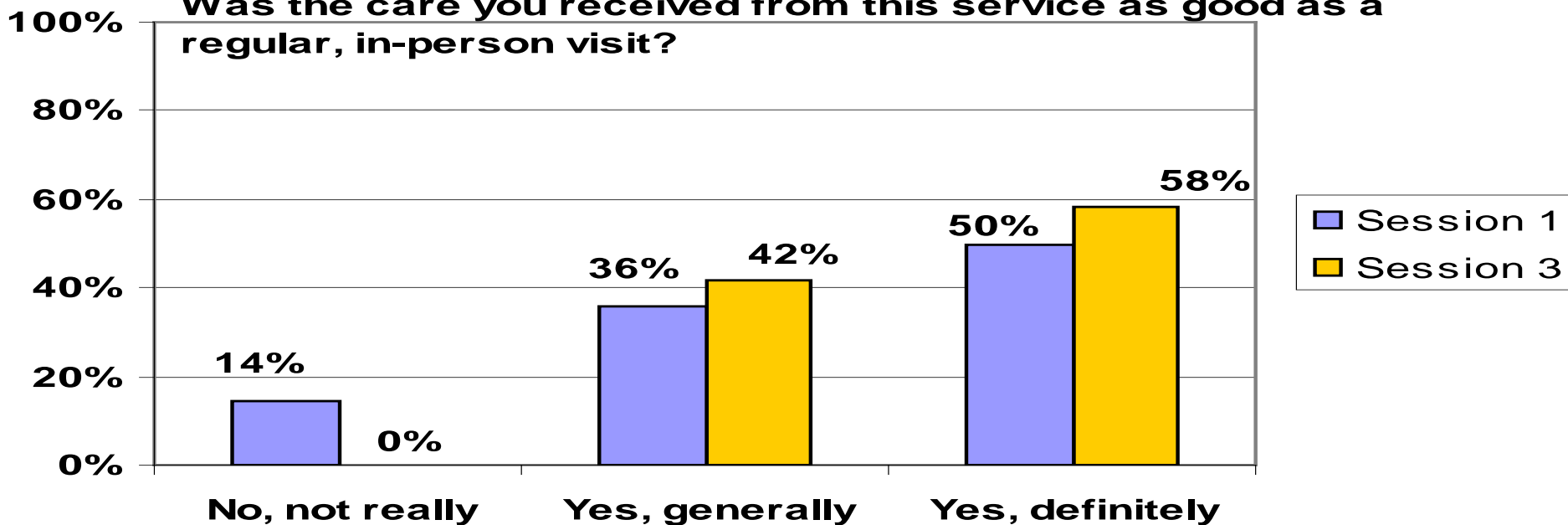
(Average drop of 22 points shows lower impairment at T2)



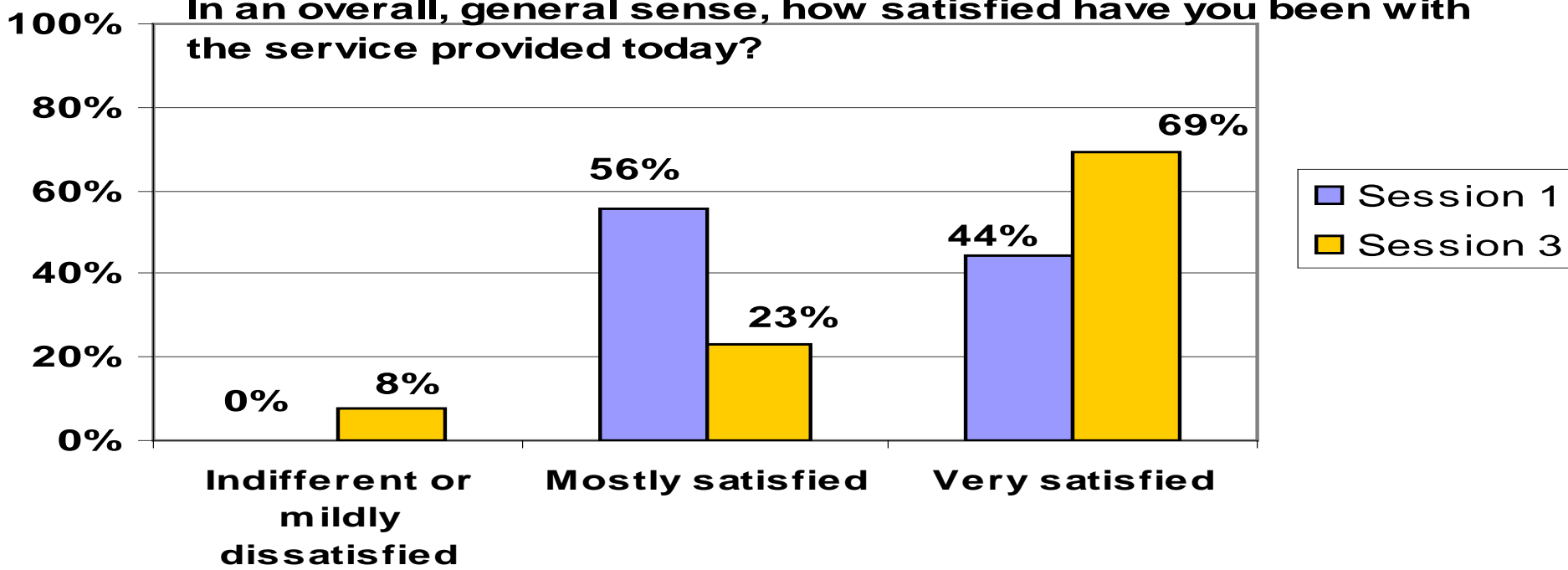
Telepsychiatry: Adjusting to Technology

- **Provide telepsychiatry services to 6 rural areas in the state of Pennsylvania:**
 - 21,000 services were provided by 7 psychiatrists in the past year
- **Questionnaire was administered to individuals participating in the program:**
 - prior to the first telepsychiatry session
 - and after the third encounter
- **The questionnaire focused on three domains:**
 - satisfaction with clinical services
 - technology evaluation
 - overall satisfaction with telemedicine product
- **Data supports:**
 - individuals satisfied in all three areas
 - satisfaction increases from session one to three
 - as they continue to receive services and acclimate to both the specific clinician and the use of the technology

Was the care you received from this service as good as a regular, in-person visit?



In an overall, general sense, how satisfied have you been with the service provided today?



Incorporating Quality Measures into Practice

- Measures Driven by Both Internal and External Impetus

Metabolic Syndrome Tool for Psychiatric Patients

- **Patients with Serious Mental Illness (SMI):**
 - Multiple physical health conditions
 - smoking
 - obesity
 - 25 years (mortality) earlier than their peers
- **Psychotropic medicines can contribute to excess weight, diabetes mellitus, and high cholesterol levels**
- **Develop EMR tool to screen for metabolic syndrome:**
 - constellation of symptoms
 - capture these medical issues in one snapshot
 - facilitate psychiatrists to run labs, counsel, treat, and/or refer to colleagues
- **Deploy EMR tool and initiate QI project to capture data on the rates of its usage by a pilot team of psychiatrists**
- **Clinical treatment notes will be reviewed for qualitative analysis**

**Medication Management**

- Current Clinical Status
- Current Medications
- Prescription History
- Mental Status Examination
- Diagnosis
- Medication Education
- Clinical Summary
- Print Preview
- AllScripts
- Metabolic Screening

Metabolic Syndrome Screening

Gender	<input type="text" value="Male"/>	Weight	<input type="text" value="150"/> lbs	Height	<input type="text" value="5"/> Ft <input type="text" value="11"/> In
BMI Value	<input type="text" value="20.92"/>	BMI Level	<input type="text" value="Normal"/>		
Sitting BP Values	Systolic <input type="text" value="80"/>	Waist Measurement	<input type="text" value="34"/> in		
	Diastolic <input type="text" value="122"/>	Metabolic Criteria For Waist Circumference Met?	<input type="text" value="NO"/>		
Patient in TX with Hypertensive Drugs	<input type="text" value="Yes"/>	Metabolic Criteria for High Blood Pressure met?	<input type="text" value="YES"/>		

Lab ValuesLab Date Fasting?

Blood Sugar Value:	<input type="text" value="40"/> mg/dl	Triglycerides Value	<input type="text" value="60"/> mg/dl
Patient in TX with Anti-Diabetic Drugs / Insulin	<input type="text" value="No"/>	Patient in TX with Cholesterol Lowering Drugs	<input type="text" value="Yes"/>
Metabolic Criteria for High Blood Sugar met?	<input type="text" value="NO"/>	Metabolic Criteria for High Triglycerides met?	<input type="text" value="YES"/>
HDL Value:	<input type="text" value="30"/> mg/dl	LDL Value	<input type="text" value="60"/> mg/dl (optional)
Patient in TX with HDL Elevating Drugs	<input type="text" value="No"/>	Total Cholesterol	<input type="text" value="90"/> mg/dl (optional)
Metabolic Criteria for Low HDL met?	<input type="text" value="YES"/>		

Metabolic Syndrome Results**Criteria Met****TX Alerts****High Blood Pressure
High Triglycerides
Low HDL****Additional Notes:**

Patient Meets Metabolic Syndrome Criteria. Recommend Treatment Options.

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*This is what's
being used now,
in Psych
Consult, filled
out during Med
Management
Visit*

Aim

- In order to improve attendance and engagement in treatment, the NATP will use positive reinforcements or Motivational Incentives when patients show for individual and group treatment sessions

Result:

- 70% of participants increased their attendance hours during the MI Project
- Of the 70%, 35% met or exceeded state recommended 2.5 hours of therapy per week
- Average number of therapeutic hours increased from 1.06 to 2.14 per week
- Staff report is seeing some very positive patient involvement in therapy attendance

- **Planned Change:**

- Intervention consisted of increasing first appointment time by 15 minutes
- Extra time allocated to:
 - Clearly define patient’s goals for treatment
 - Use motivational interviewing techniques to identify potential barriers to future attendance, problem-solving
 - Improve patient perception of their therapy in light of goals

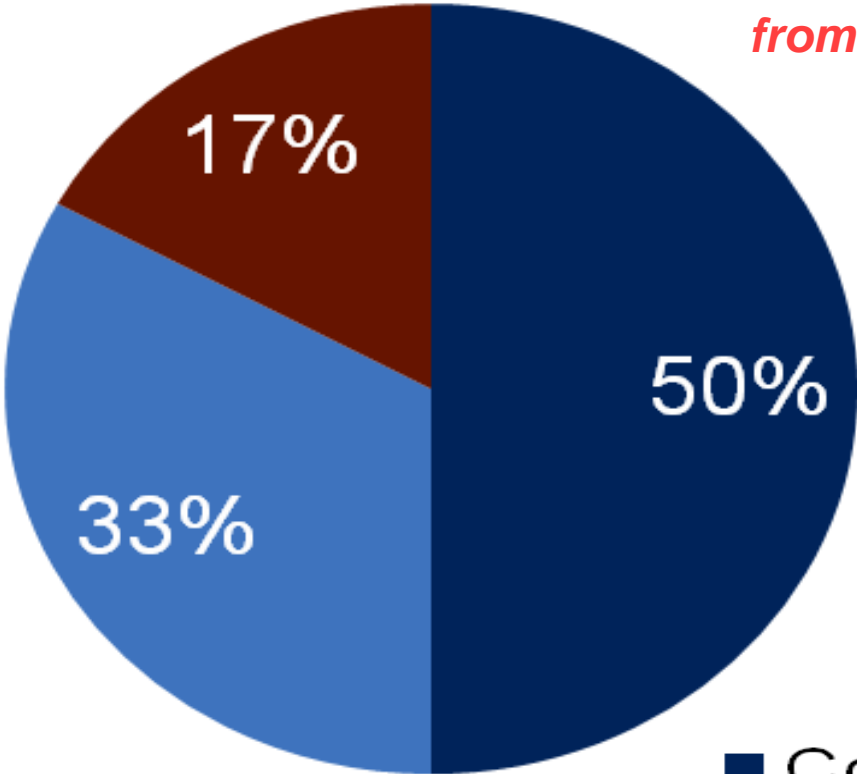
- **Outcomes of Interest:**

- Increased attendance at second appointment

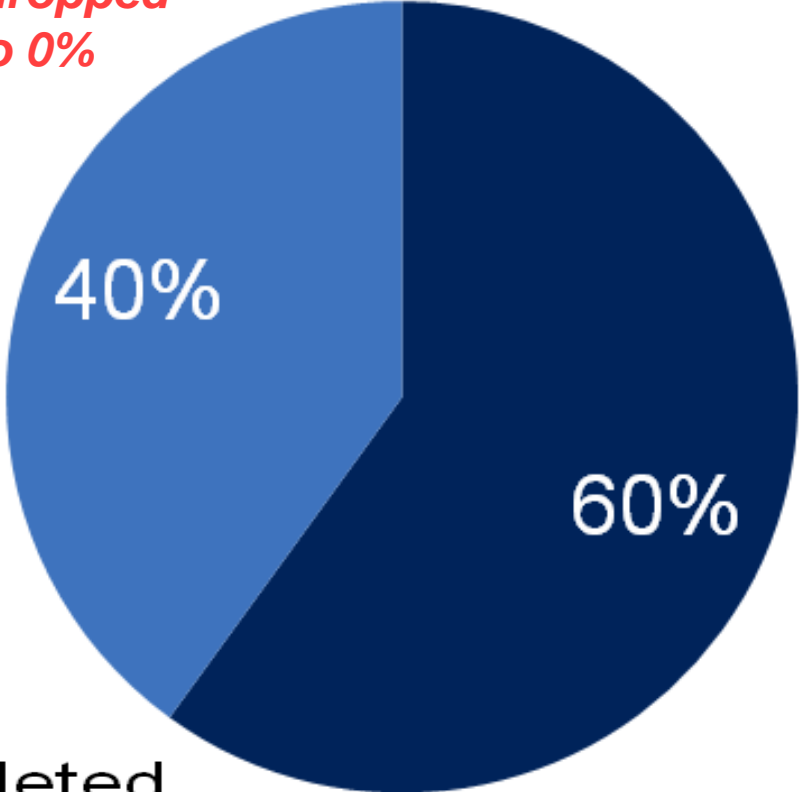
Outcomes

Before Intervention (Nov 2009 - Jan 2010)

After Intervention (Nov 2010 - Jan 2011)



No show rate dropped from 17% to 0%



- Completed
- Cancelled
- No Show

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Transitional Care Following Psychiatric Discharge

- **QI team sent a psychiatric nurse for training in the Care Transitions Intervention (Univ. Colorado)**
- **Assigned her to work with individuals discharged from a 42-bed geropsychiatric unit to provide healthcare “coaching”:**
 - reinforcing patient-identified goals
 - promoting follow-up
 - assistance with problem-solving
- **Presentation reviews step-by- step process undertaken to:**
 - Train
 - Implement
 - provide ongoing support
 - for a hospital-based care transitions team, led by:
 - nurse transitions coordinator
 - supervising psychiatrist

WPIC Geropsychiatry Discharges with Highmark
(25% of total)

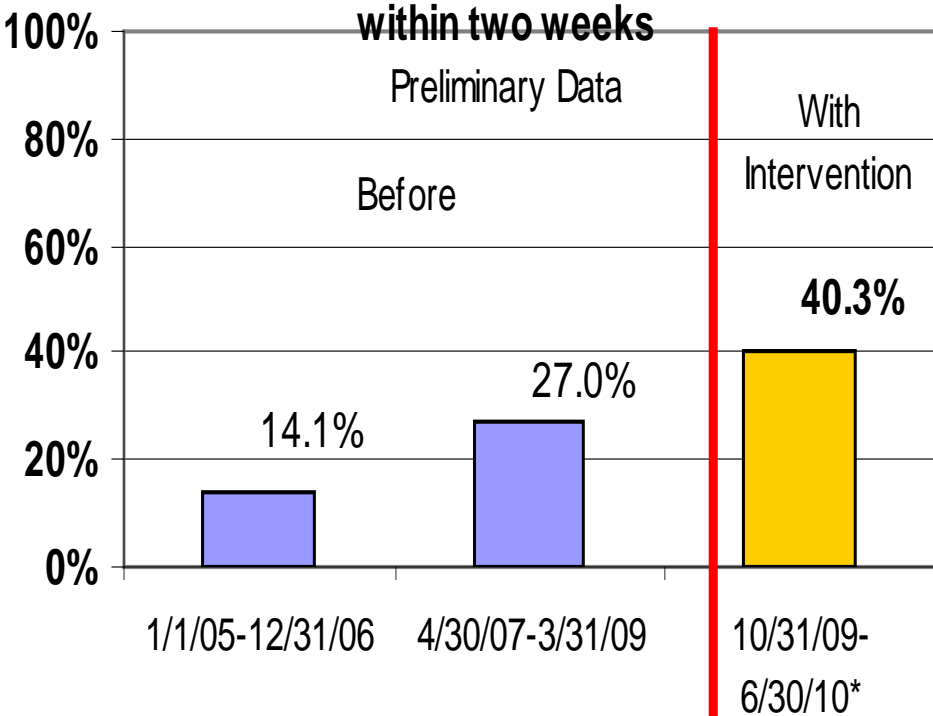
MH outpatient Follow-up attended

within two weeks

Preliminary Data

Before

With
Intervention

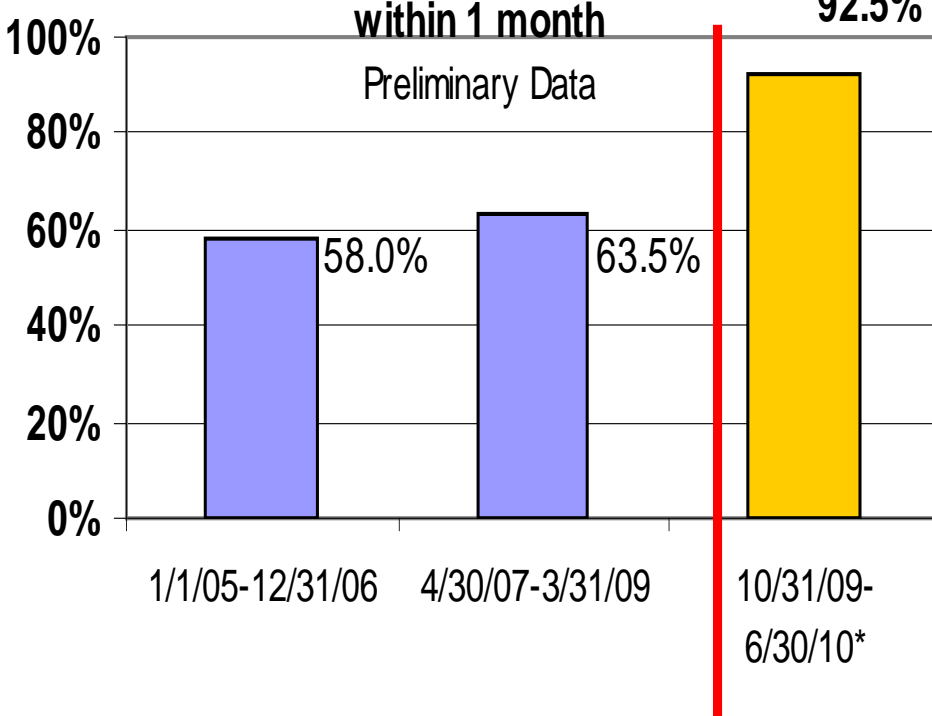


WPIC Geropsychiatry Discharges with Highmark
(25% of total)

Any Follow-up (med or psych)

within 1 month

Preliminary Data



WPIC Quality and Operational Dashboard

- WPIC Sample List of Dashboard/Run Chart Indicators

DOGBERT CONSULTS

YOU NEED A DASH-
BOARD APPLICATION
TO TRACK YOUR
KEY METRICS.



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THAT WAY YOU'LL HAVE
MORE DATA TO IGNORE
WHEN YOU MAKE YOUR
DECISIONS BASED ON
COMPANY POLITICS.



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WILL THE
DATA BE
ACCURATE?

OKAY,
LET'S
PRETEND
THAT
MATTERS.



WPIC INDICATORS

- Access days 1st call to 1st appt
- Access days 1st call to 1st (0-17)
- Access days 1st call to 1st (18+)
- Attendance @ 1st appt
- Attendance @ 1st appt (0-17)
- Attendance @ 1st appt (18+)
- Hrs Restraint BEHAV 1000PHrs
- Epi Restraint BEHAV 1000PD
- Hrs Restraint MED 1000PHrs
- Epi Restraint MED 1000PD
- Hrs Seclusion 1000PHrs
- Epi Seclusion 1000PD
- Tot Fall 1000PD
- Falls Injury 1000PD
- M-Care Serious Evnt /1000PD
- Cond A 1000PD
- Cond C 1000PD
- 7 D Readm
- 30 D Readm
- NOS dx adm over all adm dx InPt
- NOS dx disch over all dc dx InPt
- Retention in Tx
- Prcnt kept Appt
- Prcnt kept Appt (0-17)
- Prcnt kept Appt (18+)
- Documentation completion
- Prcnt NOS dx as primary dx
- WPI LOS Over all
- Unit 3_los
- Unit 5_los
- Unit 5E2_los
- Unit 6_los
- Unit 7_los
- Unit 8A_los
- Unit 9_los
- Unit 10_los
- Unit 11_los
- Unit 12_los
- Unit 13_los

Incorporating Quality Measures into Practice

- Network Non-Academic Community Hospital

Network Non-Academic Community Hospital

Financial

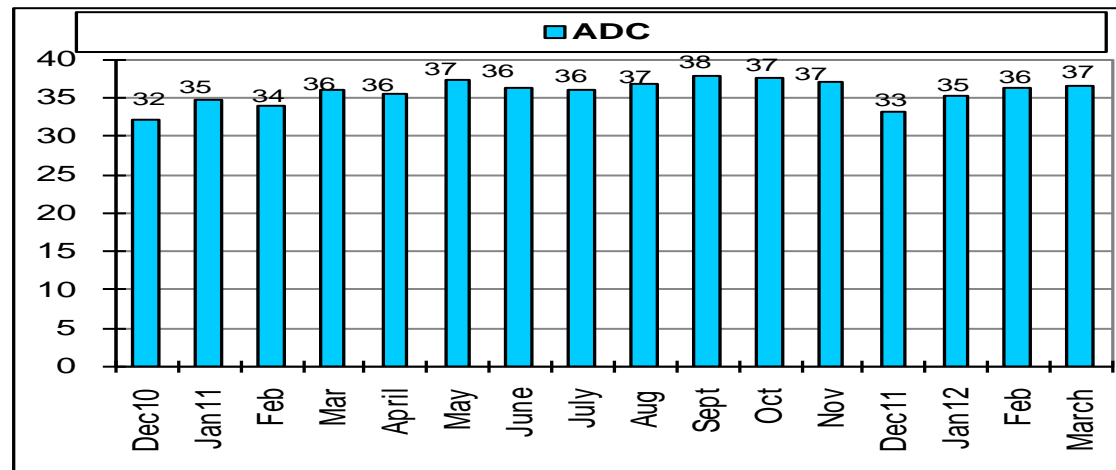
- Patient Days (denominator use)
- ADC
- LOS
- Admissions
- Occupancy , % licensed beds

Quality

- Discharges
- Hrs Seclusion / 1000 Hrs
- Epi Seclusion /1000 Days
- Hrs Restraint Behavioral
- Epi Restraint Behavioral
- Total Falls, # of & Rate
- Falls w/ Injury, # of & Rate
- Adverse Events, # & Rate
- Med Errors # of & Rate
- % Pts leaving on 2 or more AP meds

Quality Con't

- Readmits in 48 hrs
- Readmits in 7 days
- Readmits in 30 days



- % patients leaving with a scheduled appt within 7 days
- Perceptions of Care survey domain scores
- MD Sign w/in 30 Day
- Disallowed Abbreviations
- AMA Discharge rate

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Mon Yough Community Services : Discharge Planning

Problem:

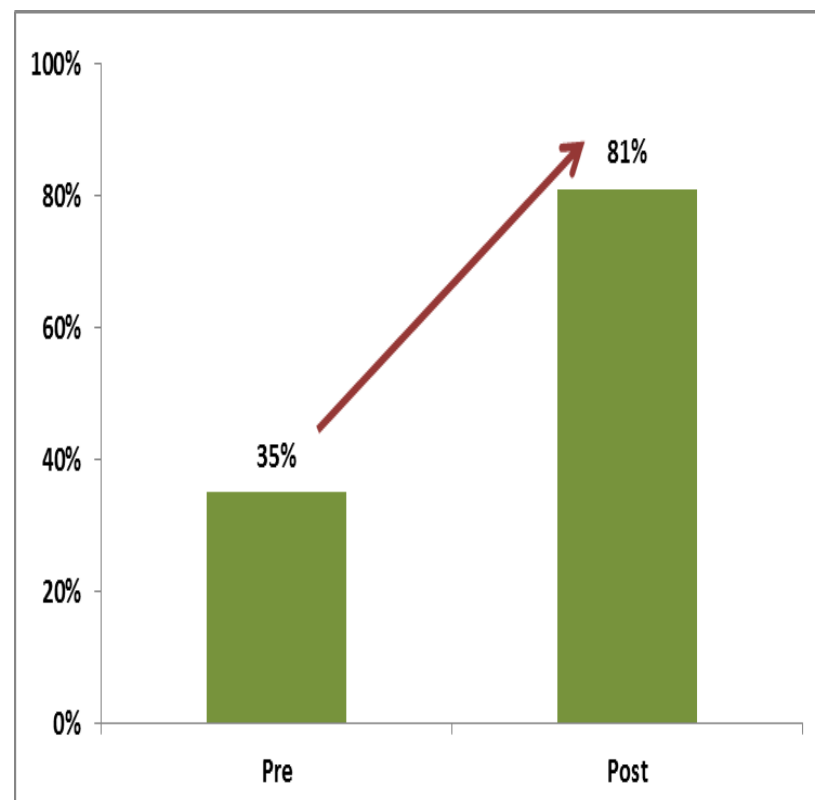
- Void in care during transition from inpatient to outpatient when not previously enrolled in outpatient services
- Disconnect between levels of care:
 - one way handoff resulting in poor engagement

Intervention:

- New Patients enrolled (intake completed) in outpatient services while on inpatient
- Interviews focused on engagement and patient preference
- Active engagement:
 - Outpatient intake staff present on the inpatient unit and in attendance at inpatient discharge meeting
- Administrative case manager provides care management services and outreach to individuals

Result:

- Show rate in first appointment after discharge increased from 35% to 81% (Pre N=50, Post N=53)



Questions and Discussion