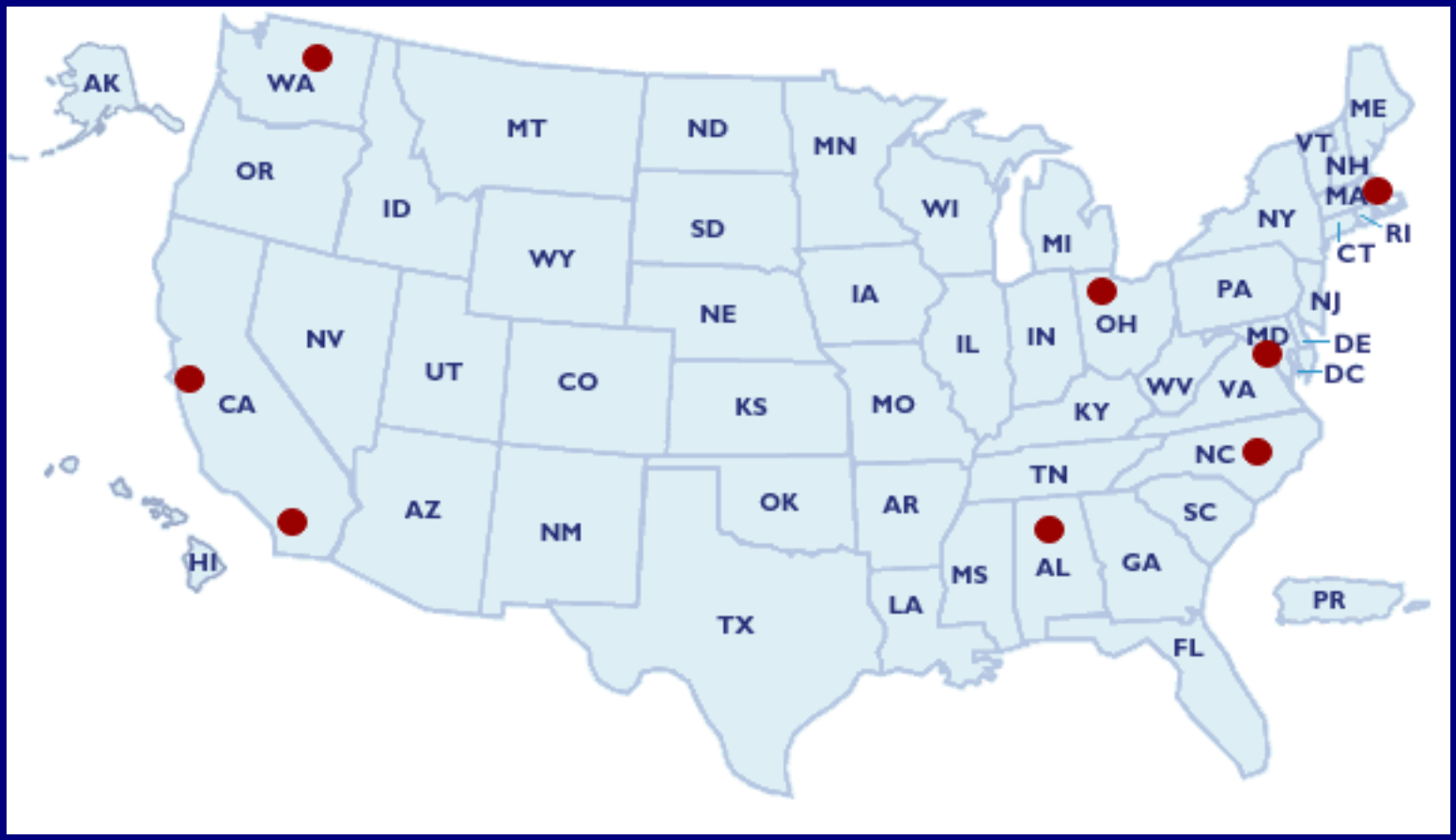
Panel #7: “Scaling up” PROs

Implementing Patient Reported Outcomes in Routine Clinical Care

HIV as an example to improve clinical care and facilitate research

Heidi M Crane, MD, MPH
University of Washington
On behalf of CNICS and UW PROMIS

CNICS



Created "to better define the relationship between patient and treatment factors and long-term clinical outcomes among HIV-infected patients in the HAART era"

CNICS

- Medications
- Laboratory values
- Diagnoses
- Health care utilization
- Vital status
- Genotype resistance
- Biological specimens
- Census block data

>27,000 HIV-infected individuals across the US

CNICS Clinical Assessment

Domain	Instrument
ARV adherence	ACTU-4, VAS, 30-day rating
Depression	PHQ-9 from PRIME-MD
Anxiety	PHQ-4
Alcohol use	AUDIT-C
Substance use	ASSIST
Health related quality of life	EuroQOL-5D
Symptom burden	HIV Symptoms Index (HIV-SI)
Body morphology	Adapted from FRAM instrument
HIV Risk Behavior	HRAP

Assessments on tablet PCs with touch screens every 4-6 months, contains between 69 and 127 items depending on responses

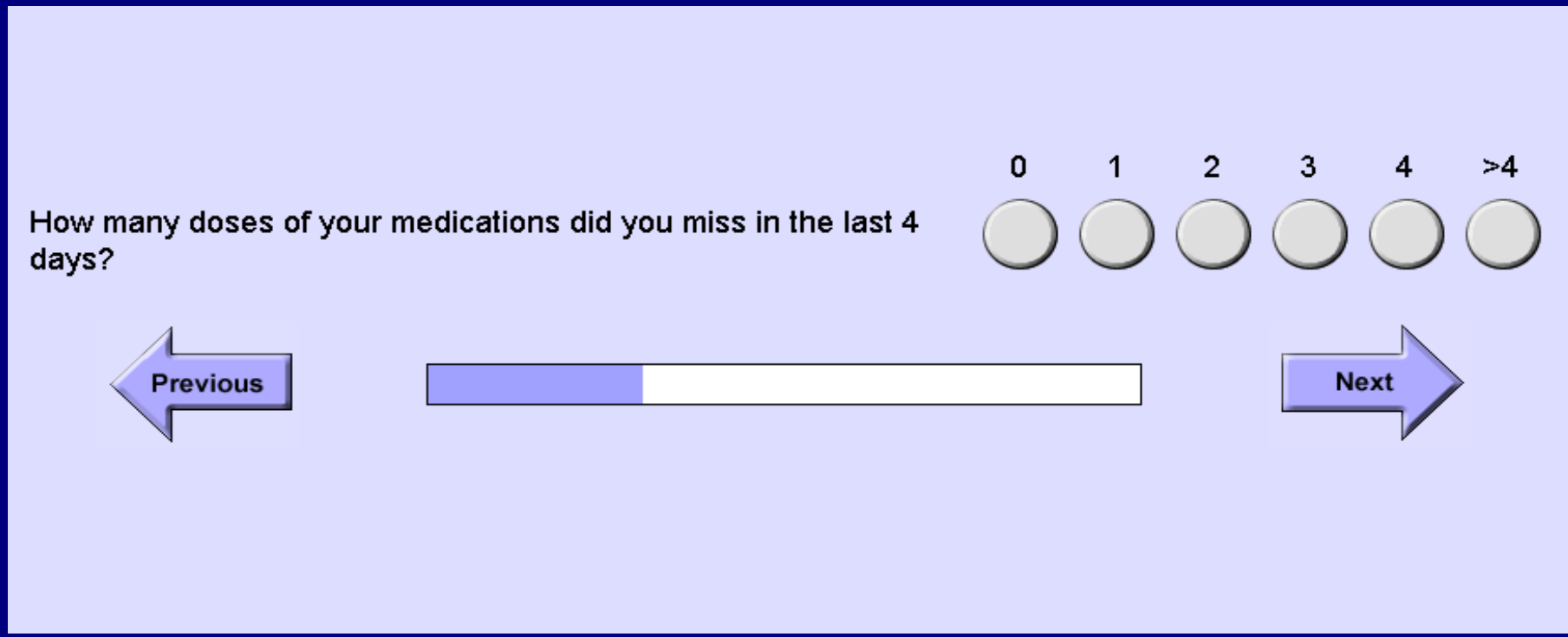
Selected to improve clinical care, inform research, minimize patient burden

Assessment

- We use an open-source, non-proprietary web-based survey software application designed by Dr. Lober and colleagues
- Surveys are completed on touch-screens
  - Facilitate data collection, decrease staff burden eliminating scoring and data-entry time compared with the use of paper forms, and also allows immediate access to results
  - Highly acceptable and feasible among HIV-infected patients in routine clinical care

    Crane et al, Current HIV Research, 2007, 5(1): 109-18
- Skip patterns based on PRO results, clinical and demographic data, time since last completed an instrument
- Encrypted SSL/TLS
- English and Spanish
- Tracks patient eligibility and time since last assessment, time to complete each assessment as well as time to complete each item and instrument for each patient

Assessment



The interface is designed for ease of navigation with questions displayed with large, easy to read type, and clearly labeled radio buttons to indicate responses, no typing to answer questions or navigate, and no keyboard available. No double or ambiguous answers by allowing only one response per question but permits mistakes to be easily corrected.

Tailored feedback based on clinic flow and practices: paper-based, electronic, integrated, often with specific resources and options

https://cnics-pro.cirg.washington.edu/uab-admin/provider-report.php?sessionID=2428169

Patient-Based Measures Provider Feedback

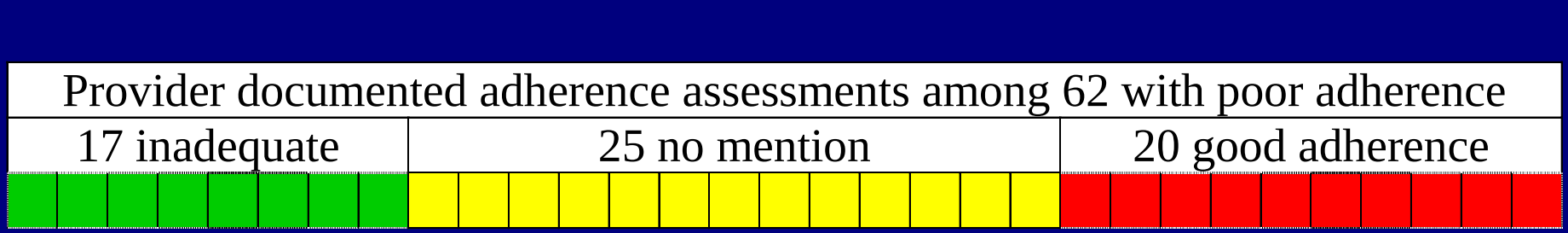
Name:
Date Completed: 2013-10-10 13:50 PDT

Instrument	Interpretation
PHQ-9 Overall depression score last 2 weeks	
12	Moderate depression (10-19)
PHQ-9 Suicidal ideation score last 2 weeks	
0	Not at all
Substance use within last 3 months	
Cocaine/Crack	
Opiates	
Marijuana	
Tobacco use	
Currently (Between 1 and 2 packs a day)	
Alcohol Score (AUDIT/AUDIT-C)	
20	At-risk alcohol consumption (>=5, AUDIT questionnaire)
MINI Score	
2	Is Not a Dependent Drinker
Antiretroviral adherence	
Adherence in the past 4 weeks	Fair
Last missed	Within the last week
High risk behavior-last 6 months	
Anal sex condom use: Had anal sex with 0 people in the last 6 months	
Vaginal sex condom use: Never had vaginal sex	
Oral sex partners: Question not answered	
Sharing needles or injection equipment: never used non-medical drugs by injection	

Provider assessment of adherence: enhancing clinic buy-in

- 62 of initial 500 patients self-reported very poor adherence
- Providers documented (same day):
  - Inadequate adherence for only 17 (27%)
  - No mention of adherence for 25 (40%)
  - Good adherence for 20 (32%)
- Furthermore, among the 17 in whom providers correctly documented inadequate adherence
  - 5 (29%) had moderate depression that was not acknowledged
  - 4 (24%) had current substance abuse that was not acknowledged

RESULT: PROs as a VITAL SIGN: Part of routine clinic procedures



Study design and methods

- Observational workflow studies
- Semi-structured in-depth 1:1 interviews with clinic providers and staff at roll-out and 1 year
- Focus group with a user-centered design
- Field-based software usability testing (patient participants)
  - Used the open-source CamStudio screen + audio capture software http://camstudio.org/
  - Patients completed the CASI while "thinking aloud" and being verbally interviewed and video recorded for qualitative analyses to identify recurring themes

Findings: recurring themes from provider & staff interviews

- System is promoting awareness of previously unrecognized/under-recognized issues
- Reports serve as "conversational icebreakers" for MD's to engage patients
- System implementation has been minimally disruptive to clinic workflow

Findings: verbatim quotes from provider & staff interviews

- "You probably have patients who feel more comfortable putting that down on a computer generated survey than they do telling people straight up. And I should say that yes, there have been things that have come forward on that assessment tool that I didn't know about my patients."
- "Unexpected effects? Well, um – I have been stunned by how many people function on some levels with active depressive symptoms."
- "….he drank a lot more than I realized, and I think the way I will just say that to him again, is 'I see that you answered this, can we talk more about that'. So it's sort of a conversation starting point."
- "I think it's been a nice tool to kind of engage around real issues."
- "I'm actually surprised at how quickly it's gotten to be this streamlined. That's surprising to me."

Findings: recurring themes from patient usability tests

- System (hardware & software) is easy to use:
  - (Minor) criticisms were limited to the wording of a few items
  - "Straightforward" questions are appreciated
- System elicits information that is:
  - Useful
  - Relevant
  - Important
- Completing a CASI session is an inherently positive, useful, and valuable experience by:
  - heightening/promoting my self-awareness, and
  - challenging me to be honest with myself and with others about my health-related behaviors and symptoms

Incorporating key stakeholders

Rank order of General Care Domains

PROMIS Existing Domain	Provider ranking	Patient ranking
Depression	1	1
Physical function	2	4
Pain	3	2
Anxiety	3	5
Fatigue	4	6
Sleep disturbance	5	3
Anger	6	5

Rank order of HIV care domains

Potential New Domain	Provider ranking	Patient ranking
Medication adherence	1	5
HIV& Treatment Symptoms	2	2
Substance abuse	3	8
Alcohol abuse	4	9
Cognition	4	7
Sexual risk behavior	5	4
HIV stigma	6	4
Positive affect	7	1
Sexual function	8	8
Social roles	9	6
Spirituality/meaning of life	10	3

* Provider findings similar for ranking for both clinical research and clinical care

Study Design: Improving Clinical Care

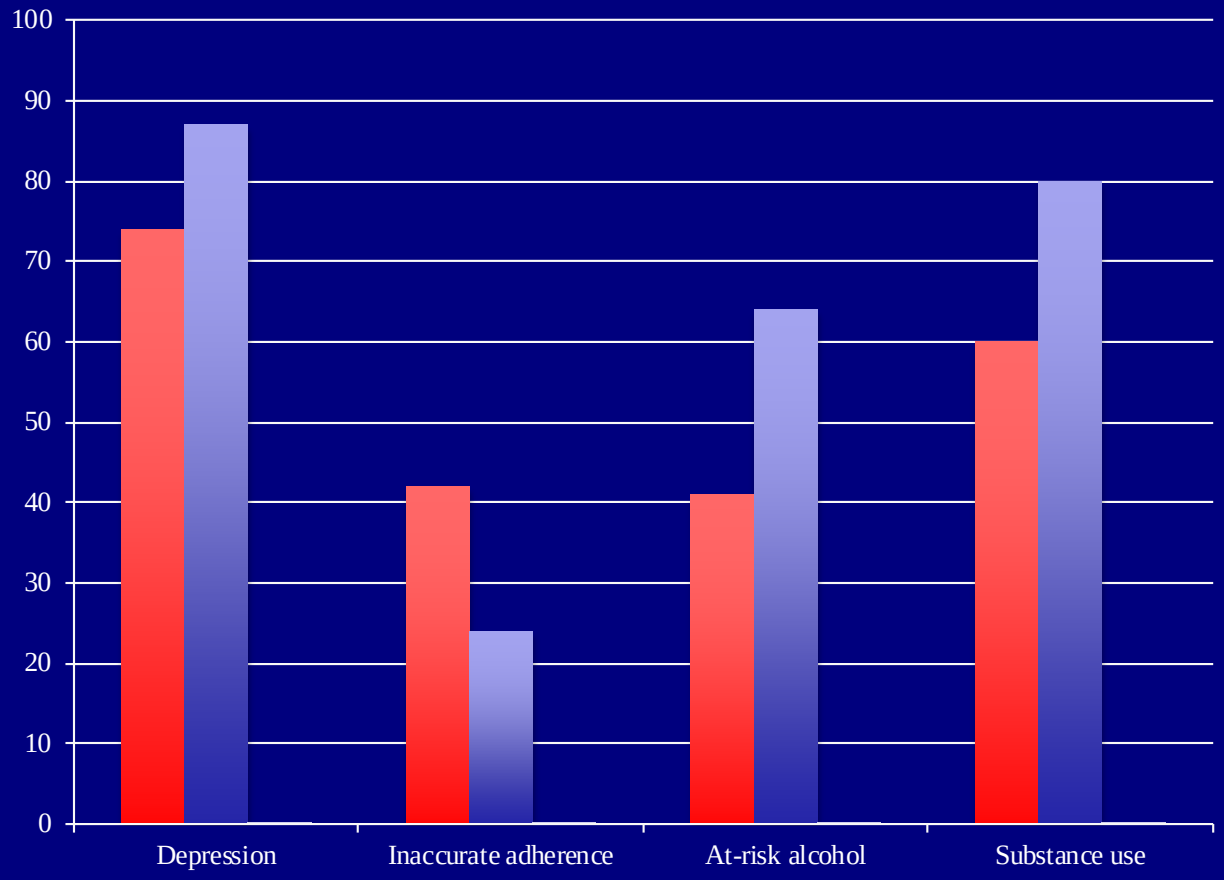
PRO assessment integrated into care 1/09

- ~600 pts completed since integration, **with** report delivery
- ~800 pts completed **without** report delivery, prior to 1/09

Chart reviewers

- Blinded to whether or not provider received report
- Reviewed same-day provider documentation of awareness and/or action within 5 domains 8 months before and after integration

Provider Documentation: Before vs. After PRO Delivery

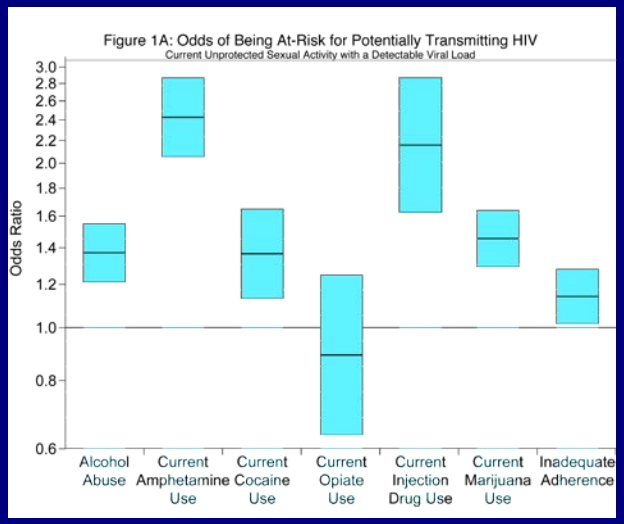


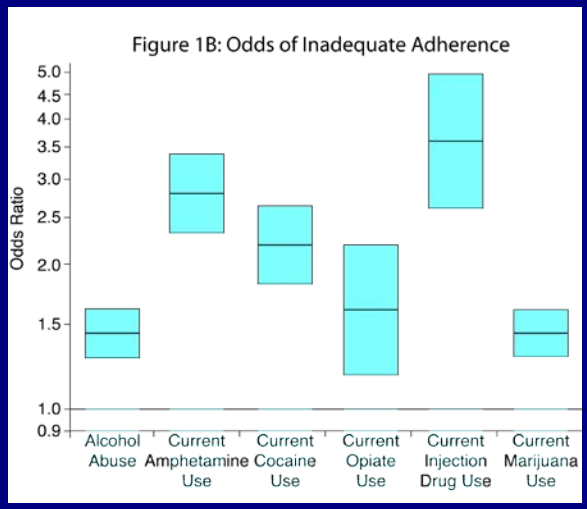
Findings

- PRO collection improves:
  - Accuracy in assessing ARV adherence
  - Identification of at-risk alcohol use
  - Action to address at-risk alcohol use
  - Identification of moderate-to-severe depression

- Actions needed:
  - Improve provider ability and/or willingness to assess and respond to known sexual risk behavior
  - Partner with providers to further tailor and promote PRO assessment as a useful, relevant clinical tool
  - Build referral options into PRO assessment to stimulate more proactive provider response across all domains

Facilitating clinical research: Over 22,000 assessments completed





Lipoatrophy among HIV-infected patients is associated with higher levels of depression than lipohypertrophy. *HIV Med.*
Lipoatrophy and lipohypertrophy are independently associated with hypertension. *HIV Med*
Routine, self-administered, touch-screen, computer-based suicidal ideation assessment linked to automated response team notification in an HIV primary care setting. *Clin Infect Dis.*
Measuring depression levels in HIV-infected patients as part of routine clinical care using the nine-item Patient Health Questionnaire (PHQ-9). *AIDS Care.*
A structural equation model of HIV-related stigma, depressive symptoms, and medication adherence. *AIDS Behav.*
Somatic symptoms and the association between hepatitis C infection and depression in HIV-infected patients. *AIDS Care*
Migrating from a legacy fixed-format measure to CAT administration: calibrating the PHQ-9 to the PROMIS depression measures. *Qual Life Res.*
Routine depression screening in an HIV clinic cohort identifies patients with complex psychiatric co-morbidities who show significant response to treatment. *AIDS Behav.*
Evaluation of the single-item self-rating adherence scale for use in routine clinical care of people living with HIV. *AIDS Behav.* Integrating a web-based patient assessment into primary care for HIV-infected adults. *Journal of AIDS and HIV Research.*
Physical activity and health outcomes among HIV-infected men who have sex with men: A longitudinal mediational analysis. *Ann Behav Med.*
Body mass index, immune status, and virological control in HIV-infected men who have sex with men. *J Int Provid AIDS Care*
Substance use among HIV-infected patients engaged in primary care in the United States: Findings from the Centers for AIDS Research Network of Integrated Clinical Systems Cohort. *Am J Pub Health.*
Body mass index, depression, and condom use among HIV-infected men who have sex with men: A longitudinal moderation analysis. *Archives of Sexual Behavior*.

Lessons learned

- We have demonstrated the feasibility of collecting PROs in busy, multi-provider HIV clinics with a number of different flow patterns, EHRs, etc.
- We found a high prevalence of poor medication adherence, moderate-to-severe depression, active substance abuse, and high symptom burden
- Additional features such as real-time, automated pager notification when patients indicate suicidality are especially valuable to providers. Important to integrate entire health team (case managers, etc.) for addressing PRO feedback
- Qualitative evaluation methods can contribute to and/or validate optimized integration of information technologies in clinical settings
- Important to include all key stakeholders in design stages
- Provider feedback raises awareness and actions regarding a number of key domains such as at-risk alcohol use, depression, substance use, etc., reinforcing idea of implementing PROs not only as outcome measures but also as tools for enhancing the care process
- Feasible to focus on improving clinical care and conducting clinical research simultaneously: not mutually exclusive goals, very related!
- Flexible implementation methods required with tailoring based on each clinic's flow pattern and EHR

Acknowledgements

- Many many colleagues from across CNICS
- Patients, providers, and staff members
- University of Washington Madison HIV clinic
- University of Alabama Birmingham 1917 clinic
- CFAR
- CNICS
- NIH NIMH R01
- PROMIS

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Use of PRO's in the Primary Care Setting to Support Care for Patients with Chronic Pain on Long Term Opioid Therapy

Lynn L DeBar, PhD MPH

Kaiser Permanente Center for Health Research

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Agenda

- "Scaling Up" PRO Use in Routine Clinical Care for Patients with chronic nonmalignant chronic pain
  - Facilitating Conditions (safety concerns, REMS, Opioid Treatment Plans)
  - IT Infrastructure to Support Clinical Work Flow: Centrality of the Panel Support Tool
  - Important Characteristics of the PRO in Clinical Care: Logistics of Administration and Potential Reactivity
- Expanding Beyond a Single PRO: Patient and Clinician Centered Design
  - Embedding PRO Summaries into the EHR: A Work in Progress
  - Patients with Multiple and Complex Chronic Conditions: Summary PRO Reports to Facilitate Clinical Care and Patient Activation
  - Considering Patient Priorities and Values: the MySupport Profile

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Key Contextual Issues

PROBLEMS

Rising prevalence of chronic pain

- 1/3 of the US pop. has chronic pain
- Annual US cost of $560-600 billion in health care costs and lost productivity

Use of opioids to treat CNMP rising

- Opioid prescriptions for CNMP doubled since 1980
- Opioid related morbidity and mortality have increased in past 2 decades
- Opioids are associated with significant efficacy-limiting side effects

REALITY

Primary care plays a central role in managing CNMP

- Primary care oversees & coordinates care
- Primary care providers (PCP) are faced with a paucity of systematic resources and support
- This gap leads to a reliance on opioids as a monotherapy

CNMP = Chronic non-malignant pain

SOLUTIONS

Optimal management relies on supporting patient self-care and partnership with PCP: utilizing patient reported outcomes an important element of this

- Chronic illness management necessitates an activated patient
- PCP/patient partnership to support focus on improving functioning critical and consistent with recent IOM/DoD reports

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Unintentional overdose deaths involving opioid analgesics parallel per capita sales of opioid analgesics in morphine equivalents by year, US, 1997-2007

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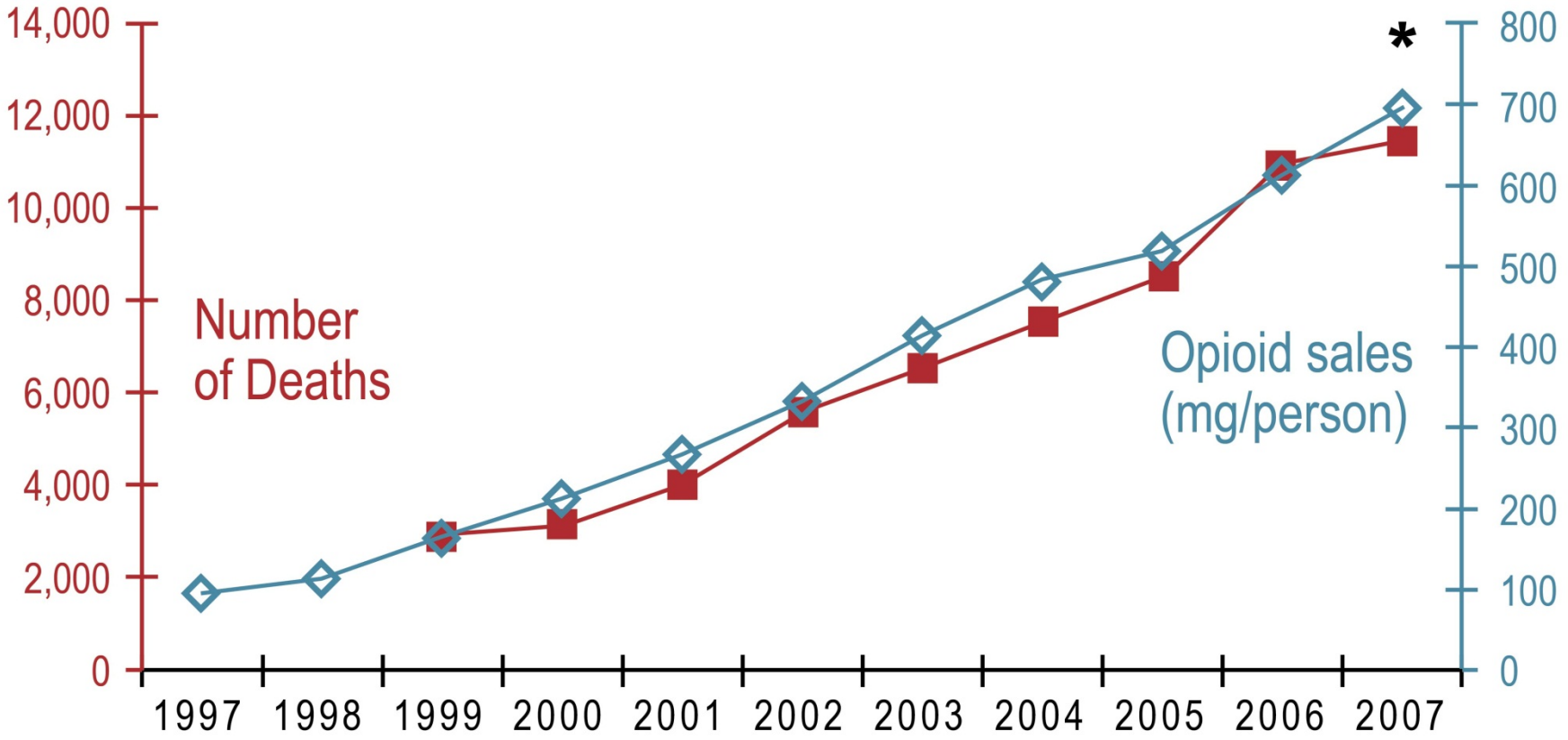

Source: National Vital Statistics System, multiple cause of death dataset, and DEAARCOS

*2007 opioid sales figure is preliminary

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The FDA's Risk Evaluation and Mitigation Strategies (REMS) for ER or LA Opioids

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Goal: Reduce serious adverse outcomes resulting from inappropriate prescribing, misuse, and abuse of ER/LA opioid analgesics while maintaining patient access to pain medications.

- Elements to assure safe use:
  - Training for providers who prescribe ER/LA opioids
    - Specific requirements for training along with audits of the educational material
- Medication guide: Dispensed with each ER/LA opioid

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Clinical Context: KPNW Operational Response to Opioid Use

- Motivating factors for systematic clinical response (safety & efficacy concerns)
  - High dose opioid prescribing
  - Primary care in need of assistance
- Opioid Use Improvement Project (OUI)

Objectives:

- Improve patient safety
- Improve provider and team support
- Improve outcomes with chronic pain management

Opportunity for implementation of pain-related PRO

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Opioid Therapy Plan (OTP) Operational Criteria

PATIENT CRITERIA	BASIC GREEN	COMPLEX YELLOW	COMPLEX RED
Follows plan reliably	X		
No history of opioid abuse	X		
No history of other substance abuse within past 2 years	X		
No current behaviors indicating drug misuse	X		
Current behaviors raise questions about the ability to follow the OTP		X	
History of opioid abuse		X	
History of other substance abuse within past 2 years		X	
Calculated overall opioid dosing level at 180mg morphine equivalent or higher		X	
Have demonstrated repeated problems following the OTP (e.g. unexpected UDS)			X
Active substance abuse			X
Have current behaviors which raise concerns about possibility of diversion			X

PCP REQUIREMENTS	BASIC GREEN	COMPLEX YELLOW	COMPLEX RED
Office visit frequency (minimum)	Semi-annually (1 may be TAV)	Quarterly (2 may be TAVs)	Quarterly (no TAVs)
Office visit required for any dosing changes	No	Yes	Yes
Brief Pain Inventory (BPI) completed (minimum) ***[Recommended to be administered at every office visit]***	Semi-annually	Quarterly	Quarterly
Refresh pain diagnosis on problem list	Yearly	Yearly	Yearly
Verify current dosing level is reflected on OTP on the problem list	Yes	Yes	Yes
Discuss with the patient their use of opioid, non-opioid and non-pharmacological modalities to control pain	Each visit	Each visit	Each visit
UDS ordered and resulted (minimum)	Yearly	Quarterly	Quarterly
Confirm random pill counts completed	PRN	2x/Year & PRN	2x/Year & PRN
Create AVS or send letter with patient's dosing and instructions after dosing change	Yes	Yes – AVS only	Yes – AVS only
Create separate monthly opioid prescriptions, no refills and no mail order	No	Yes*	Yes
Early refills for travel	Yes	Yes	Up to 2/year
May refill prescriptions early for lost or stolen reasons (Police report needed before receiving refill of stolen medications)	Yes	Limited supply only	No
New OTP required when prescriber changes or OTP color changes	Yes	Yes	Yes

Kaiser Permanente's Patient Panel Support Tool

- Web-based software that extracts information from KP HealthConnect EMR (Epic) to help physicians improve and manage patient care
- Highlights "gaps" between delivered care and national guidelines pertaining to chronic disease management and preventive care (includes "gaps" associated with OTP such as the regular administration of the Brief Pain Inventory)
- Specifies the actions a primary care team must take to resolve these gaps both for individual patients and across PCP panel

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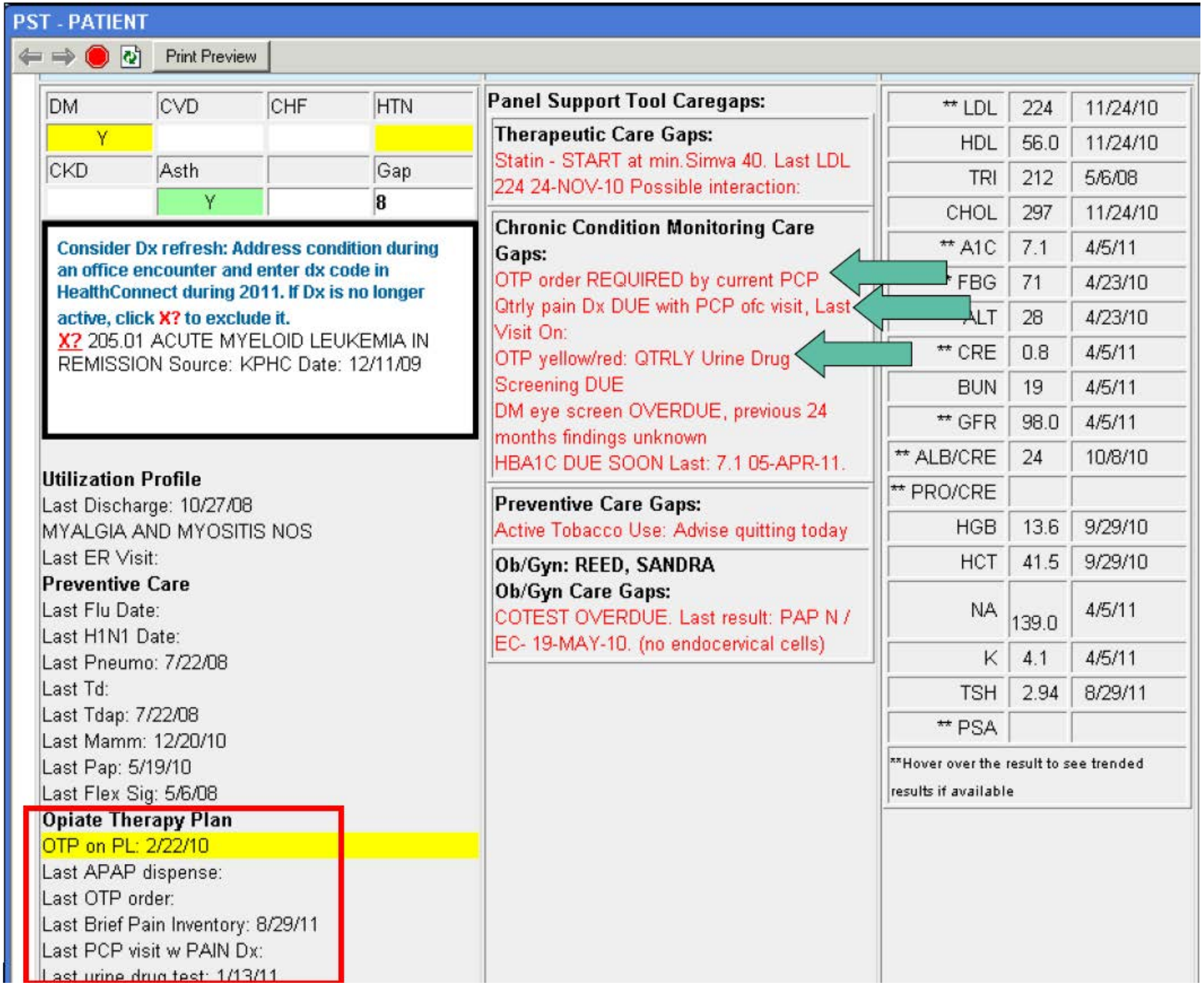
PST - PATIENT
Print Preview
DM
CVD
CHF
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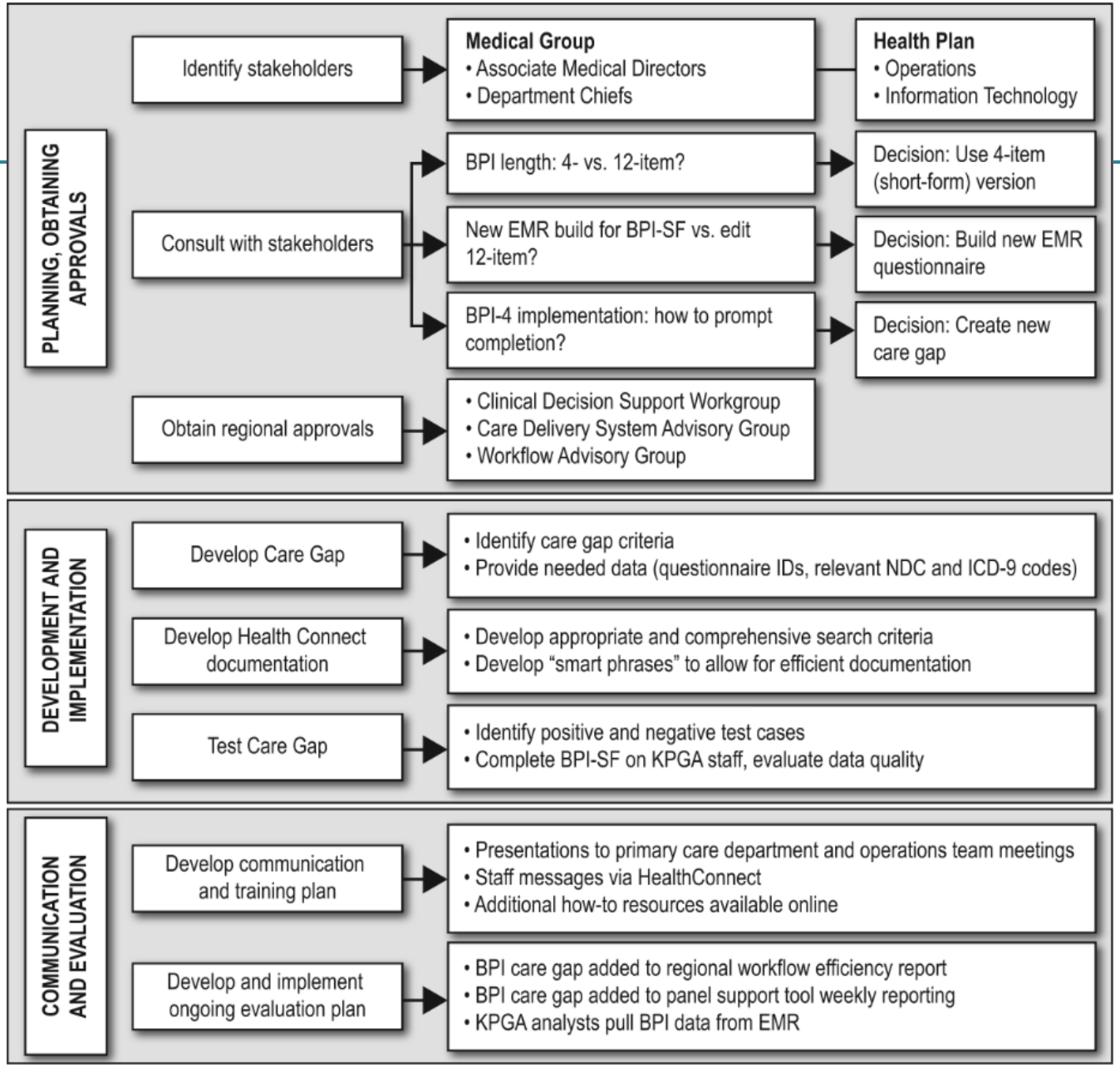
CKD
Asth
Gap
Y
8
Consider Dx refresh: Address condition during an office encounter and enter dx code in HealthConnect during 2011. If Dx is no longer active, click X? to exclude it.
X? 205.01 ACUTE MYELOID LEUKEMIA IN REMISSION Source: KPHC Date: 12/11/09
Utilization Profile
Last Discharge: 10/27/08
MYALGIA AND MYOSITIS NOS
Last ER Visit:
Preventive Care
Last Flu Date:
Last H1N1 Date:
Last Pneumo: 7/22/08
Last Td:
Last Tdap: 7/22/08
Last Mamm: 12/20/10
Last Pap: 5/19/10
Last Flex Sig: 5/6/08
Opiate Therapy Plan
OTP on PL: 2/22/10
Last APAP dispense:
Last OTP order:
Last Brief Pain Inventory: 8/29/11
Last PCP visit w PAIN Dx:
Last urine drug test: 1/13/11
Panel Support Tool Caregaps:
Therapeutic Care Gaps:
Statin - START at min.Simva 40. Last LDL 224 24-NOV-10 Possible interaction:
Chronic Condition Monitoring Care Gaps:
OTP order REQUIRED by current PCP
Qtrly pain Dx DUE with PCP ofc visit, Last Visit On:
OTP yellow/red: QTRLY Urine Drug Screening DUE
DM eye screen OVERDUE, previous 24 months findings unknown
HBA1C DUE SOON Last: 7.1 05-APR-11.
Preventive Care Gaps:
Active Tobacco Use: Advise quitting today
Ob/Gyn: REED, SANDRA
Ob/Gyn Care Gaps:
COTEST OVERDUE. Last result: PAP N / EC- 19-MAY-10. (no endocervical cells)
** LDL 224 11/24/10
HDL 56.0 11/24/10
TRI 212 5/6/08
CHOL 297 11/24/10
** A1C 7.1 4/5/11
FBG 71 4/23/10
ALT 28 4/23/10
** CRE 0.8 4/5/11
BUN 19 4/5/11
** GFR 98.0 4/5/11
** ALB/CRE 24 10/8/10
** PRO/CRE
HGB 13.6 9/29/10
HCT 41.5 9/29/10
NA 139.0 4/5/11
K 4.1 4/5/11
TSH 2.94 8/29/11
** PSA
**Hover over the result to see trended results if available

Establishing Routine BPI Administration in Clinical Workflow



Using the Personal Health Record to Collect PROs

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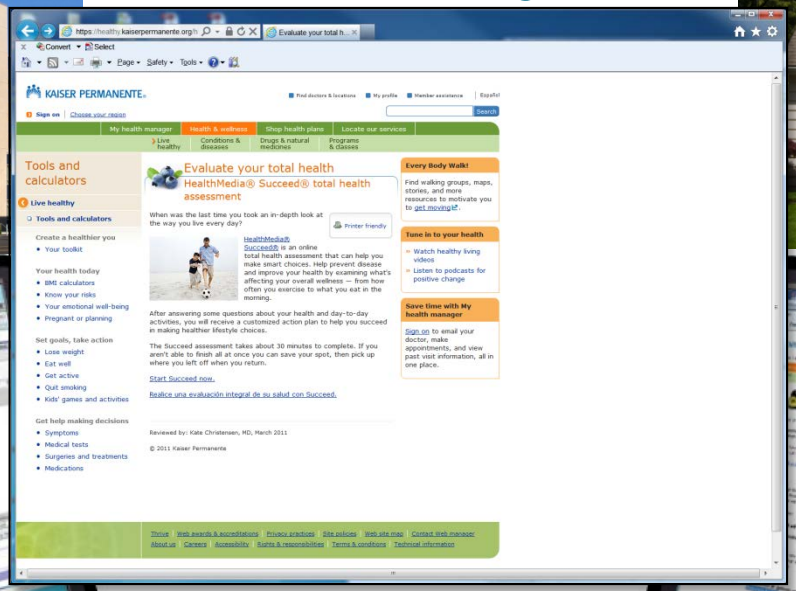
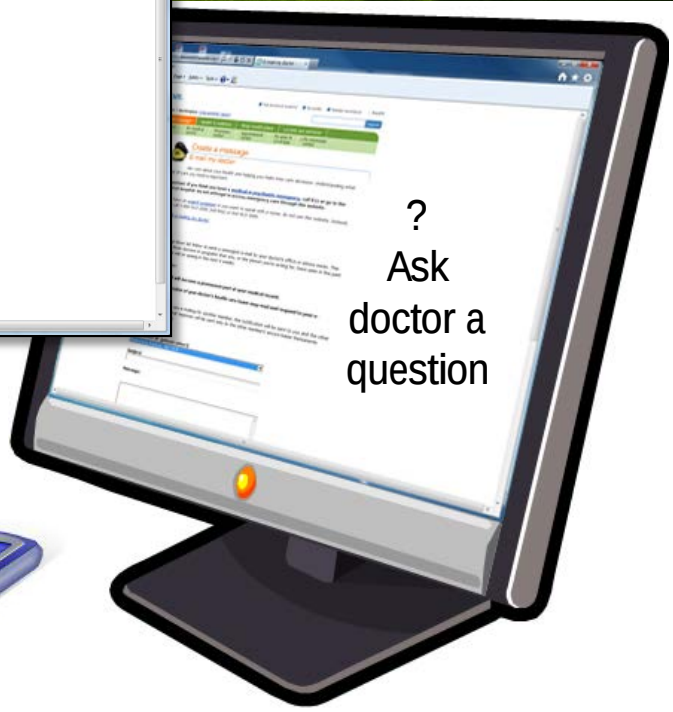
Patient Home

www.KP.org





? Ask doctor a question

EPIC Terminal

Personal Digital Devices

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Important Characteristics of the PRO: Logistics of Administration and Potential Reactivity

- Logistics of Administration
  - Frequency of BPI administration linked to patient's OTP "risk" level -> need to support low burden modes of collection to encourage more frequent PRO collection (e.g., Personal Health Record / e-mail, IVR)
  - 4- versus 12-item scale improves work flow
- Consider context of PRO administration and potential reactivity
  - Patient belief: Pain severity linked to "need" for opioid medication
  - Reported PCP preference for abbreviated scale as "focuses the discussion on functioning and don't need to explain an arbitrary summary score"

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Potential Cautions for Research Use of Clinically Collected PROs

- Adoption can be largely driven by “stick” (regulation or safety concerns) rather than “carrot” (clinical utility)
- Example: Administration of BPI linked to Opioid Prescription
  - Frequency of PRO administration linked to opioid dose (morphine equivalent dose)
  - Potential loss of follow-up data for those tapering off opioids
- Timing and Amount of Data Variable
  - Heterogeneity across health care providers
  - Potential for more frequent collection of PRO among patients with higher rates of health care utilization (potential bias by medical complexity or pain severity)

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Expanding Beyond a Single PRO: Patient and Clinician Centered Design

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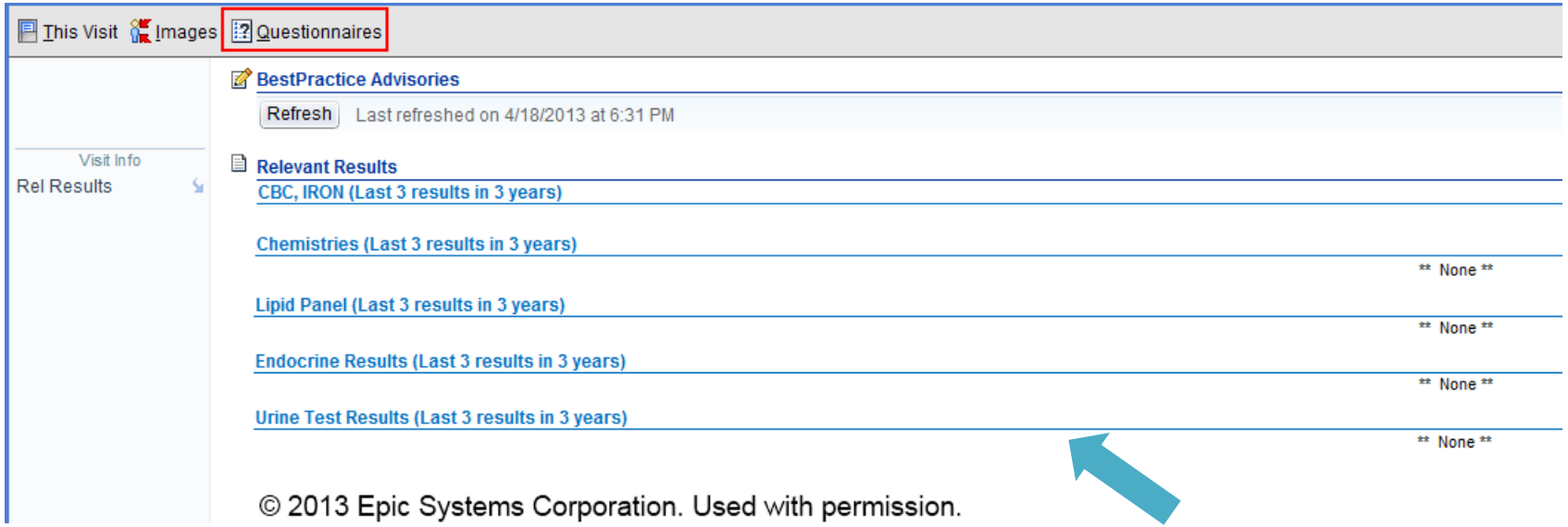
- Embedding PRO Summaries into the EHR: A Work in Progress…

PRO data entered in separate charting area



Lab data embedded directly into chart note

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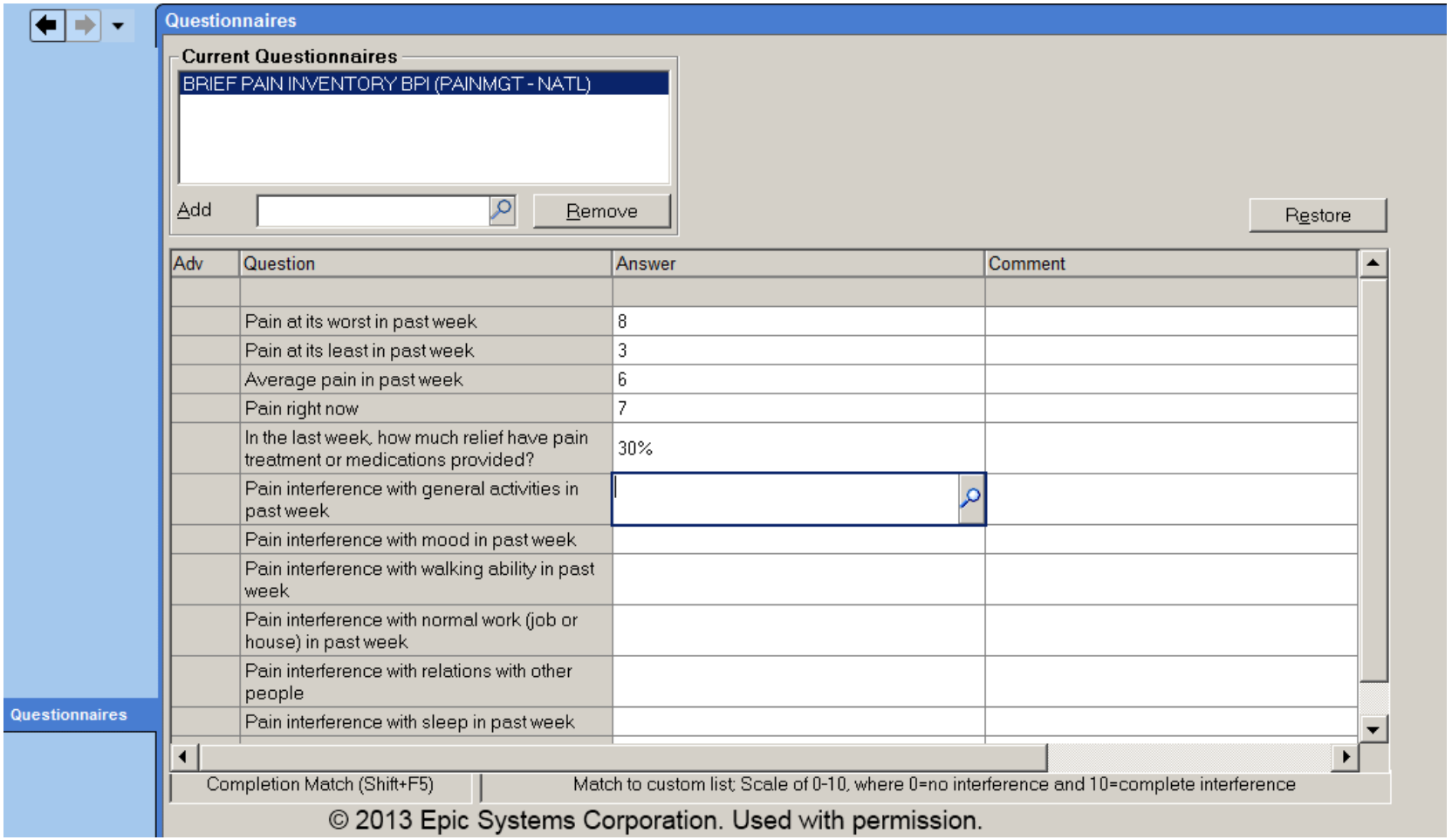
- Less than ideal interface and data entry



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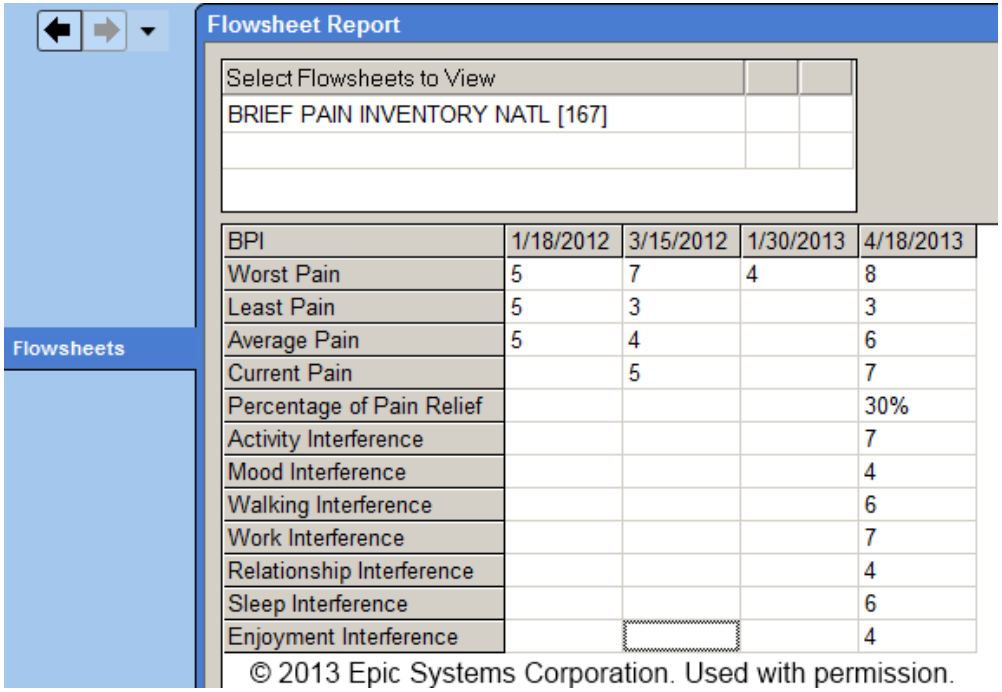
- Variable collection of PROs



BPI	1/18/2012	3/15/2012	1/30/2013	4/18/2013
Worst Pain	5	7	4	8
Least Pain	5	3		3
Average Pain	5	4		6
Current Pain		5		7
Percentage of Pain Relief				30%
Activity Interference				7
Mood Interference				4
Walking Interference				6
Work Interference				7
Relationship Interference				4
Sleep Interference				6
Enjoyment Interference				4

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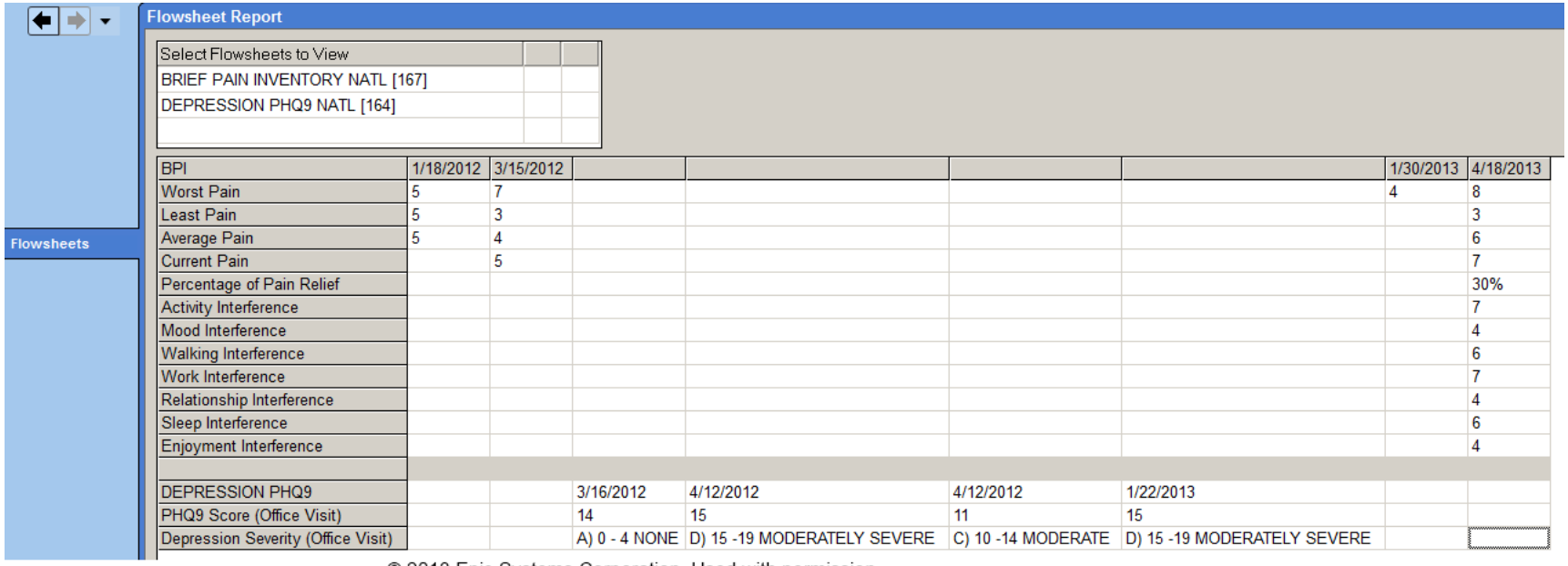
- Less than ideal display when viewing multiple PROs



Flowsheets

Flowsheet Report

Select Flowsheets to View
BRIEF PAIN INVENTORY NATL [167]
DEPRESSION PHQ9 NATL [164]

BPI	1/18/2012	3/15/2012					1/30/2013	4/18/2013
Worst Pain	5	7					4	8
Least Pain	5	3						3
Average Pain	5	4						6
Current Pain		5						7
Percentage of Pain Relief								30%
Activity Interference								7
Mood Interference								4
Walking Interference								6
Work Interference								7
Relationship Interference								4
Sleep Interference								6
Enjoyment Interference								4
DEPRESSION PHQ9			3/16/2012	4/12/2012	4/12/2012	1/22/2013		
PHQ9 Score (Office Visit)			14	15	11	15		
Depression Severity (Office Visit)			A) 0 - 4 NONE	D) 15 -19 MODERATELY SEVERE	C) 10 -14 MODERATE	D) 15 -19 MODERATELY SEVERE		

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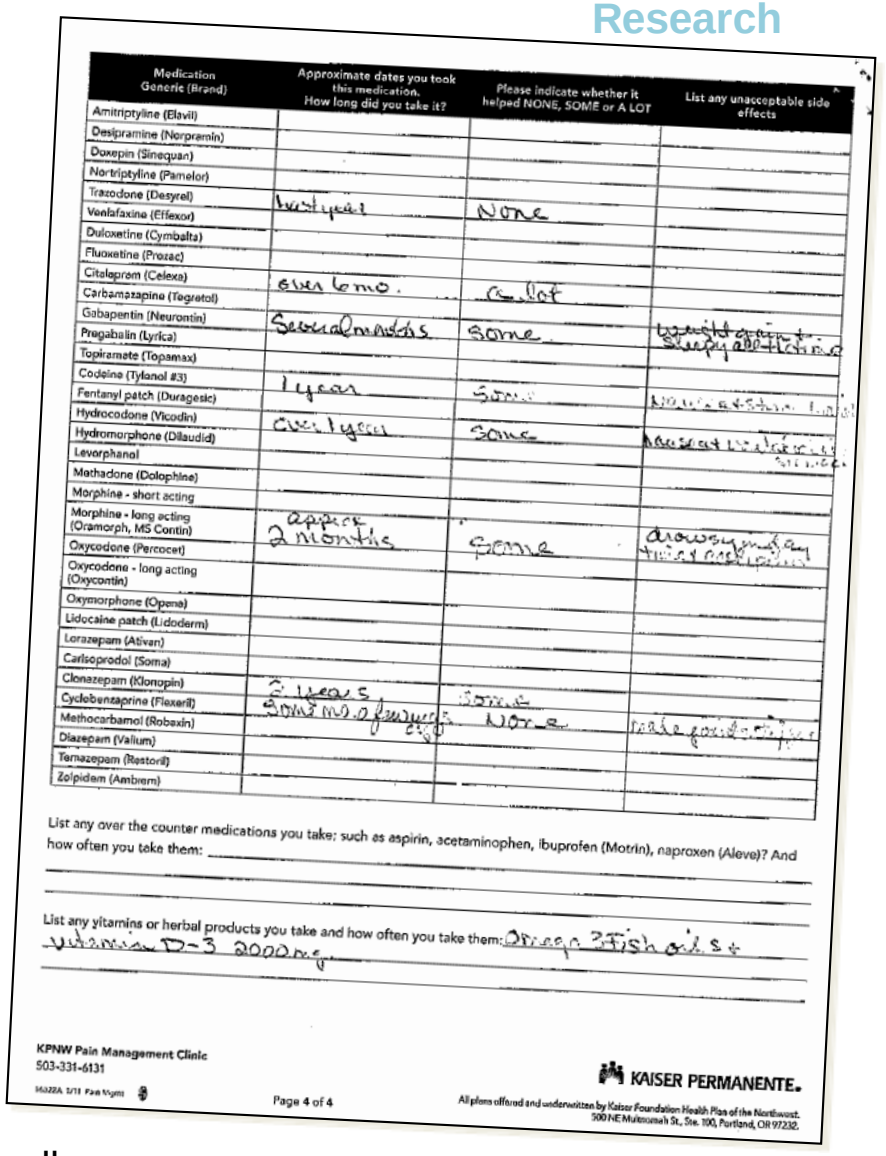

Medication Generic (Brand)	Approximate dates you took this medication. How long did you take it?	Please indicate whether it helped NONE, SOME or A LOT	List any unacceptable side effects
Amitriptyline (Elavil)			
Desipramine (Norpramin)			
Doxepin (Sinequan)			
Nortriptyline (Pamelor)			
Trazodone (Desyrel)	last year	NONE	
Venlafaxine (Effexor)			
Duloxetine (Cymbalta)			
Fluoxetine (Prozac)			
Citalopram (Celexa)	over 6 mo.	a lot	
Carbamazapine (Tegretol)			
Gabapentin (Neurontin)	Several months	some	
Pregabalin (Lyrica)			
Topiramate (Topamax)			
Codeine (Tylenol #3)			
Fentanyl patch (Duragesic)	1 year	some	
Hydrocodone (Vicodin)			
Hydromorphone (Dilaudid)	over 1 year	some	
Levorphanol			
Methadone (Dolophine)			
Morphine - short acting			
Morphine - long acting (Oramorph, MS Contin)	approx 2 months	some	
Oxycodone (Percocet)			
Oxycodone - long acting (Oxycontin)			
Oxymorphone (Opana)			
Lidocaine patch (Lidoderm)			
Lorazepam (Ativan)			
Carisoprodol (Soma)			
Clonazepam (Klonopin)			
Cyclobenzaprine (Flexeril)	2 years some no frequency	some none	
Methocarbamol (Robaxin)			
Diazepam (Valium)			
Temazepam (Restoril)			
Zolpidem (Ambien)			

List any over the counter medications you take; such as aspirin, acetaminophen, Ibuprofen (Motrin), naproxen (Aleve)? And how often you take them:

List any vitamins or herbal products you take and how often you take them: Omega 3 Fish oils + Vitamin D-3 2000 mg.

KPNW Pain Management Clinic
503-331-6131

Page 4 of 4

KAISER PERMANENTE®

All plans offered and underwritten by Kaiser Foundation Health Plan of the Northwest.
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Select each page individually…

Highly variable quality…

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Summary PRO Reports to Facilitate Clinical Care and Patient Activation

Kaiser Permanente
Research

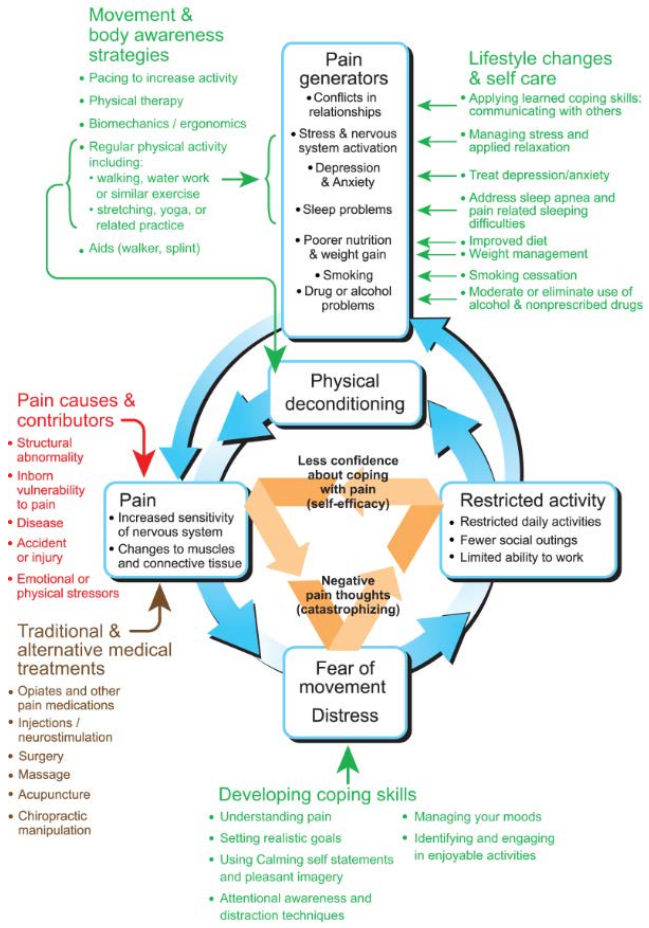
Collaborative Care for Chronic Pain in Primary Care

Sponsor: National Institutes of Health Common Fund, National Institute of Neurological Diseases and Stroke, National Institute of Drug Abuse, and Administrated by the National Center for Complementary and Alternative Medicine

Goal: Coordinate and integrate services for helping patients adopt self-management skills for managing chronic pain, limit opioid medications, and identify exacerbating factors amenable to treatment that is feasible and sustainable within the primary care setting

Design: Pragmatic Trial at KP Northwest, KP Southeast, and KP Hawaii

Target Population: Patients with chronic pain on long-term opioid treatment (prioritized recruitment based on operational need: MED ≥ 120 mg, concurrent opioid and benzodiazepine use, or high utilization of primary care services)



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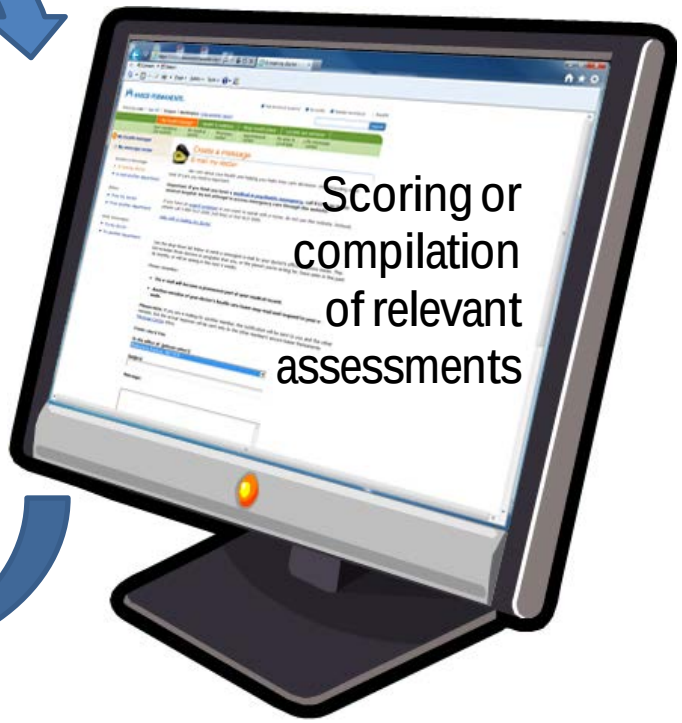
Online
or paper
collection

EMR Provider
Summary
Report



Scoring or
compilation
of relevant
assessments

© 2

MySupport Tool

Effects of a Patient Driven Assessment Process with Complex Pain Patients

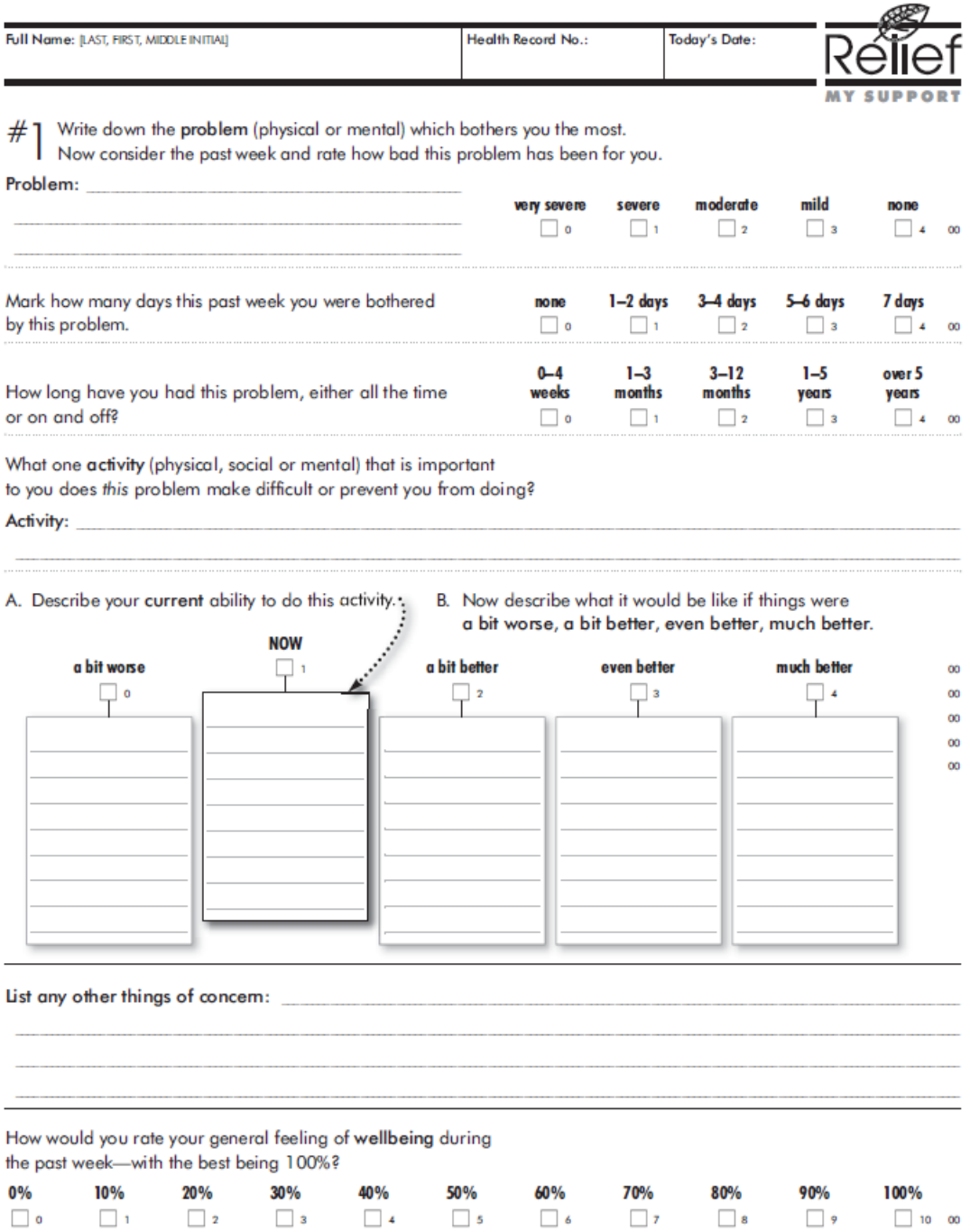
Sponsor: PCORI

Goal: Develop a patient-driven assessment process for patients with complex pain that helps them identify functional issues of primary importance to them and provides PCPs with this information at the point-of-care that can be easily tracked over time.

Target Population: Patients with widespread chronic pain or ≥ 3 pain conditions on long term opioid treatment

Design: Mixed methods with RCT pilot

Relief MY SUPPORT



Full Name: [LAST, FIRST, MIDDLE INITIAL] | Health Record No.: | Today's Date:

Relief MY SUPPORT

#1 Write down the **problem** (physical or mental) which bothers you the most.
Now consider the past week and rate how bad this problem has been for you.

Problem: _____

very severe 0 | severe 1 | moderate 2 | mild 3 | none 4 00

Mark how many days this past week you were bothered by this problem.

none 0 | 1–2 days 1 | 3–4 days 2 | 5–6 days 3 | 7 days 4 00

How long have you had this problem, either all the time or on and off?

0–4 weeks 0 | 1–3 months 1 | 3–12 months 2 | 1–5 years 3 | over 5 years 4 00

What one **activity** (physical, social or mental) that is important to you does *this* problem make difficult or prevent you from doing?

Activity: _____

A. Describe your **current** ability to do this activity.

B. Now describe what it would be like if things were a bit worse, a bit better, even better, much better.

a bit worse 0 | NOW 1 | a bit better 2 | even better 3 | much better 4 00 00 00 00 00

List any other things of concern: _____

How would you rate your general feeling of **wellbeing** during the past week—with the best being 100%?

0% 0 | 10% 1 | 20% 2 | 30% 3 | 40% 4 | 50% 5 | 60% 6 | 70% 7 | 80% 8 | 90% 9 | 100% 10 00

Kaiser Permanente
Research

A) MyMOP

Full Name: [LAST, FIRST, MIDDLE INITIAL]		Date of Birth:
Street Address:	City:	Zipcode/Postcode:
Today's Date:	Practitioner Seen:	

MY MOP

Choose one or two symptoms (physical or mental) which bother you the most. Write them on the lines. Now consider how bad each symptom is, over the last week, and score it by marking your chosen number.

SYMPTOM 1: _____ As GOOD as it could be ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 As BAD as it could be ☐ 6

SYMPTOM 2: _____ As GOOD as it could be ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 As BAD as it could be ☐ 6

Now choose one activity (physical, social or mental) that is important to you, and that your problem makes difficult or prevents you doing. Score how bad it has been in the last week.

ACTIVITY: _____ As GOOD as it could be ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 As BAD as it could be ☐ 6

Lastly how would you rate your general feeling of wellbeing during the last week?

As GOOD as it could be ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 As BAD as it could be ☐ 6

How long have you had *SYMPTOM 1*, either all the time or on and off?

	0–4 weeks	4–12 weeks	3 months–1 year	1–5 years	Over 5 years
Please mark:	☐	☐	☐	☐	☐

Are you taking any medication *FOR THIS PROBLEM*? YES ☐ NO ☐
Please mark:

IF *YES*:

1. Please write in name of medication, and how much a day/week

2. Is cutting down this medication:

	Not important	A bit important	Very important	Not applicable
Please mark:	☐	☐	☐	☐

IF *NO*:

Is avoiding medication for this problem:

Not important	A bit important	Very important	Not applicable
☐	☐	☐	☐

B) MySupport

Full Name: [LAST, FIRST, MIDDLE INITIAL]	Health Record No.:	Today's Date:

Relief MY SUPPORT

#1 Write down the **problem** (physical or mental) which bothers you the most.
Now consider the past week and rate how bad this problem has been for you.

Problem: _____

very severe	severe	moderate	mild	none
☐ 0	☐ 1	☐ 2	☐ 3	☐ 4 00

Mark how many days this past week you were bothered by this problem.

none	1–2 days	3–4 days	5–6 days	7 days
☐ 0	☐ 1	☐ 2	☐ 3	☐ 4 00

How long have you had this problem, either all the time or on and off?

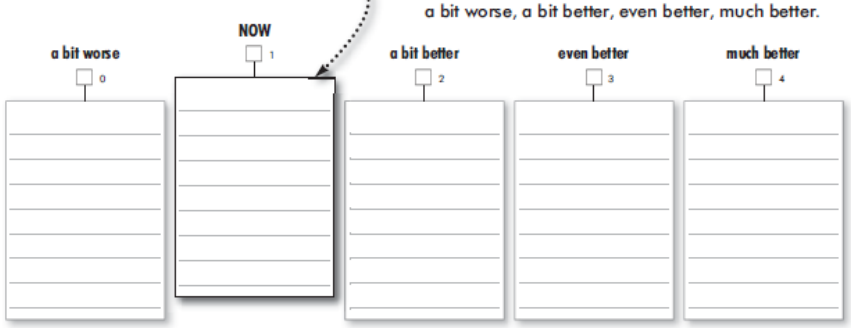
0–4 weeks	1–3 months	3–12 months	1–5 years	over 5 years
☐ 0	☐ 1	☐ 2	☐ 3	☐ 4 00

What one **activity** (physical, social or mental) that is important to you does *this* problem make difficult or prevent you from doing?

Activity: _____

A. Describe your **current** ability to do this activity.

B. Now describe what it would be like if things were a bit worse, a bit better, even better, much better.



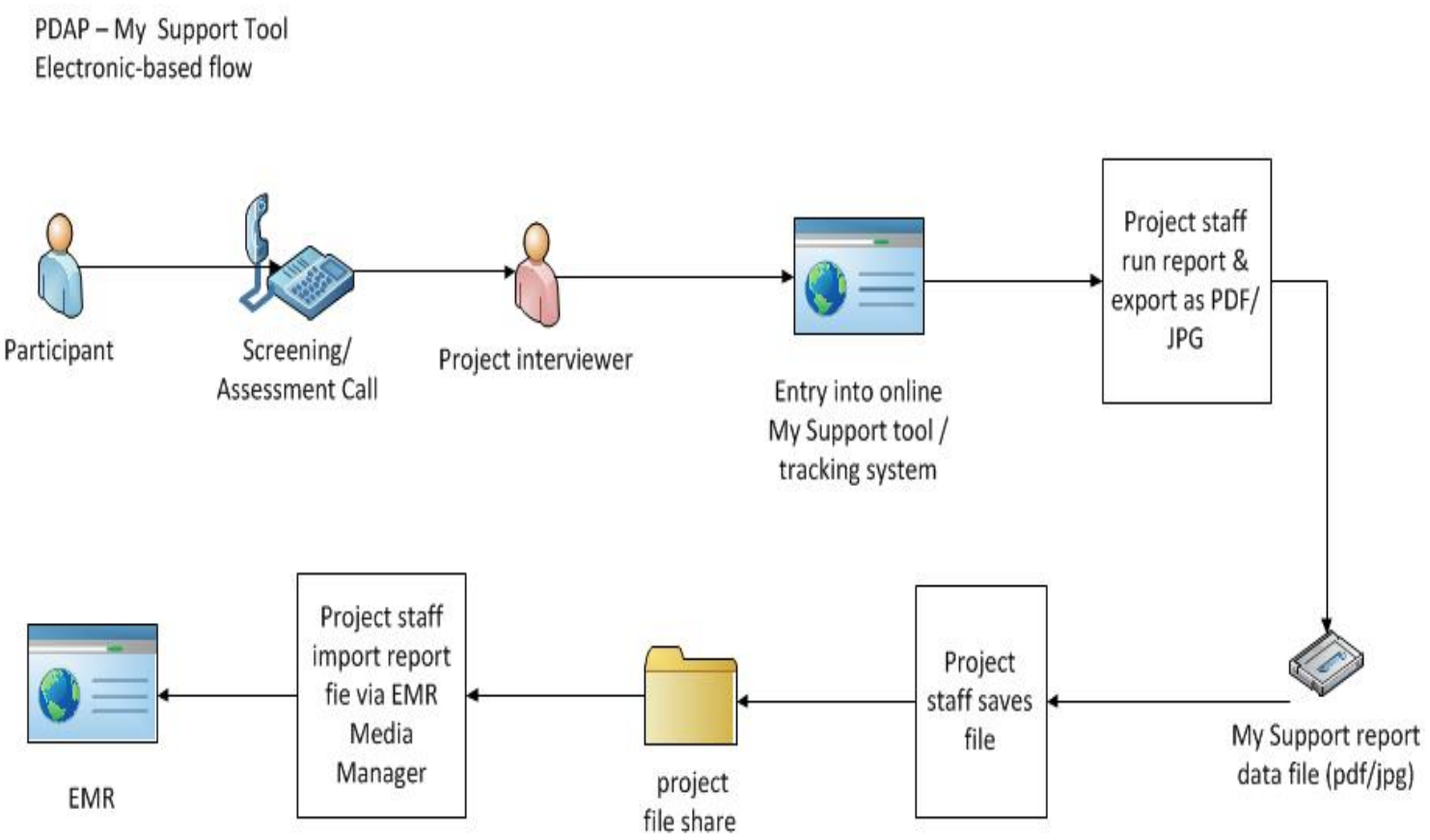
List any other things of concern: _____

How would you rate your general feeling of **wellbeing** during the past week—with the best being 100%?

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	☐ 10 00

Kaiser Permanente
Research

Process of "Pushing" PRO Report into EMR



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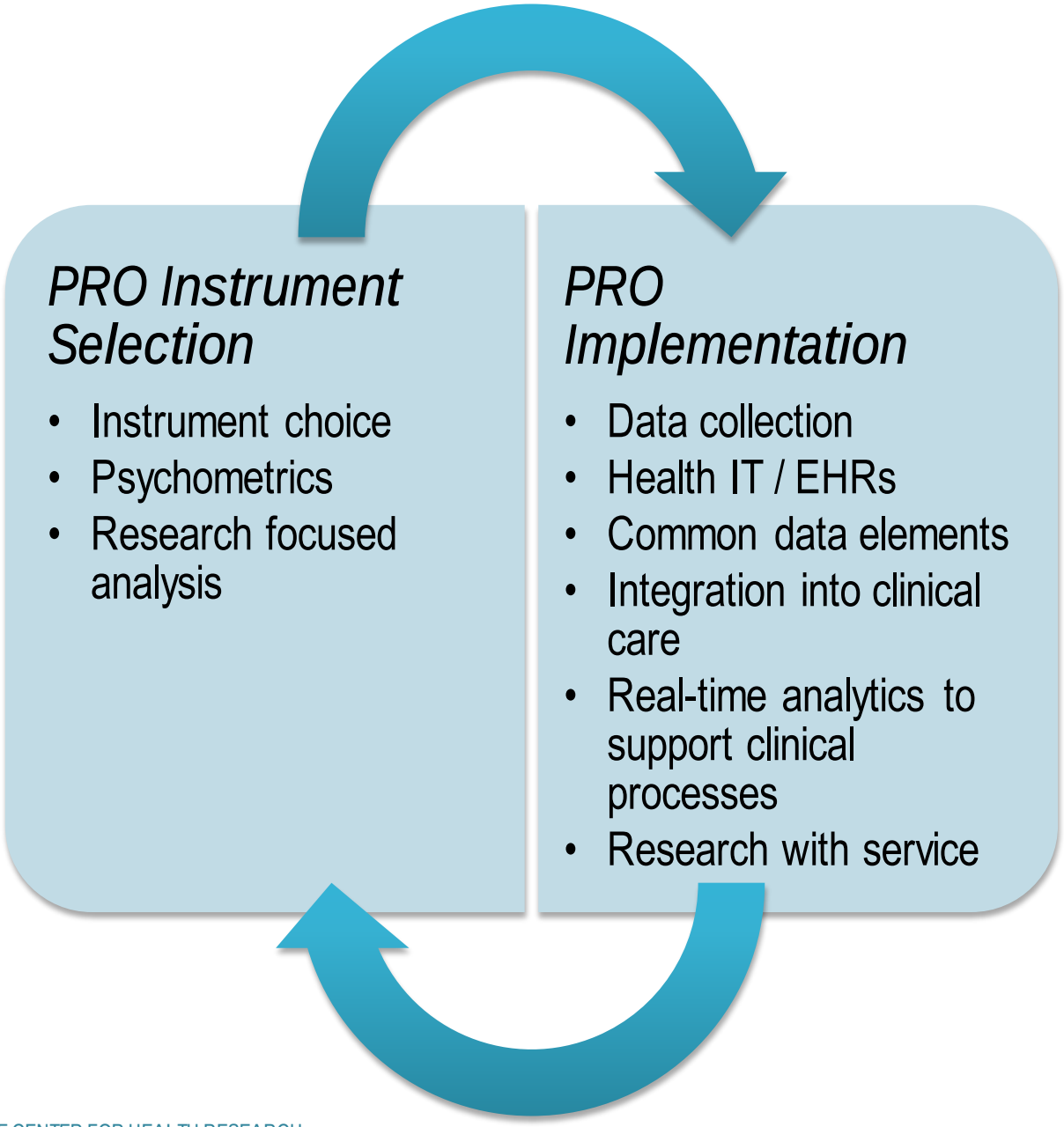

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"*Scaling Up*" a Successful Geriatrics Model of Care

Michael L. Malone, M.D.
Aurora Health Care/ University of Wisconsin
School of Medicine and Public Health

November 20, 2013

George and “Sweet Potato”

The Model- Acute Care for Elders:

Functional Older Person

↓

Acute Illness,
Possible Impairment

↓

Hospitalization

↓

Depressed Mood
Negative Expectations → ACE Programs

↓

Prehab Program Interventions:

Prepared environment **with standard equipment for seniors**
Patient-centered, interdisciplinary care
Multi-dimensional assessment and non-pharmacologic prescription
Home planning/informal network
Medical review using real-time information technology tools

Nursing assessment/ patient reported information in the electronic health record.

↓

Improved Mood
Positive Expectations

Reduced Impairment

Decreased Iatrogenic
Risk Factors

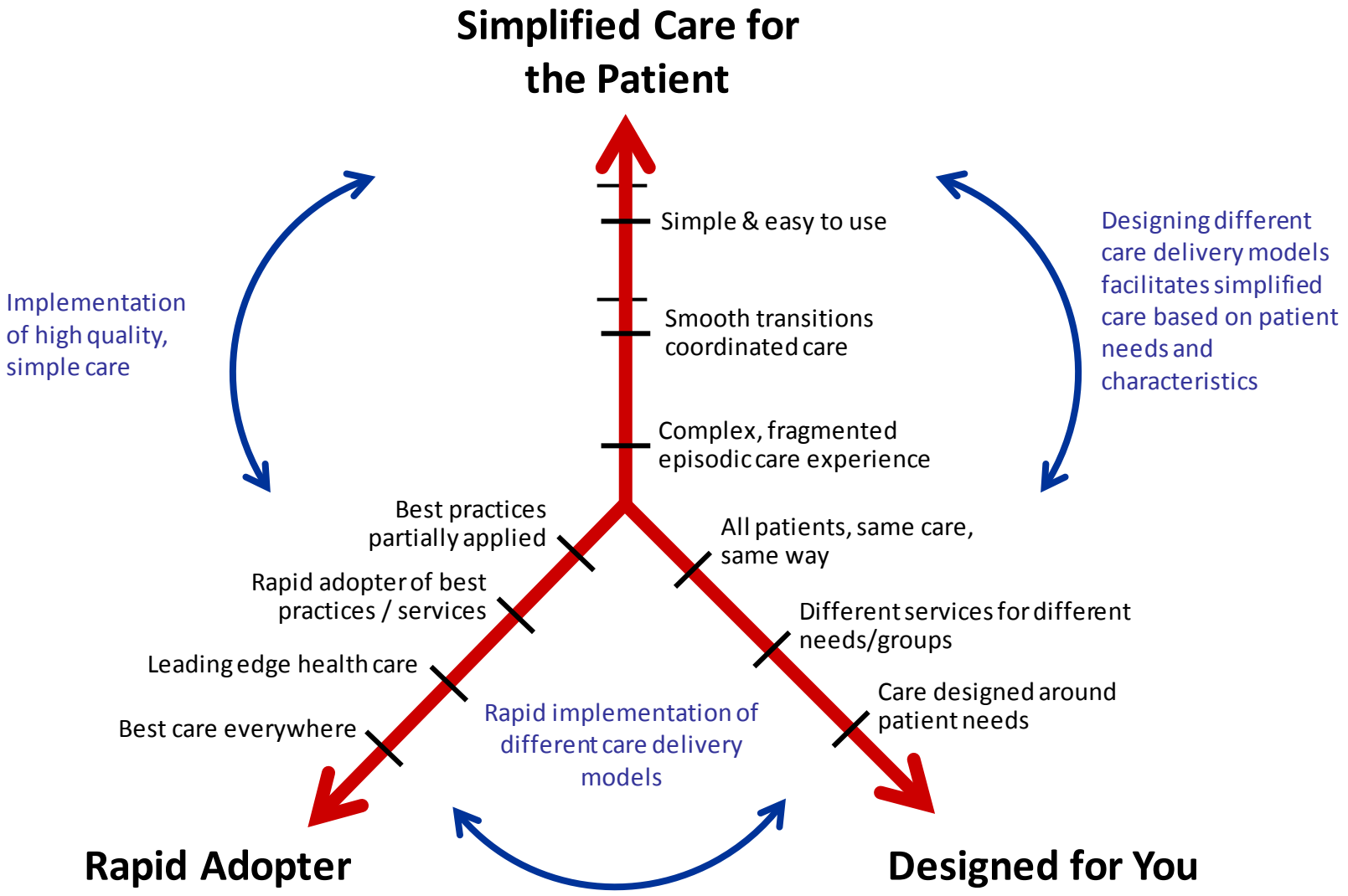
↓

Functional Older Person

Aurora Health Care®

ACE
Acute Care for Elders

The Challenge- How do we Disseminate Acute Care for Elders to All of our Older Patients?



ACE Tracker as “a checklist”:

- Simple, brief, and to the point.
- Information comes from daily nursing assessment/ interaction with the patient.
- Information is pulled from the EHR (Cerner/ Epic).
- Short enough to fit on a single page.
- Step by step check for common conditions.
- Allows clinicians to assess multiple fields, which are too complex for them to carry out reliably from memory alone.

“The Checklist Manifesto- How to get things done right” by Atul Gwande, 2009, Picor. New York, NY

ACE Tracker software to identify vulnerable elders:

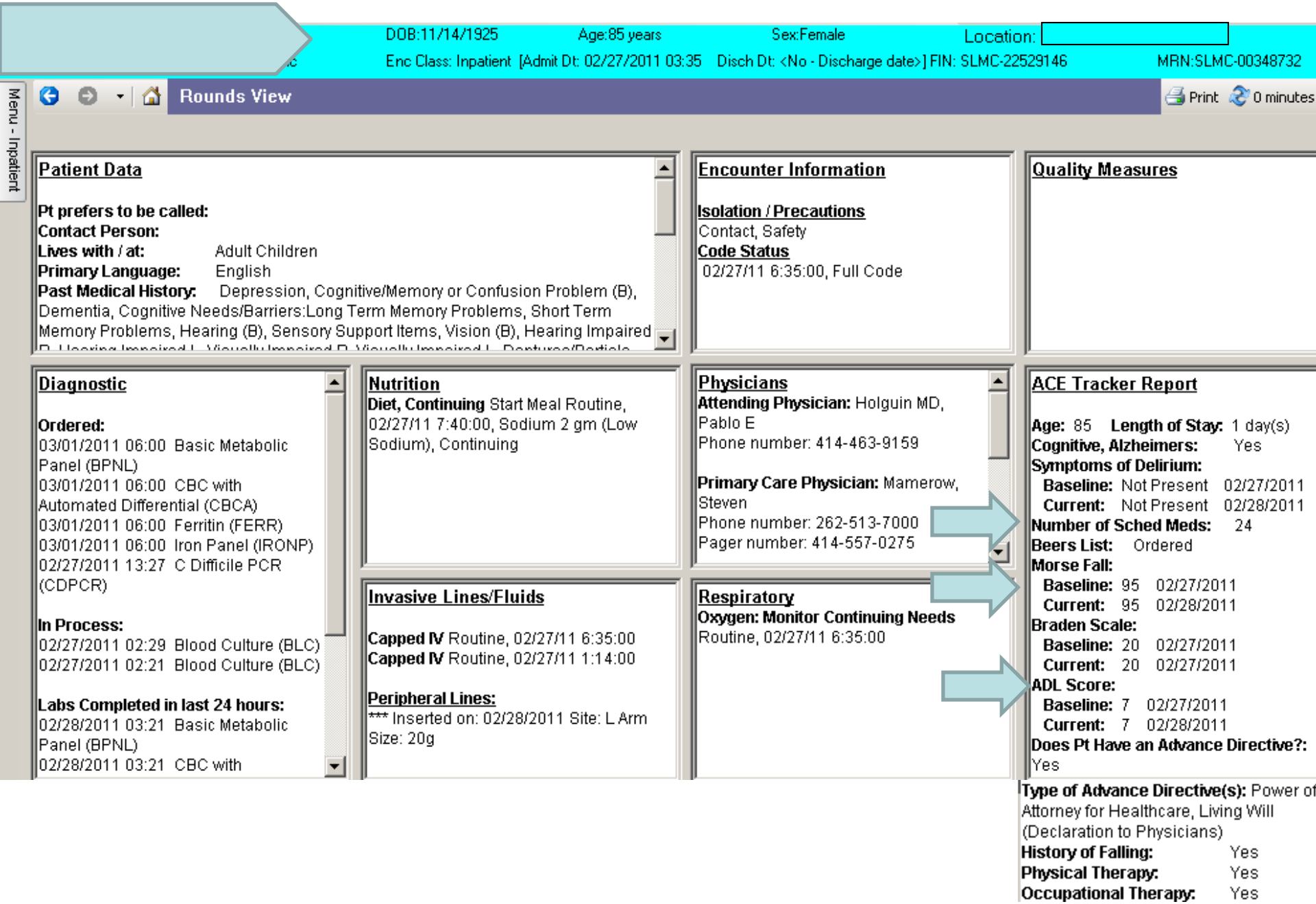
Actionable clinical information reviewed during daily team rounds.

Table 1. Example of Printout from ACE Tracker Summarizing Risk Factor for Patients Age 65 or Older on a Hospital Unit

Patient Room/Bed	Age	Length of Stay	History of Dementia	CAM	Number of Meds	Beers	Morse	HX of Falls	Bed Rest	P/T	O/T	RES	ADL	Cath	Press Ulcer	Wound Care	Braden Scale	Albumin	Social Services	Advance Directives
Patient A	76	2	N	N	13	N	60	Y	N	Y	Y	N	8	Y	Y	Y	17	ND	Y	N
Patient B	74	1	Y	N	7	N	50	Y	Y	N	N	N	6	Y	Y	Y	9	2.9	N	Y
Patient C	78	12	Y	Y	10	Y	50	Y	N	Y	Y	N	7	N	N	Y	14	3.9	Y	Y
Patient D	72	1	N	N	5	N	50	N	N	N	N	N	12	N	N	N	15	ND	N	N
Patient E	91	6	Y	N	8	N	60*	N	N	Y	Y	N	6*	N	N	N	14	ND	Y	N
Patient F	78	1	N	N	7	N	70	Y	Y	N	N	N	6	Y	N	N	16	ND	N	N
Patient G	75	1	N	N	0	N	45	N	N	Y	Y	N	12	N	N	N	14	4.3	N	N
Patient H	93	1	Y	N	12	N	65	Y	N	Y	Y	N	6	N	N	N	15	ND	Y	Y
Patient I	91	1	Y	N	1	N	95	Y	N	Y	Y	N	7	N	N	N	12	3.5	N	Y
Patient J	74	5	N	N	20	N	45	Y	N	Y	Y	N	7	Y	Y	Y	12*	ND	Y	Y
Patient K	72	6	N	Y	14	N	20	N	N	Y	Y	N	8	N	N	N	17	3.2	Y	Y
Patient L	83	3	N	Y	12	N	80*	Y	Y	Y	Y	N	8	Y	N	N	12	2.3	N	Y
Patient Totals			5	3	11	1		8	3	9	9	0		5	3	4			6	7

Malone ML, Vollbrecht M, Stephenson J, et al, J Amer Geriatr Soc 2010: 58:161-167

ACE Tracker disseminated to all hospitalized older patients.



DOB:11/14/1925 Age:85 years Sex:Female Location:
Enc Class: Inpatient [Admit Dt: 02/27/2011 03:35 Disch Dt: <No - Discharge date>] FIN: SLMC-22529146 MRN:SLMC-00348732

Menu - Inpatient

Rounds View

Print 0 minutes

Patient Data

Pt prefers to be called:
Contact Person:
Lives with / at: Adult Children
Primary Language: English
Past Medical History: Depression, Cognitive/Memory or Confusion Problem (B), Dementia, Cognitive Needs/Barriers:Long Term Memory Problems, Short Term Memory Problems, Hearing (B), Sensory Support Items, Vision (B), Hearing Impaired

Encounter Information

Isolation / Precautions
Contact, Safety
Code Status
02/27/11 6:35:00, Full Code

Quality Measures

Diagnostic

Ordered:
03/01/2011 06:00 Basic Metabolic Panel (BPNL)
03/01/2011 06:00 CBC with Automated Differential (CBCA)
03/01/2011 06:00 Ferritin (FERR)
03/01/2011 06:00 Iron Panel (IRONP)
02/27/2011 13:27 C Difficile PCR (CDPCR)

In Process:
02/27/2011 02:29 Blood Culture (BLC)
02/27/2011 02:21 Blood Culture (BLC)

Labs Completed in last 24 hours:
02/28/2011 03:21 Basic Metabolic Panel (BPNL)
02/28/2011 03:21 CBC with

Nutrition
Diet, Continuing Start Meal Routine, 02/27/11 7:40:00, Sodium 2 gm (Low Sodium), Continuing

Physicians
Attending Physician: Holguin MD, Pablo E
Phone number: 414-463-9159

Primary Care Physician: Mamerow, Steven
Phone number: 262-513-7000
Pager number: 414-557-0275

ACE Tracker Report

Age: 85 **Length of Stay:** 1 day(s)
Cognitive, Alzheimers: Yes
Symptoms of Delirium:
Baseline: Not Present 02/27/2011
Current: Not Present 02/28/2011
Number of Sched Meds: 24
Beers List: Ordered
Morse Fall:
Baseline: 95 02/27/2011
Current: 95 02/28/2011
Braden Scale:
Baseline: 20 02/27/2011
Current: 20 02/27/2011
ADL Score:
Baseline: 7 02/27/2011
Current: 7 02/28/2011
Does Pt Have an Advance Directive?:
Yes

Invasive Lines/Fluids

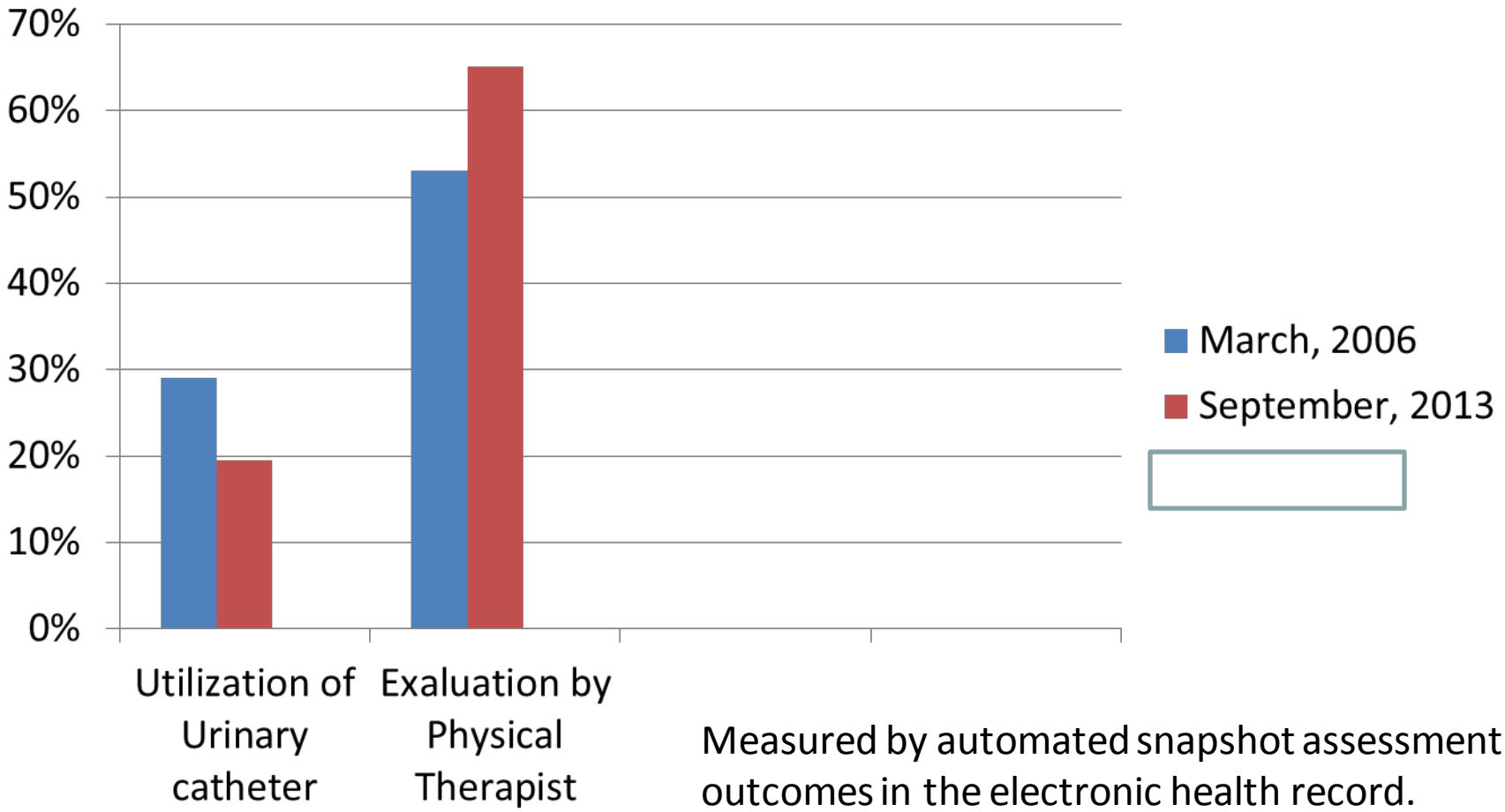
Capped IV Routine, 02/27/11 6:35:00
Capped IV Routine, 02/27/11 1:14:00

Peripheral Lines:
*** Inserted on: 02/28/2011 Site: L Arm Size: 20g

Respiratory
Oxygen: Monitor Continuing Needs Routine, 02/27/11 6:35:00

Type of Advance Directive(s): Power of Attorney for Healthcare, Living Will (Declaration to Physicians)
History of Falling: Yes
Physical Therapy: Yes
Occupational Therapy: Yes

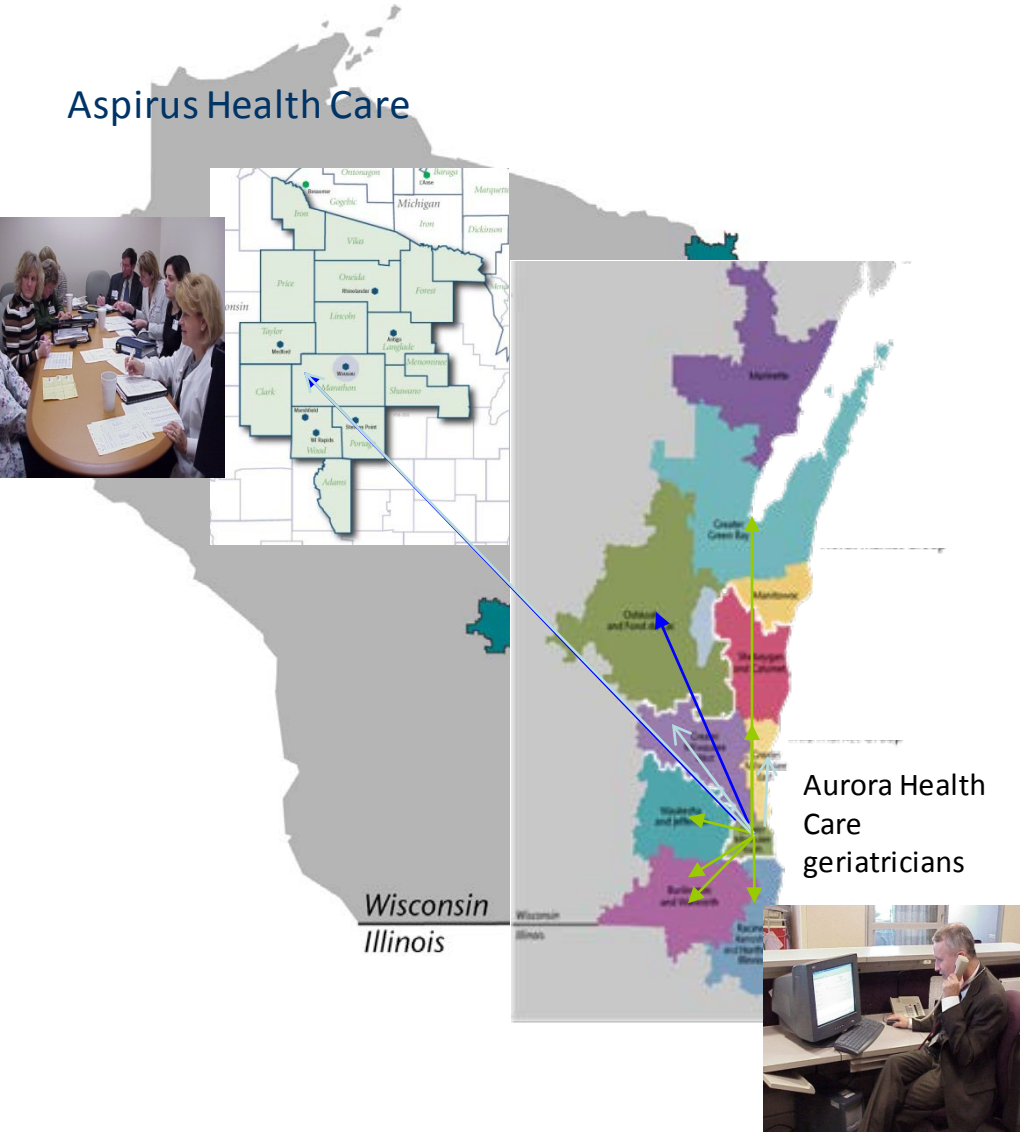
Processes of Care for Older Patients in 14 Aurora Health Care Hospitals:



Measured by automated snapshot assessment of outcomes in the electronic health record.

Urinary catheter: March 06:501/1729; Sept, 2013: 500/2563.
Physical therapy: March 06: 1542/2911; 1665/2563.

Scaling Up: Successful Models



- ACE units at two hospitals in Milwaukee.
- Acute Care for Elders programs at 12 of 15 medical centers.
- Total of 44 medical surgical units within Aurora (one at Memorial Health Center- Medford,WI) practicing Acute Care for Elders model.
- “e-Geriatricians” join interdisciplinary teams for scheduled teleconferences at 8 remote/ rural sites.
- ACE Tracker software integrates the model of care into the system-wide electronic health record.

Lessons Learned in Scaling Up Successful Models:

- Real-time, point of care information can be helpful to identify vulnerable older patients.
- Information collected should be actionable.
- Checklists can be integrated into the workflow of the health professionals.
- The tools can be neutral to the patients' disease and designed to support patient safety.
- Patient Reported Outcomes in ACE Tracker:
  - Patient's understanding of their illness and
  - Caregiver strain & readiness for discharge.

Thank you!

George and “Sweet Potato”