

The Synergy between Meaningful Use and the Health Care Home



**Key
Health
Alliance**

Regional Extension
Assistance Center for HIT

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Health Care Homes Spring Learning Days
May 1, 2013

Objectives

- Understand the new EHR Incentive program rules for Stage 1 and Stage 2
- Know how Meaningful Use of your EHR can support your Health Care Home
- Learn how to leverage workflow analysis to implement change
- Understand the impact EHR technology will have on your staff and your workflow

Meaningful Use Outline

- **Why the Push to EHRs?**
- The Specifics of Meaningful Use
- Meaningful Use and Health Care Homes
- Workflow Redesign: How and Why
- Resources
- Pulling it all together

From the Health and Human Services Web Site:

- “Health information technology (health IT) makes it possible for health care providers to better manage patient care through secure use and sharing of health information.



Health Information Technology (HIT) Improves Care (1993 – 1994)

- Tierney, William M., et al. “Physician inpatient order writing on microcomputer workstations.” *JAMA: the journal of the American Medical Association* 269.3 (1993): 379-383. [↗](#)
 - A randomized controlled clinical trial of order writing on computers resulted in
 - **Charges that were 12.7%** lower per admission
 - Significant reductions for bed charges, diagnostic test charges and drug charges.
 - A mean length of stay was 0.89 day shorter
- Evans, R. Scott, et al. “Improving empiric antibiotic selection using computer decision support.” *Archives of Internal Medicine* 154.8 (1994): 878. [↗](#)
 - Random-selection study to compare antibiotics suggested by the antibiotic consultant with those ordered by physicians demonstrated a **17% greater pathogen susceptibility** to an antibiotic drug regimen suggested by a computer consultant vs. a physician

CPOE Decreases Errors (1997 – 1998)

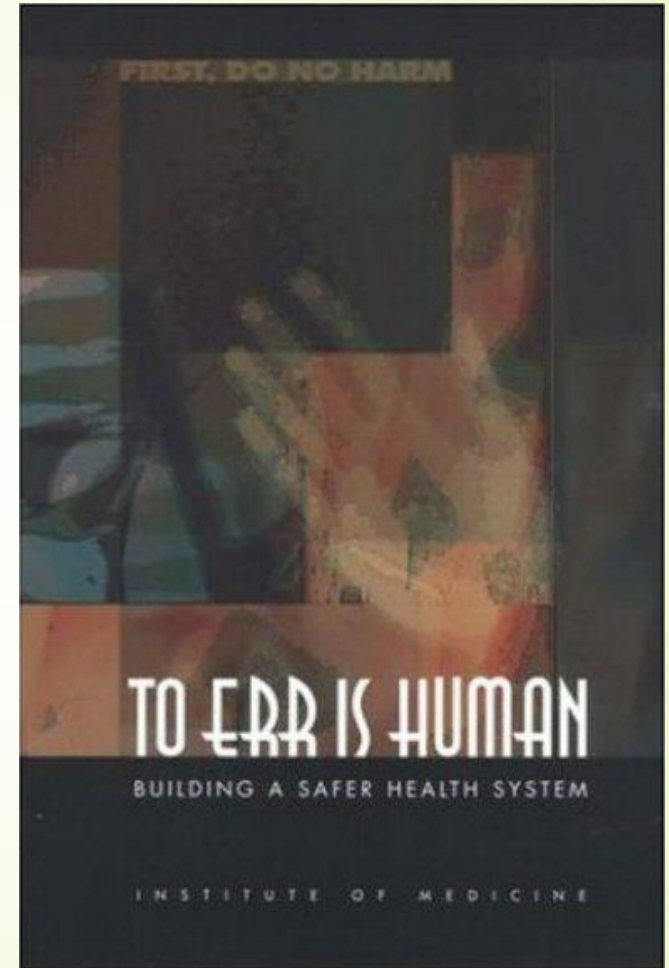
- Overhage, J. Marc, et al. “A randomized trial of “corollary orders” to prevent errors of omission.” *Journal of the American Medical Informatics Association* 4.5 (1997): 364-375. [↗](#)
 - Greater than **25% improvement in the rates of corollary orders** with implementation of computerized reminders.
- Evans, R. Scott, et al. “A computer-assisted management program for antibiotics and other anti-infective agents.” *New England Journal of Medicine* 338.4 (1998): 232-238. [↗](#)
 - Pre and post intervention study alerting for drug allergies, excessive dosages, antibiotic-susceptibility, lack of appropriateness and patients' renal function
 - Faster retrieval of relevant patient-specific information 14 minutes vs. 3.5 seconds
 - **Reductions in erroneous orders** for drugs where the patients had
 - Adverse Drug Event 70%
 - Reported allergies: 76%
 - Excess drug dosages 79%
 - Antibiotic-susceptibility mismatches 94%

CPOE Decreases Medication Errors (1998 – 1999)

- Bates, David W., et al. “Effect of computerized physician order entry and a team intervention on prevention of serious medication errors.” *JAMA: the journal of the American Medical Association* 280.15 (1998): 1311-1316. [↗](#)
 - Assessing the impact of CPOE with CDSSs in a before-after comparison study demonstrated a **55% decrease in non intercepted serious medication errors**
- Bates, David W., et al. “The impact of computerized physician order entry on medication error prevention.” *Journal of the American Medical Informatics Association* 6.4 (1999): 313-321. [↗](#)
 - Evaluated medication error rates before CPOE and in the 3 years subsequent to its implementation. It demonstrated an 81% decrease in medication errors and an **86% decrease in non intercepted serious medication errors** ($P < .001$ for both)

Institute of Medicine, Sept 1999

- At least 44,000 people, and perhaps as many as 98,000 people, die in hospitals each year as a result of medical errors that could have been prevented
- Using the lower estimate, preventable medical errors in hospitals exceed attributable deaths to such feared threats as motor-vehicle wrecks, breast cancer, and AIDS.
- The equivalent of one jumbo jet falling out of the sky every day



Continued Evidence of CPOE Benefits

Pre/Post Intervention Studies (2002-2005)

- Mekhjian, Hagop S., et al. “Immediate benefits realized following implementation of physician order entry at an academic medical center.” *Journal of the American Medical Informatics Association* 9.5 (2002): 529-539. [↗](#)
 - A 64% improvement in medication **turn-around times**, 43% in radiology procedure completion times, and 25% in laboratory result reporting times
- Potts, Amy L., et al. “Computerized physician order entry and medication errors in a pediatric critical care unit.” *Pediatrics* 113.1 (2004): 59-63. [↗](#)
 - An overall **error reduction of 95.9%** with ADEs reduced by 40.9%, Medication prescribing errors reduced by 99.4% and rule violations reduced by 97.9%.
- Kucher, Nils, et al. “Electronic alerts to prevent venous thromboembolism among hospitalized patients.” *New England Journal of Medicine* 352.10 (2005): 969-977. [↗](#)
 - **Reduced risk of deep-vein thrombosis** or pulmonary embolism at 90 days by 41%
- Holdsworth, Mark T., et al. “Impact of computerized prescriber order entry on the incidence of adverse drug events in pediatric inpatients.” *Pediatrics* 120.5 (2007): 1058-1066. [↗](#)
 - A 43% reduction in preventable ADEs and **63% reduction in potential ADEs**

Health Information Technology and Quality, Efficiency and Cost (2006)

- Wu, Shinyi, et al. “Systematic review: impact of health information technology on quality, efficiency, and costs of medical care.” *Annals of internal medicine* 144.10 (2006): 742-752. [↗](#)
- 257 studies met the inclusion criteria of which 25% were from 4 academic institutions with internally developed systems
 - Brigham and Women's Hospital in Boston
 - LDS Hospital in Salt Lake City
 - Vanderbilt University Medical Center in Nashville
 - The Regenstrief Institute in Indianapolis
- Those 4 institutions (and only those 4) demonstrated
 - Benefits on quality:
 - Increased adherence to guideline-based care
 - Enhanced surveillance and monitoring
 - Decreased medication errors.
 - Benefit of improvement
 - Preventive health (DVT, pressure ulcers and post-op infections)
 - Efficiency benefit
 - Decreased utilization of care.

EHRs: Problems with Commercial Installations (2005 – 2007)

- Han YY, Carcillo JA, Venkataraman ST, et al. Unexpected increased mortality after implementation of a commercially sold computerized physician order entry system. *Pediatrics*. 2005;116(6):1506–1512
 - The rapid implementation of a minimally modified, commercially available CPOE system in a pediatric critical care unit was associated with an **increase in mortality rate** for children admitted via interfacility transport over a 5-month period.
- Linder, Jeffrey A., et al. “Electronic health record use and the quality of ambulatory care in the United States.” *Archives of Internal Medicine* 167.13 (2007): 1400-1405.
 - Evaluated 50,000 patient records from over 1500 physician practices in 2003 and 2004 and found: “As implemented, EHRs were **not associated with better quality** ambulatory care.”
 - Acknowledged the positive information came from 4 “benchmark” institutions

Local Customization of CPOE Improves Quality (2010 – 2012)

- Longhurst, Christopher A., et al. “Decrease in hospital-wide mortality rate after implementation of a commercially sold computerized physician order entry system.” *Pediatrics* 126.1 (2010): 14-21. [↗](#)
 - Pre and Post implementation of a locally modified CPOE and electronic nursing documentation system at quaternary care academic children's hospital demonstrated a monthly adjusted **mortality rate decreased by 20%**
- Bright, Tiffani J., et al. “Effect of clinical decision-support systems: a systematic review.” *Annals of internal medicine* 157.1 (2012): 29-43. [↗](#)
 - A review of 148 randomized, controlled trials of electronic CDSSs implemented in clinical settings, used at the point of care and reported either clinical, health care process, workload, relationship-centered, economic, or provider use outcomes.
 - Both **commercially and locally developed clinical decision-support systems (CDSSs) showed statistical significance in improved health care process measures** related to performing preventive services, ordering clinical studies and prescribing therapies across diverse settings.

EHRs and Quality (2012)

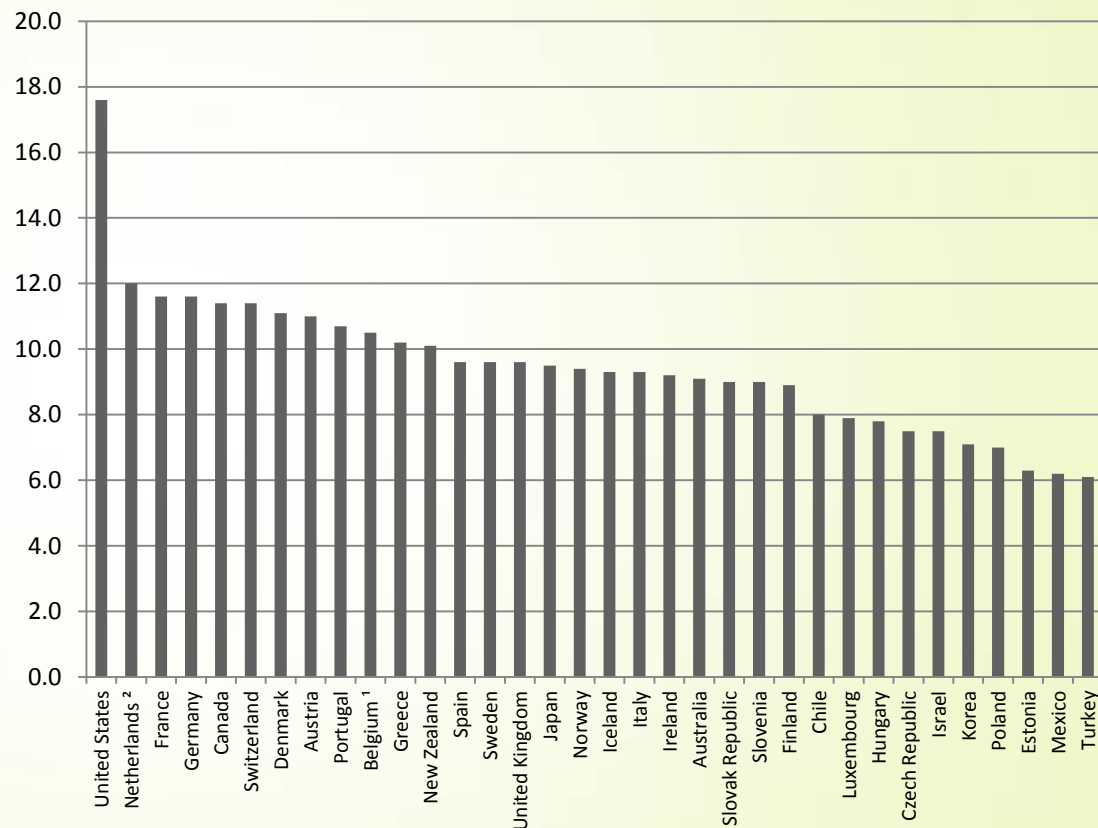
- Haut, Elliott R., et al. "Improved Prophylaxis and Decreased Rates of Preventable Harm With the Use of a Mandatory Computerized Clinical Decision Support Tool for Prophylaxis for Venous Thromboembolism in Trauma Patients." *Archives of Surgery* 147.10 (2012): 901-907. [↗](#)
 - Retrospective cohort study of trauma patients demonstrated increased mechanical prophylaxis (10.0% vs. 1.5%), increased pharmacologic prophylaxis (23.6% vs. 13.%) and **reduced risk of deep-vein thrombosis or pulmonary embolism at 90 days by 41%**.
- Kern, Lisa M., et al. "Electronic Health Records and Ambulatory Quality of Care." *Journal of General Internal Medicine* (2012): 1-8. [↗](#)
 - Study compared physicians using EHRs to physicians using paper on performance for each of the nine quality measures
 - EHRs were associated with **significantly higher quality of care** for hemoglobin A1c testing in diabetes, breast cancer screening, chlamydia screening and colorectal cancer screening
 - When all nine measures were combined into a composite, EHR use was associated with statistically significant higher quality of care
- Reed, M., et al. "Outpatient electronic health records and the clinical care and outcomes of patients with diabetes mellitus." *Annals of internal medicine* 157.7 (2012): 482. [↗](#)
 - Statistically significant improvements in treatment intensification after HbA1c \geq 9% or LDL-C values of 100 to 129 mg/dL
 - Increases in 1-year retesting for HbA1c and LDL-C levels among all patients
 - Decreased 90-day retesting among controlled patients with HbA1c levels $<$ 7% and LDL-C levels $<$ 100 mg/dL
 - **Statistically significant reductions in HbA1c and LDL-C levels**, with the largest reductions among patients with the worst control

Are we getting value for our dollar?

Cost vs. Quality

- Per capita health care spending¹
 - \$2.7T (2011)
 - 17.9% GDP
 - \$8,682 per person
- 2010 Life expectancy as a surrogate for quality: 27th of 34 countries³

Spending as a % of GDP²

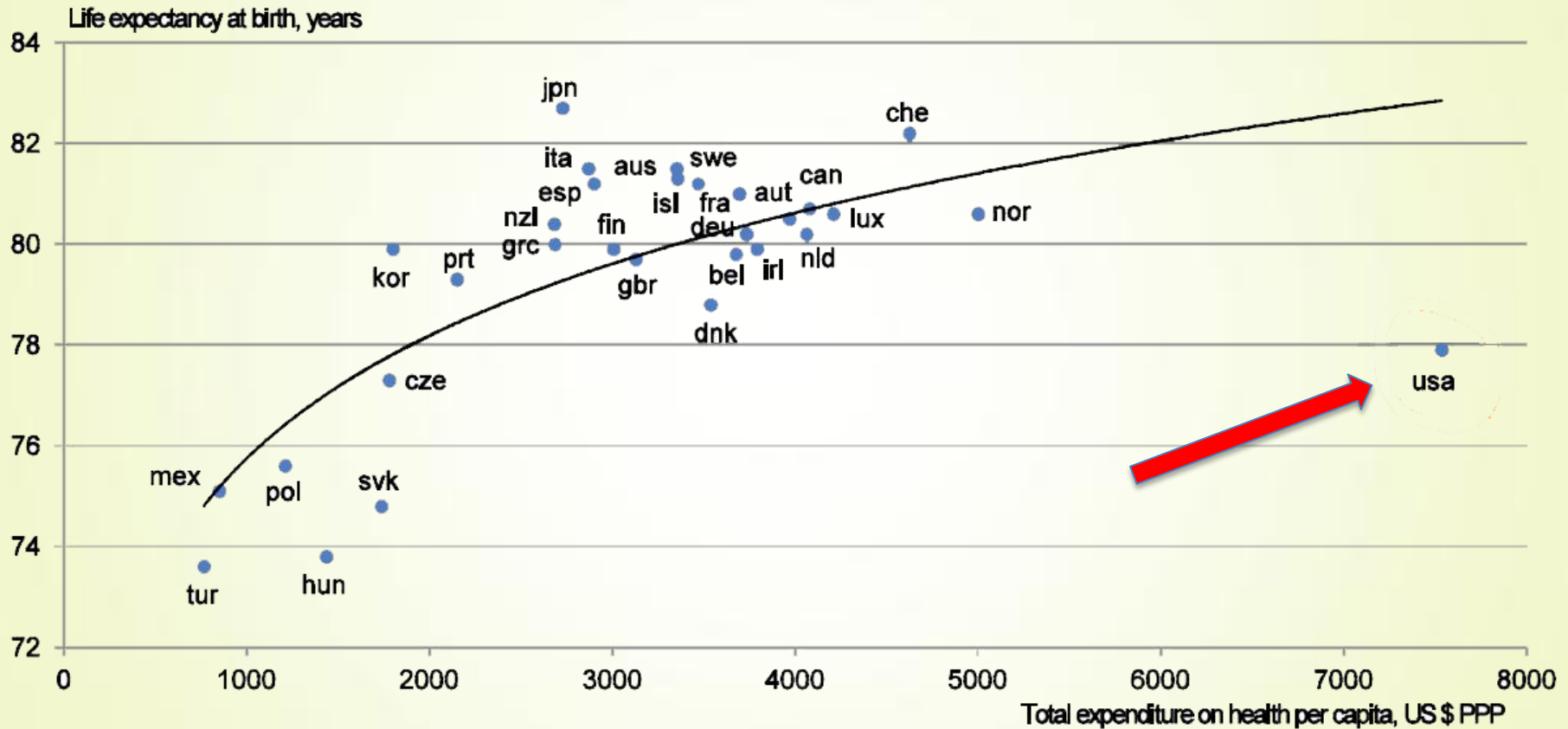


¹ CMS Health Expenditures 1960-2010 (<http://www.cms.gov/NationalHealthExpendData/>)

² Organization for Economic and Co-operation and Development (http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT)

³ OECD Health Data 2011: http://www.oecd.org/document/16/0,3343,en_2649_34631_2085200_1_1_1_1,00.html

Per Capita Health Expenditure vs. Life Expectancy



1. Or latest year available.

Source: OECD Health Data 2010.

The Bi-Partisan Support:

2004 “...an Electronic Health Record for every American by the year 2014. By computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care.” George W Bush - State of the Union address, Jan. 20, 2004



2009 “Computerize all health records within five years.” Barack Obama - George Mason University, January 12, 2009

Stages of Meaningful Under Medicare

		Stage of Meaningful Use										
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
First Attestation Year	2011	1	1	1	2	2	3	3	TBD	TBD	TBD	TBD
	2012		1	1	2	2	3	3	TBD	TBD	TBD	TBD
	2013			1	1	2	2	3	3	TBD	TBD	TBD
	2014				1	1	2	2	3	3	TBD	TBD
	2015					1	1	2	2	3	3	TBD
	2016						1	1	2	2	3	3
	2017							1	1	2	2	3

- Note: Under Medicaid, if a Medicaid only provider does not receive a payment for that year, the stage of MU does not progress.

Incentives

- Some broadening of Medicaid eligibility
- Medicare and Medicaid Incentives are unchanged from the Stage 1 Rule



Medicaid Changes

- Service rendered on any one day to a Medicaid-enrolled individual, regardless of payment liability
- CHIP encounters for patients in Title 19 and Title 21 Medicaid expansion programs (not stand-alone CHIP)
- States may allow providers to calculate Medicaid (or needy individual) patient volume across 90-day period in last 12 months preceding attestation

Maximum Medicare Incentives for EPs¹

		2011	2012	2013	2014	2015	2016	2017	Total
First Attestation Year	2011	Stage 1 \$18k	Stage 1 \$12k	Stage 1 \$8k	Stage 2 \$4k	Stage 2 \$2k	Stage 3	Stage 3	\$44k
	2012		Stage 1 \$18k	Stage 1 \$12k	Stage 2 \$8k	Stage 2 \$4k	Stage 3 \$2k	Stage 3	\$44k
	2013			Stage 1 \$15k	Stage 1 \$12k	Stage 2 \$8k	Stage 2 \$4k	Stage 3	\$39k
	2014				Stage 1 ² \$12k	Stage 1 \$8k	Stage 2 \$4k	Stage 2	\$24k
	2015					Stage 1 ²	Stage 1	Stage 2	0
Penalty (deduction from Medicare charges) if not a meaningful user:						1%	2%	3%	

1. Professionals with >50% Medicare services (as opposed to charges) in a health professional shortage area see a 10% increase in the maximum payment
2. Must demonstrate and attest to MU by October 1 to avoid the penalty in the next year



Maximum Medicaid Incentives for EPs with $\geq 30\%$ volume

		Calendar Year											Total
		2011	2012	2013	2014	2015 ¹	2016 ¹	2017 ¹	2018 ¹	2019 ¹	2020 ¹	2011 ¹	
First Year of Adopt, implement, Upgrade or MU Demonstration	2011	\$21,250	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500						\$63,750
	2012		\$21,250	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500					\$63,750
	2012		\$21,250		\$8,500	\$8,500	\$8,500	\$8,500		\$8,500			\$63,750
	2012		\$21,250	\$8,500		\$8,500		\$8,500		\$8,500		\$8,500	\$63,750
	2013			\$21,250	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500				\$63,750
	2014				\$21,250	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500			\$63,750
	2015 ¹					\$21,250	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500		\$63,750
	2016 ¹						\$21,250	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500	\$63,750
	2017 ¹								\$0				\$0

- Note: Medicare penalties will apply for any of the professional's billing to Medicare part B if not a meaningful user

EHR Reporting Period

- EPs who demonstrate meaningful use in 2011 through 2013 calendar years will not be penalized 2 years later

Payment Adjustment Year	2015	2016	2017	2018	2019	2020
EHR Reporting Period	2013	2014	2015	2016	2017	2018

- For EPs who demonstrates meaningful use in 2014 or later for the first time (using 2014 as an example):

Payment Adjustment Year	2015	2016	2017	2018	2019	2020
90 day EHR Reporting Period	2014*	2014				
Full Year EHR Reporting Period			2015	2016	2017	2018

- * If the EP attests no later than the October 1 before the penalty year

EP Medicare Payment Adjustments

- For the EP starting in 2015:
 - If $> 75\%$ of EPs are meaningful users, allowable charges will be reduced 1%/year to a max of 3%
 - If $< 75\%$ of EPs are meaningful users, again 1%/year with a maximum reduction of 5%
- Hardship exemptions will be available by request



Small Group Exercise

At your table, discuss the barriers to doing
MU and HCH together

Meaningful Use Outline

- Why the Push to EHRs?
- **The Specifics of Meaningful Use**
- Meaningful Use and Health Care Homes
- Workflow Redesign: How and Why
- Resources
- Pulling it all together

Important Changes to Meaningful Use

- Starting in 2014
 - Menu objective exclusions will no longer count towards the number of menu objectives needed.
- For all in the 2014 reporting year not in their first year of attestation:
 - Reporting period reduced to a calendar quarter
 - To allow providers time to adopt 2014 certified EHR technology and prepare for Stage 2
 - To allow quality measures to correspond with reporting requirements of other quality reporting programs

Stage 1 and Stage 2 Meaningful Use for 2014

Eligible Professionals

13 core objectives

5 of 9 menu objectives

18 total objectives



Eligible Professionals

17 core objectives

3 of 6 menu objectives

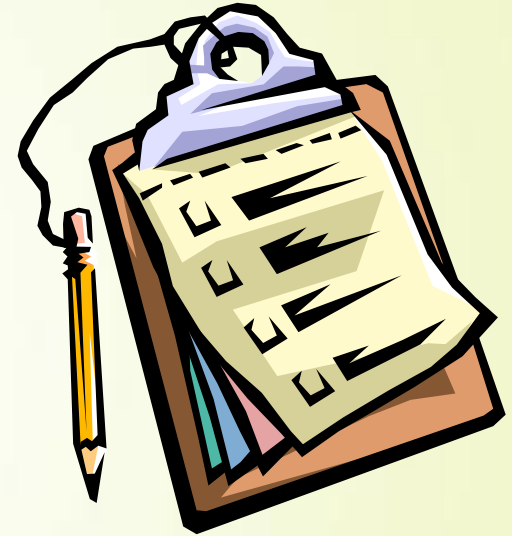
20 total objectives

Changes to Stage 1

- CPOE:
 - Starting in 2013 option of 30% of all medication orders
- Vital Signs:
 - Optional in 2013 and required in 2014:
 - ≥ 3 for BP; all ages for height/length & weight; growth charts ≤ 20
 - May claim exclusion for H/L&W or BP or both
- Test of exchange and the yes/no measure “Reporting CQMs”:
 - Removed for 2013
- Electronic copies and access:
 - 2 measures replaced in 2014 with online view, download and transmit
- Public Health Measures:
 - “...except where prohibited...” added to the requirements

Concepts for the Updated Meaningful Use Rules

- For both stages:
 - More exchange
 - More patient online access and involvement
- For Stage 2:
 - Stage 1 menu items have become core
 - Percentages have increased
 - Turnaround time is shorter
 - Some measures incorporated into others



Stage 1 and 2 Core Objectives

- Record:
 - Demographics
 - Problems
 - Medications
 - Medication allergies
 - Vital sign
 - Smoking status
- Use
 - Clinical decision support to improve care
 - Electronic ordering of medications in the EHR (CPOE)
 - for stage 2: electronic ordering of labs and radiographs
 - Drug/drug and drug/allergy interaction checking
 - Electronic transmission of medication orders
- Provide visit summaries for office visits
- Conduct or review security analysis and incorporate in risk management process

Stage 1 Menu Items that Become Core in Stage 2

- Medication reconciliation
- Incorporate lab results as data
- Generate a patient list (example diabetics)
- Provide summary of care document for transitions of care and referrals
 - (Stage 2 requires electronic transmittal)
- Use the EHR to identify and provide:
 - Education resources
 - Reminders for preventive/follow-up care
- Provide online access to health information
 - (Stage 2 requires patient's use of it)
- Transmission of immunization data to the state

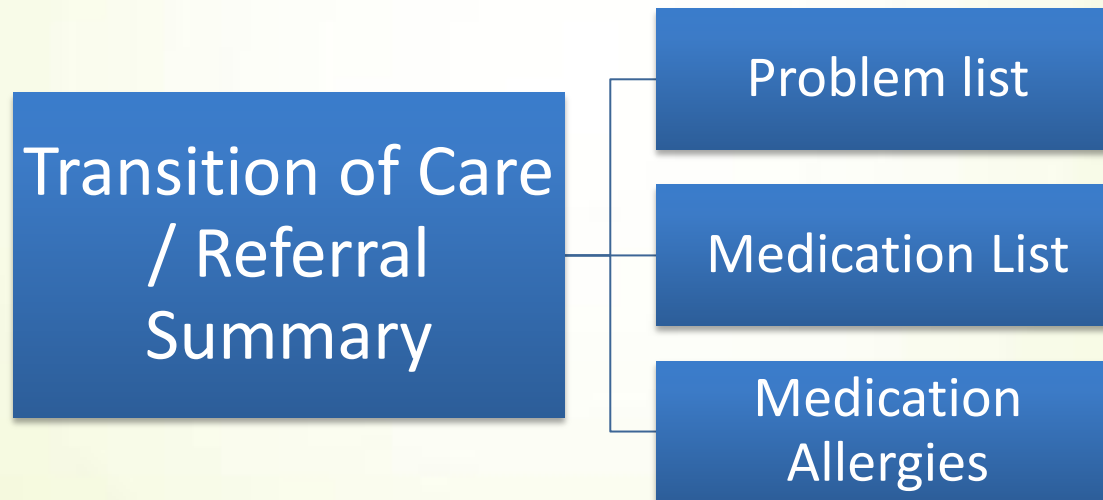
New Stage 2 Core Objective:

- More than 5% of patients send a secure messages about a clinically related issue



Stage 1 Core Measures Incorporated Into Others for Stage 2

- In order to meet the Transition of Care / Referral measure, must contain an up-to-date problem list, medication list and allergy list whether or not they are electronically transferred



Elements of the Stage 2 Transfer of Care / Referral Summary

- Patient name.
- Referring or transitioning provider's name and office contact information (EP only).
- Demographic information (preferred language, sex, race, ethnicity, date of birth).
- Current problem list (EPs and EHs may also include historical problems at their discretion).
- Current medication list, and
- Current medication allergy list.
- Vital signs (height, weight, blood pressure, BMI).
- Smoking status.
- Immunizations.
- Laboratory test results.
- Procedures.
- Encounter diagnosis
- Functional status, including activities of daily living, cognitive and disability status
- Care plan field, including goals and instructions.
- Care team including the primary care provider of record and any additional known care team members beyond the referring or transitioning provider and the receiving provider.
- Reason for referral (EP)
- Discharge Instructions (EH)

Stage 2 Menu Objectives (Select 3 of 6)

- Imaging results are accessible through Certified EHR Technology
- Record
 - Electronic progress notes
 - Family health history
- Successful ongoing transmission of:
 - Syndromic surveillance data
 - Cancer case information
 - Data to a specialized registry

Stage 1 EP Criteria for 2014:

Core:

Numerator/Denominator:

- Demographics
- Problem list
- Medication list
- Medication allergy list
- CPOE
- E-Prescribing
- Vital signs
- Smoking status
- Clinical summaries
- Provide patients with eAccess

On (Yes or No):

- Drug (D-A, D-D) Interactions
- One clinical decision support rule
- Protect electronic health information

Menu:

Numerator/Denominator:

- Provide patient-specific education resources
- Labs as structured data
- Patient reminders
- Medication reconciliation
- Referral/Transfer of care summary

On (Yes or No):

- Drug - formulary checks
- Patient list by specific condition
- Test of submission of electronic data to immunization registries. *
- Test of providing electronic syndromic surveillance data to public health agencies. *

* At least 1 public health objective must be selected

Stage 2 EP Criteria for 2014:

Core:

Numerator/Denominator:

- Demographics
- Medication reconciliation
- CPOE
- E-Prescribing
- Vital signs
- Smoking status
- Clinical summaries
- Labs as structured data
- Provide patient-specific education resources
- Provide patients with eAccess with some using it
- Referral/Transfer of care summary
- Patient reminders
- Secure messages from patients

Yes or No:

- Patient list by specific condition
- 5 clinical decision support rules (with D-D, D-A)
- Submission of electronic data to immunization registries.
- Protect electronic health information

Menu:

Numerator/Denominator:

- Electronic notes
- Imaging results
- Family health history
- Report to cancer registries
- Report to specialized registries

Yes or No:

- Provide electronic syndromic surveillance data to public health agencies

Meaningful Use Outline

- A reminder of why we are doing this
- Changes to the timeline
- Review of the incentives
- Clarification of the penalties
- New requirements and options for stage 1
- Stage 2 requirements
- **New quality measurement requirements starting in 2014 for all**
- New EHR software certification standards for all in 2014
- What you need to do now

Clinical Quality Measures

Prior to 2014

EPs

Report 6 out of 44 CQMs

- 3 core or alt. core
- 3 menu



Beginning in 2014

EPs

Report 9 out of 64 CQMs

Selected CQMs must cover at least 3 of the 6 NQS domains

Recommended core CQMs:

- 9 for adult populations
- 9 for pediatric Populations

National Quality Strategy domains (NQS):

1. Patient and Family Engagement
2. Patient Safety
3. Care Coordination
4. Population and Public Health
5. Efficient Use of Healthcare Resources
6. Clinical Processes/Effectiveness

CQM Specifications

- No change in specifications for the CQMs in 2013
- For EPs starting in 2014
 - 32 of the 44 CQMs finalized in the Stage 1 final rule will remain
 - 32 new CQMs will be added totalling 64



2013 Core Quality Measures for EPs

Measure Number	Clinical Quality Measure Title
NQF 0013	Blood pressure measurement
NQF 0028	Tobacco use assessment and intervention
NQF 0421 PQRI 128	Adult Weight Screening and Follow-up
Alternate Core Measures	
NQF 0024	Weight Assessment and Counseling for Children and Adolescents
NQF 0041 PQRI 110	Influenza Immunization for Patients ≥ 50 Years Old
NQF 0038	Childhood Immunization Status

2014 CQMs Recommended for Adults

Patient and Family Engagement.	Functional status assessment for complex chronic conditions
Patient Safety.	Use of High-Risk Medications in the Elderly
	Documentation of Current Medications in the Medical Record Description
Care Coordination.	Closing the referral loop: receipt of specialist report
Population/Public Health.	Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention
	Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up
	Preventive Care and Screening: Screening for Clinical Depression and Follow-Up Plan
Efficient Use of Healthcare Resources.	Use of Imaging Studies for Low Back Pain
Clinical Process/Effectiveness.	Controlling High Blood Pressure

2014 CQMs Recommended for Children

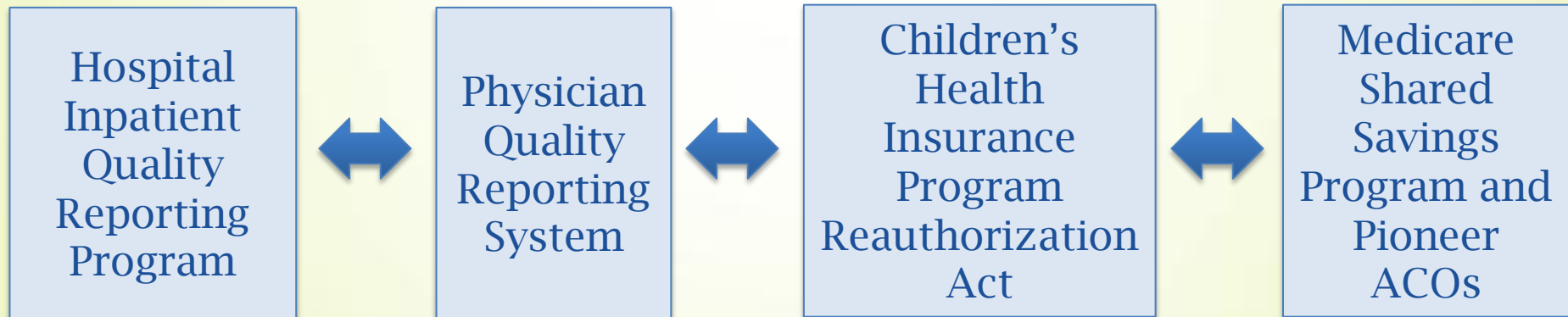
Population/Public Health.	Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents
	Chlamydia Screening for Women
	Childhood Immunization Status
	Preventive Care and Screening: Screening for Clinical Depression and Follow-Up Plan
Efficient Use of Healthcare Resources.	Appropriate Testing for Children with Pharyngitis
	Appropriate Treatment for Children with Upper Respiratory Infection (URI)
Clinical Process/Effectiveness.	Use of Appropriate Medications for Asthma
	ADHD: Follow-Up Care for Children Prescribed Attention-Deficit/Hyperactivity Disorder (ADHD) Medication
	Children who have dental decay or cavities Description: Percentage of children ages 0-20, who have had tooth decay or cavities during the measurement period.

Additional Quality Measures

- Diabetes
- Cardiovascular disease
- Preventative care and Screening
- Pediatrics
- Geriatrics
- Appropriate use
- Asthma
- Oncology
- Alcohol and drug dependence
- Depression
- Ophthalmology
- HIV/AIDS
- Functional assessment
- Medication management
- Pregnancy
- Referral reports

Aligning CQMs Across Programs

- The same CQMs will be used in multiple quality reporting programs beginning in 2014
 - Other programs include Hospital IQR Program, PQRS, CHIPRA, and Medicare SSP and Pioneer ACOs



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Access and Communication Standard – Health Care Home

- Offer HCH services to patients at risk or have complex or chronic conditions
- A system to support effective communication among the members of the health care home (HCH) team, the participant, and other providers.
- Establish adequate information and privacy security measures
- Access to the patient’s medical record information, which includes
 - Racial or ethnic background, primary language and preferred means of communication;
 - Consents and restrictions for releasing medical information;
 - Diagnoses, allergies, medications, and whether a care plan has been created for the participant;
- On-call staff with access to this medical record information in real time

Access and Communication Standard – Meaningful Use

- Interoperable EHR
 - Referral/Transfer of care summary
 - Submit to immunization registry
 - Provide patients with eCopy
 - Protect electronic health information
 - Patient list by specific condition
- Stage 1 and 2:
 - Demographics
 - Provider’s name and contact info
 - Clinical summary and transfer of care / referral summary
 - Preferred method of communication
 - Patient reminders
 - Vital signs
 - Problem list
 - Medication list
 - Medication reconciliation
 - Medication allergy list
 - Smoking status
 - Advanced directives (Hospital)
 - Clinical decision support
 - E-Prescribing
 - Labs as structured data
 - Clinical summaries
- Stage 2
 - Family health history
 - Electronic notes
 - Imaging results
 - Provide patients with eAccess
 - Secure eMessages from patients
 - Report to cancer registries
 - Report to specialized registries
- 2014 Quality Measures
 - Documentation of current medications
 - Functional status for complex conditions

Tracking Care with a Registry

- The registry must contain the name, age, gender, contact information, and identification number
- Use the registry to
 - Review the HCH participant population to manage services, follow-up, and identify gaps in care.
 - Identify gaps in care and implement remedies such as appointment reminders and pre-visit planning.
- Stages 1 & 2:
 - Demographics
 - Vital signs
 - Problem list
 - Medication list
 - Medication reconciliation
 - Medication allergy list
 - Smoking status
 - Advanced directives (Hospital)
 - Computerized Provider Order Entry (CPOE)
 - Clinical decision support
 - Electronic notes
 - Labs as structured data
 - Clinical summaries
 - Referral/Transfer of care summary
 - Submit to immunization registry
 - Submit syndromic surveillance data
- Provide patients with eCopy or eAccess
- Protect electronic health information
- Patient list by specific condition
- Patient reminders
- Stage 2
 - Family health history
 - Imaging results
 - Report to cancer registries
 - Report to specialized registries
- 2014 Quality Measures
 - 64 potential measures to demonstrate quality of care and identify gaps

Care Coordination – Health Care Home

- The health care home team and the participant set goals and identify resources to achieve the goals
- Coordinate patient care with specialists
- Identify one personal clinician and one care coordinator as the primary contact for each patient
- Routine, face-to-face discussions between the personal clinician and the care coordinator.
- Document:
 - Referrals for specialty care and the result of the referral
 - Tests ordered, and results relayed to the participant
 - Admissions to other facilities
 - Timely post discharge planning
 - Communication with participant's pharmacy
 - Other information such as links to external care plans

Care Coordination – Meaningful Use

- Stage 1 & 2:
 - Demographics
 - Vital signs
 - Problem list
 - Medication list
 - Medication reconciliation
 - Medication allergy list
 - Smoking status
 - Family health history
 - Advanced directives (Hospital)
 - Computerized Provider Order Entry (CPOE)
 - Drug - formulary checks
 - Drug (D-A, D-D) Interactions
 - Clinical decision support
 - E-Prescribing
 - Labs as structured data
 - Patient education
 - Clinical summaries
 - Referral/Transfer of care summary
 - Submit to immunization registry.
 - Provide patients with eCopy
 - Protect electronic health information
- Patient list by specific condition
- Patient reminders
- Stage 2:
 - CPOE for labs and radiology
 - Electronic notes
 - Imaging results
 - Report to cancer registries
 - Report to specialized registries
 - Electronic access to results with tracking
 - And Stage 1 starting in 2014
 - Care Plan
 - Stage 2 Transfer of Care and Referral summary
 - Secure eMessages from patients
- 2014 Quality Measures
 - Closing the referral Loop

Care Planning – Health Care Home

- Engage all appropriate members of the health care team
- incorporate patient's health risks and chronic conditions
- Review and amend at specified intervals the care plan with the patient, to manage the health and measure progress
- Provide a copy of the care plan to the participant upon completion of creating or amending the plan
- Use and document the use of evidence-based guidelines for medical services and procedure when available
- Must include goals and an action plan for the following:
 - preventive care
 - care of chronic illnesses;
 - exacerbation of a known chronic condition
 - end-of-life care and health care directives
- Consolidate external care plans into the participant's care plan.

Care Planning – Meaningful Use

- Stage 1:
 - Demographics
 - Vital signs
 - Problem list
 - Medication list
 - Medication reconciliation
 - Medication allergy list
 - Smoking status
 - Advanced directives (Hospital)
 - Computerized Provider Order Entry (CPOE)
 - Drug - formulary checks
 - Drug (D-A, D-D) Interactions
 - Clinical decision support
 - E-Prescribing
 - Labs as structured data
 - Patient education
 - Clinical summaries
 - Referral/Transfer of care summary
 - Provide patients with eCopy or eAccess
 - Protect electronic health information
 - Patient list by specific condition
 - Quality measures
- Stage 2:
 - Family history
 - Electronic notes
 - Imaging results
 - Online access to health information
 - Secure eMessages from patients
 - Report to cancer registries
 - Report to specialized registries
 - Functional Status
 - Stage 2 Clinical and Referral / transfer of care summaries
 - Care Plan
 - Stage 2 Clinical and Referral / transfer of care summaries
- Quality Measures
 - 64 potential measures to identify gaps for care planning

Performance Measure, Quality Improvement and Reporting

- Staffing and Process Items:
 - Establish a quality improvement team and procedures that the team uses to share their work and elicit feedback
 - Participate in a health care home learning collaborative and establish procedures to share information learned through the collaborative
- Reporting Items:
 - Demonstrating capability in performance measurement by measuring, analyzing, and tracking changes in quality indicators
 - Participating in the statewide quality reporting system by submitting outcomes for the quality indicators
 - Achieving the state benchmarks for patient health, patient experience, and cost-effectiveness
- Meaningful Use Quality Measures
 - 2011 – 2013 standards require reporting 6 of 44 possible quality measures
 - 2014 standards require reporting 9 of 64 quality measures

Patient and Family Centered Care

- Encourage patients to take an active role in managing their health care
 - Patients are to fully engage in care planning and shared decision-making regarding their care
 - Verify joint understanding of the care plan
 - Provide a copy of the care plan to the patient
 - Review and amend the care plan with the patient, to manage the health and measure progress
 - Engage patients in planning for transitions among providers, and between life stages
- Stages 1 & 2:
 - Patient education
 - Clinical and Referral / transfer of care Summaries (Care Plan)
 - Patient reminders
 - Electronic copy of and timely access to health information
 - Stage 2:
 - Online access to health information (Patient Portal)
 - Secure electronic messaging
 - Reports from within EHR to demonstrate patient engagement

Meaningful Use Criteria That Support the Health Care Home

Criteria	Access/ Communication	Registry Tracking	Care Coordination	Care Planning	Performance Improvement	Patient & Family Centered Care
Demographics	X	X	X	X	X	X
Vital signs	X	X	X	X	X	X
Problem list	X	X	X	X	X	X
Medication list	X	X	X	X	X	X
Medication reconciliation	X	X	X	X	X	X
Medication allergy list	X		X	X	x	
Smoking status	X	X	X	X	X	
Family health history	X	X	X	X	X	X
Advanced directives (Hospital)	X	X	X	X	X	X
Computerized Provider Order Entry (CPOE)		X	X	X	X	X
Drug - formulary checks			X	X	X	X
Drug (D-A, D-D) Interactions			X	X	X	
Clinical decision support	X	X	X	X	X	X
E-Prescribing	X		X	X	X	X
Electronic notes	X	X	X	X	X	X

Meaningful Use Criteria That Support the Health Care Home

Criteria	Access/ Communication	Registry Tracking	Care Coordination	Care Planning	Performance Improvement	Patient & Family Centered Care
Imaging results	X	X	X	X	X	X
Labs as structured data	X	X	X	X	X	X
Patient education			X	X	X	X
Clinical summaries	X	X	X	X	X	X
Referral/Transfer of care summary	X	X	X	X	X	X
Submit to immunization registry.	X	X	X		X	X
Submit syndromic surveillance data		X			X	
Provide patients with eCopy or eAccess	X	X	X	X	X	X
Protect electronic health information	X	X	X	X	X	X
Patient list by specific condition	X	X	X	X	X	X
Patient reminders		X	X		X	X
Secure eMessages from patients	X		X	X	X	X
Report to cancer registries	X	X	X	X	X	X
Report to specialized registries	X	X	X	X	X	X
Quality measures	X	X	X	X	X	X

Small Group Exercise

At your table, discuss one of the following questions:

1. How are you using your EHR to support the work of your Health Care Coordinator
2. How might you leverage the Meaningful Use Criteria in your work as a Health Care Home
3. How can you use the elements within your EHR to build your registry

Break



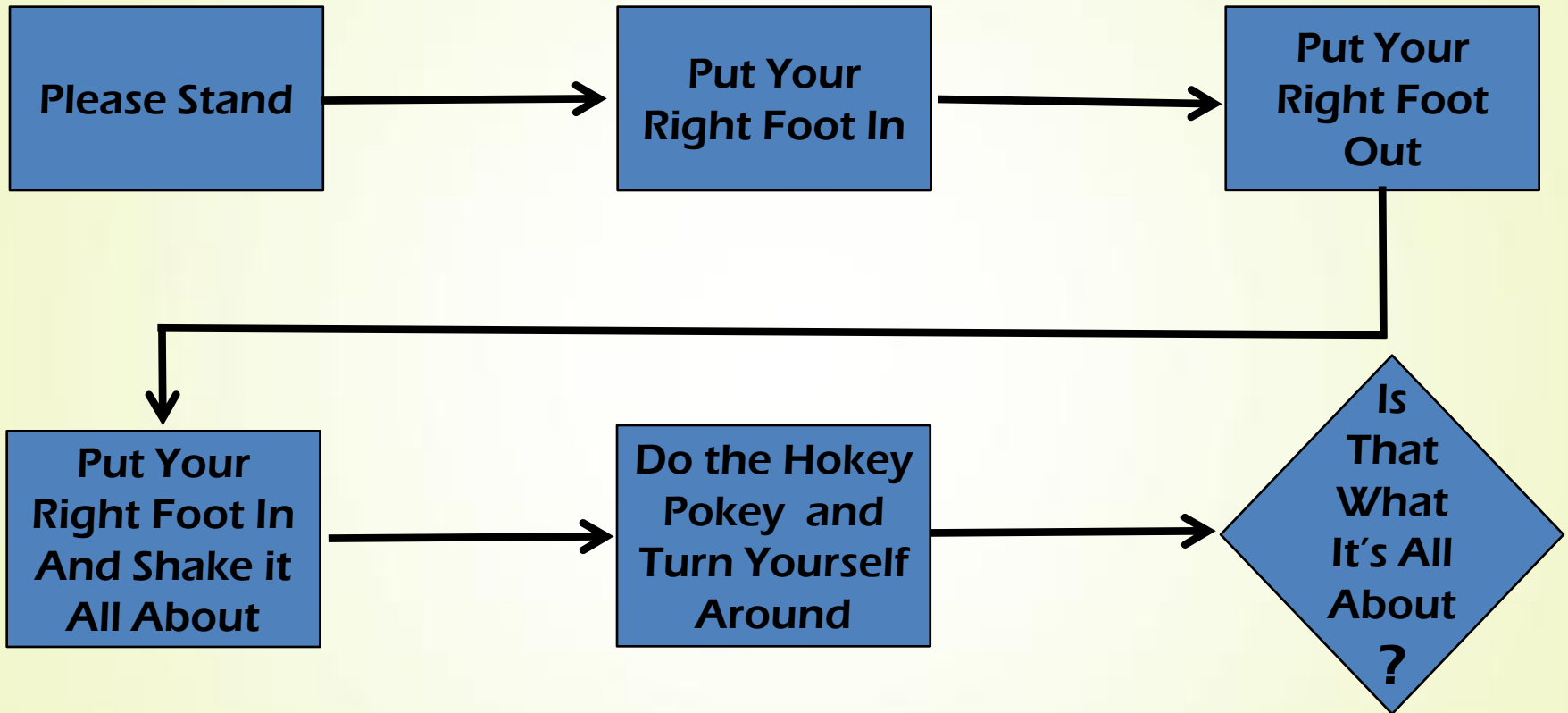
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Regional Extension
Assistance Center for HIT

Meaningful Use Outline

- Why the Push to EHRs?
- The Specifics of Meaningful Use
- Meaningful Use and Health Care Homes
- **Workflow Redesign: How and Why**
- Resources
- Pulling it all together

What It's All About



What It's Really All About

Change causes problems



Objectives

- Learn the value of understanding current clinical workflows
- Learn how to get started with workflow documentation
- Learn how workflow documentation can improve the success of change initiatives

Why Map Processes?

- Create an understandable illustration of the current and future states
- Excellent early step to engage the organization in the idea of change
 - Clinicians and clinic staff are confronted with almost continuous change initiatives
- Potential for process improvement
 - Almost always “aha moments”
- Captures key controls, processes, important ways you are unique
- Process mapping helps you spot where change management work needs to occur

Once you document a process...you can then analyze and improve it!

- Bottlenecks
- Sources of delay
- Rework due to errors
- Role ambiguity
- Unnecessary duplications
- Unnecessary steps
- Long cycle time
- Lack of adherence to standards
- Lack of information
- Lack of quality controls

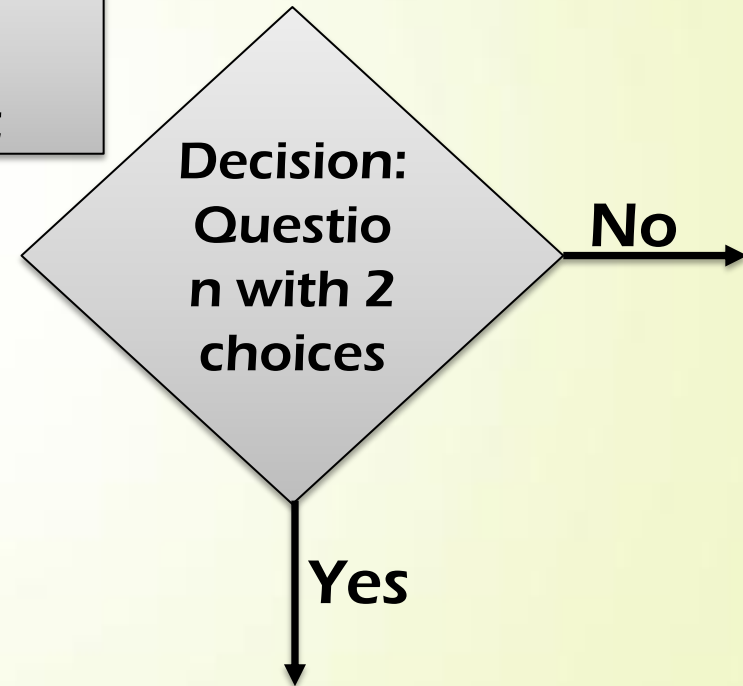
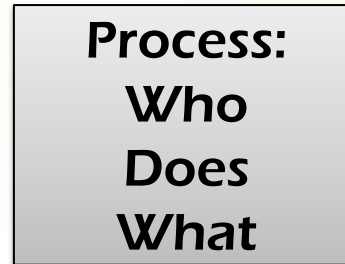
Process Maps & Process Improvement

- Process maps illustrate nature of the activities and the sequence & flow of the work
- Process maps are a visual representation of complex activities
- Process mapping begins the change management process by engaging users
- Process maps help identify problems and workarounds in the current system
- Process maps can form the basis for identifying functional requirements in the EHR

How to Map Processes

- With a reason
 - Way too much work to complete without a clear purpose
 - Understand current state to enable proper redesign
 - Ensure new process increase quality, safety, or efficiency
- With a team of experts – those who do the work
- Dynamically – in a way that can be updated
- With or without flow charting tools
- With a sense of engagement or excitement

Using Shapes



- **Generally run top to bottom, left to right**
- **Each step needs to say clearly:**
 - **Who - Subject**
 - **Does - Verb**
 - **What – Object**
- **Decision diamonds represent key choices or decisions.**
 - **Label routes**
 - **Yes or No most frequent**

Exercise

Scenario

After two incidents of responding to tearful calls from their 9-year old child, a parent decides to document the process of making sure the child leaves the house with her lunch.

Situation:

- Monday, Wednesday and Friday: The parent makes a regular bag lunch for the child.
- Tuesdays: The child takes \$3.50 to buy school lunch – the parent leaves early that morning and doesn't have time to make a lunch.
- Thursday: In addition to lunch, the child takes an extra snack (granola bars, fruit, etc) because she stays late for soccer practice.
- The parent will make the lunch, (or money, or lunch and extra snack) put it on the counter. The child will put the lunch in her backpack and leave.

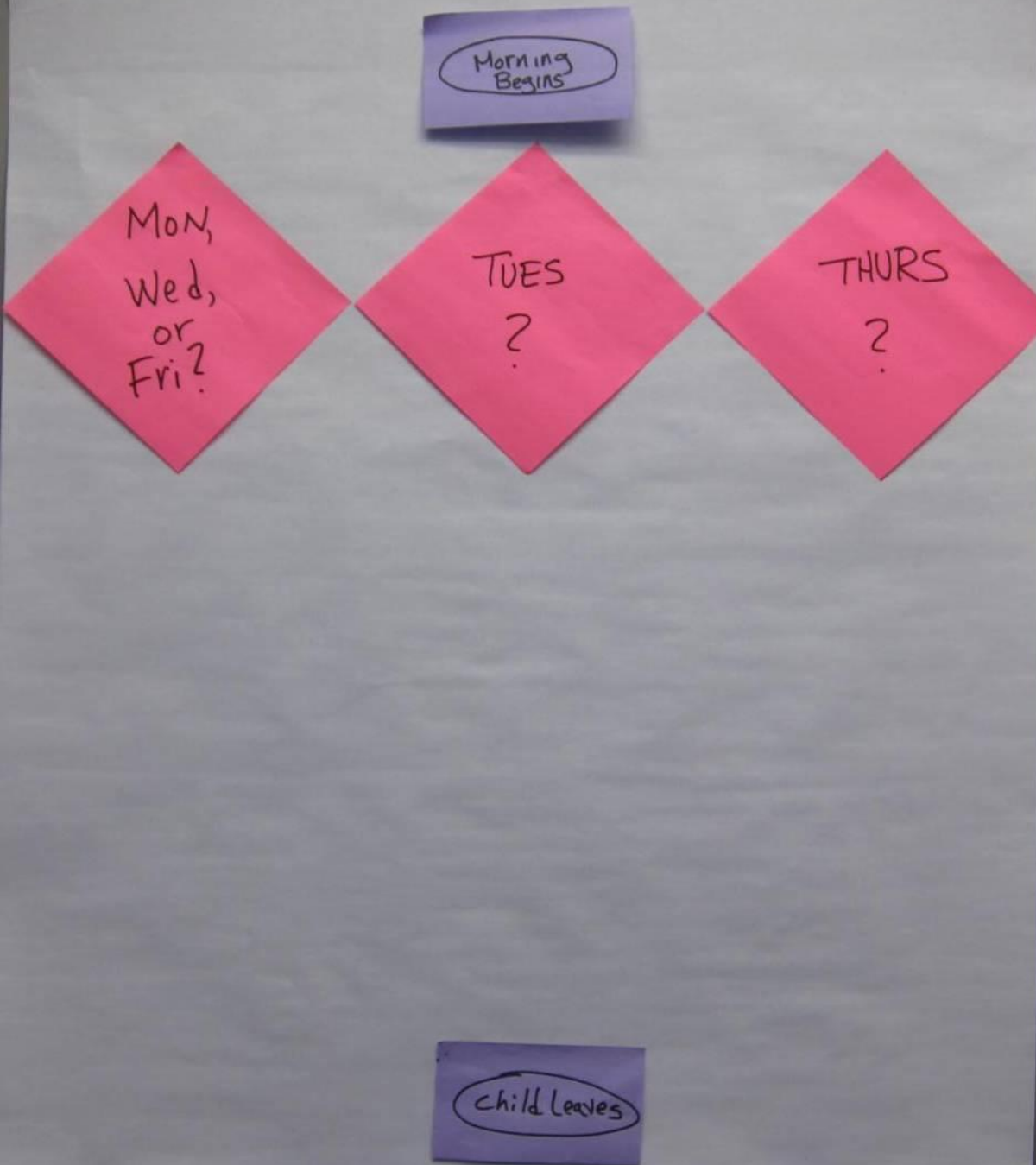
Please get a post-it pad and write out the steps of this process. Take 5 minutes to think and arrange, then we will discuss as a group.

Morning
Begins

Flowcharting

- Assemble team
- Give folks sticky notes and bold pens
- Start with beginning and end of the process

Child Leaves



- Use a square pad for decision diamonds
- Don't start drawing lines

Morning Begins

MON,
Wed,
or
Fri?

TUES
?

THURS
?

Parent
MAKES
BAG Lunch

Parent
PUTS
\$3.50 in B.Pack

Parent
Makes
BAG Lunch

Parent
Puts
Lunch on Counter

Parent
Adds
Snack to Lunch

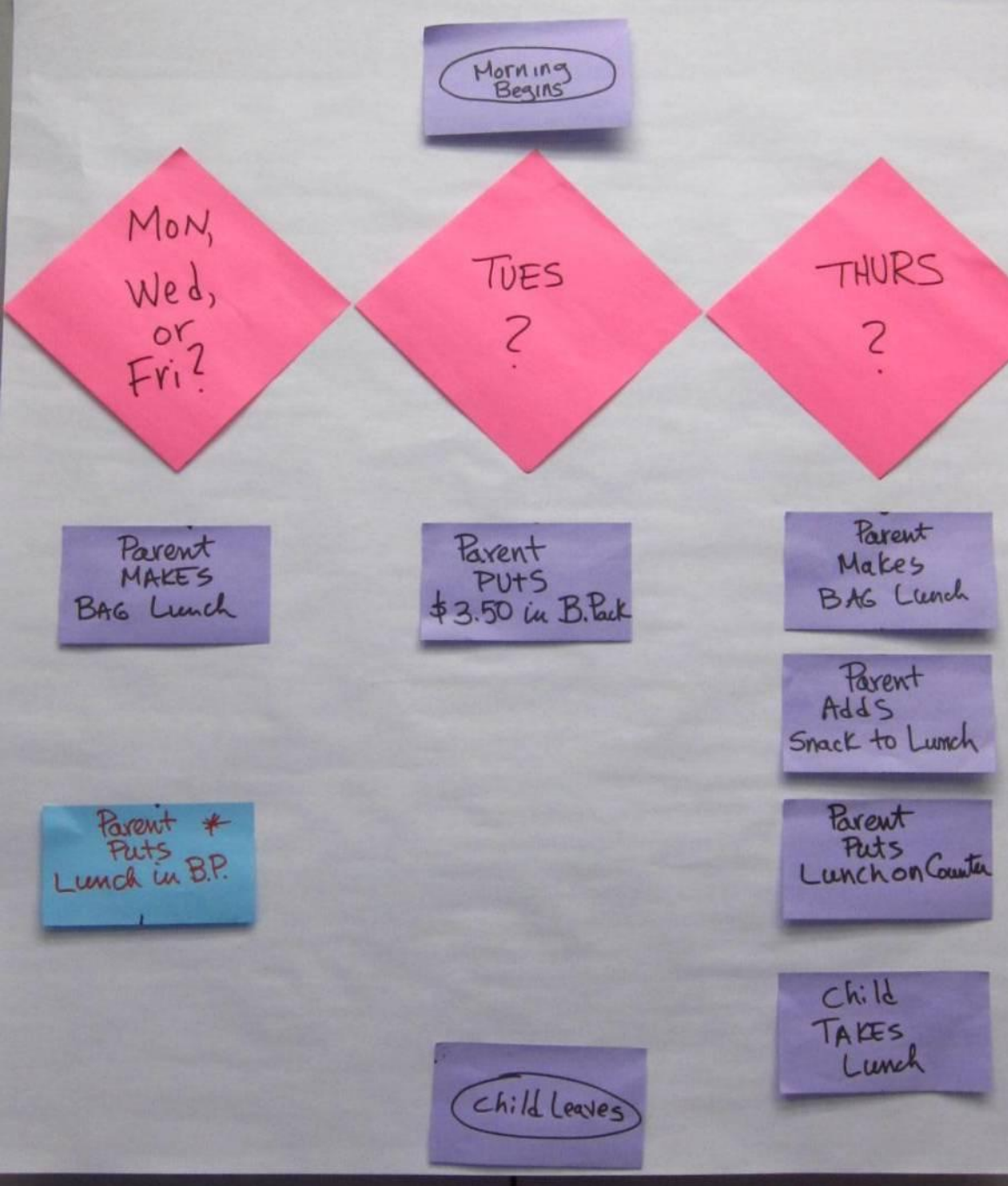
Parent
Puts
Lunch on Counter

Child
Takes
Lunch

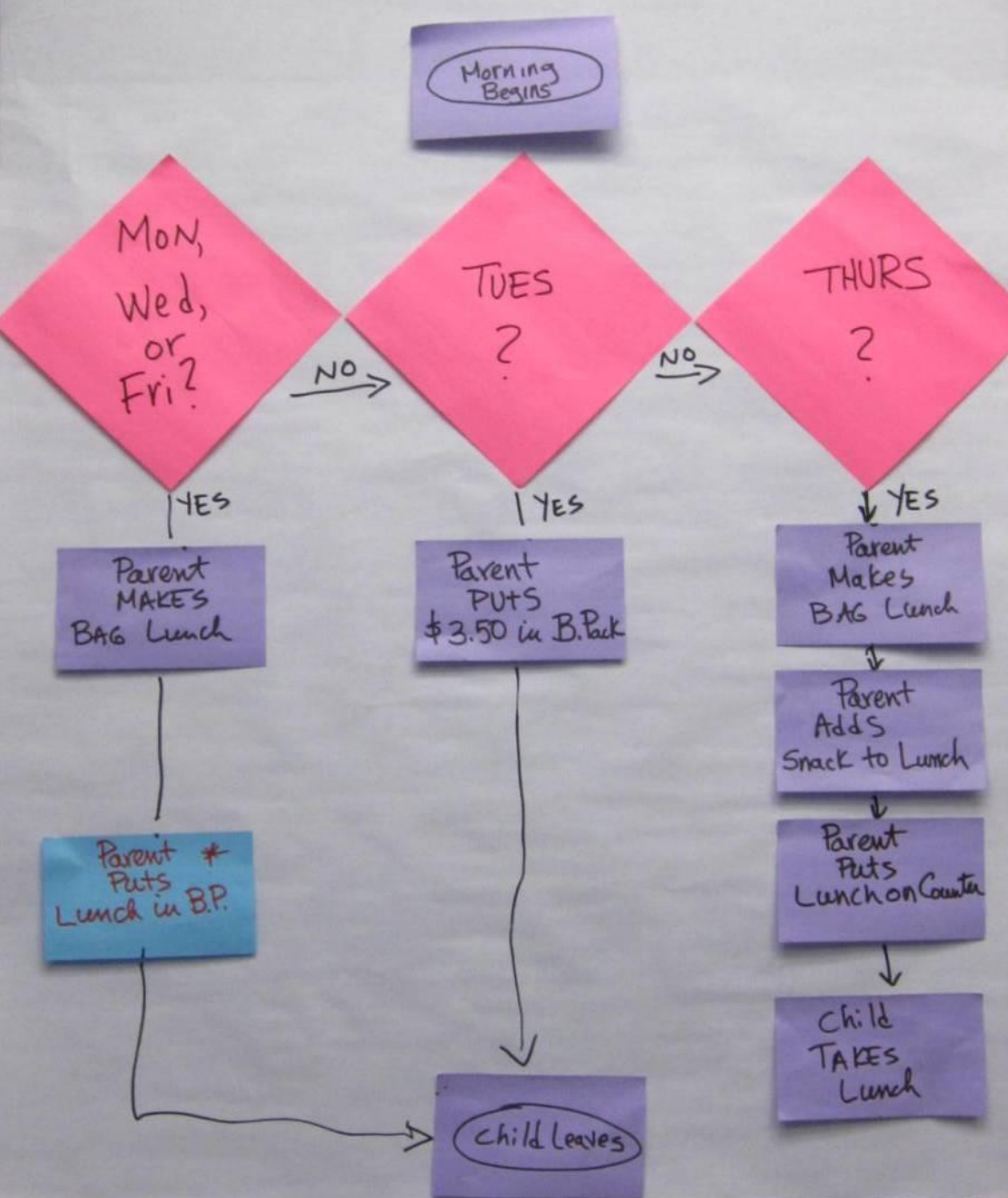
child leaves

Child
TAKES
Lunch

- Add steps as you think of them
- When steps are complete review for improvements – What jumps out?



- Because you used sticky notes, it's easy to change
- Note improvements with star or other color
- Continue to review –look harder, ask “Why do we do that” and “Do we all agree this is the right way?”

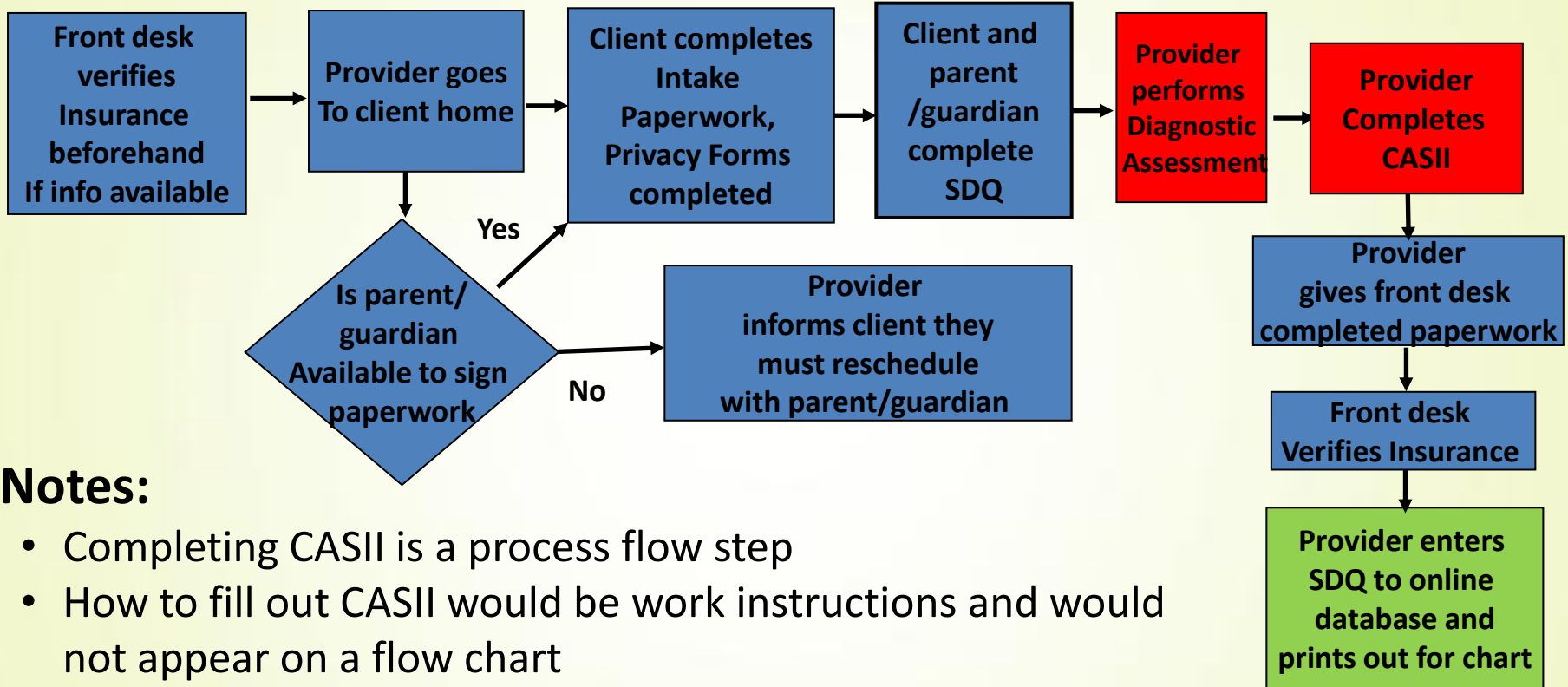


- When complete draw the lines
- Move into an electronic format
- Digital camera is a great tool – phones work in a pinch
 - CAUTION: Photos or paper don't lend themselves to updates

To What Level: Process Map vs. Work Instruction

- Common hang up – how much detail?
- Remember the purpose:
 - Documenting current state
 - Redesign to improve
 - Improvement
- Distinguish between flow charts and work instructions
 - Flows are higher level – Who / Does / What
 - Work instructions are the details

In Home First Appointment

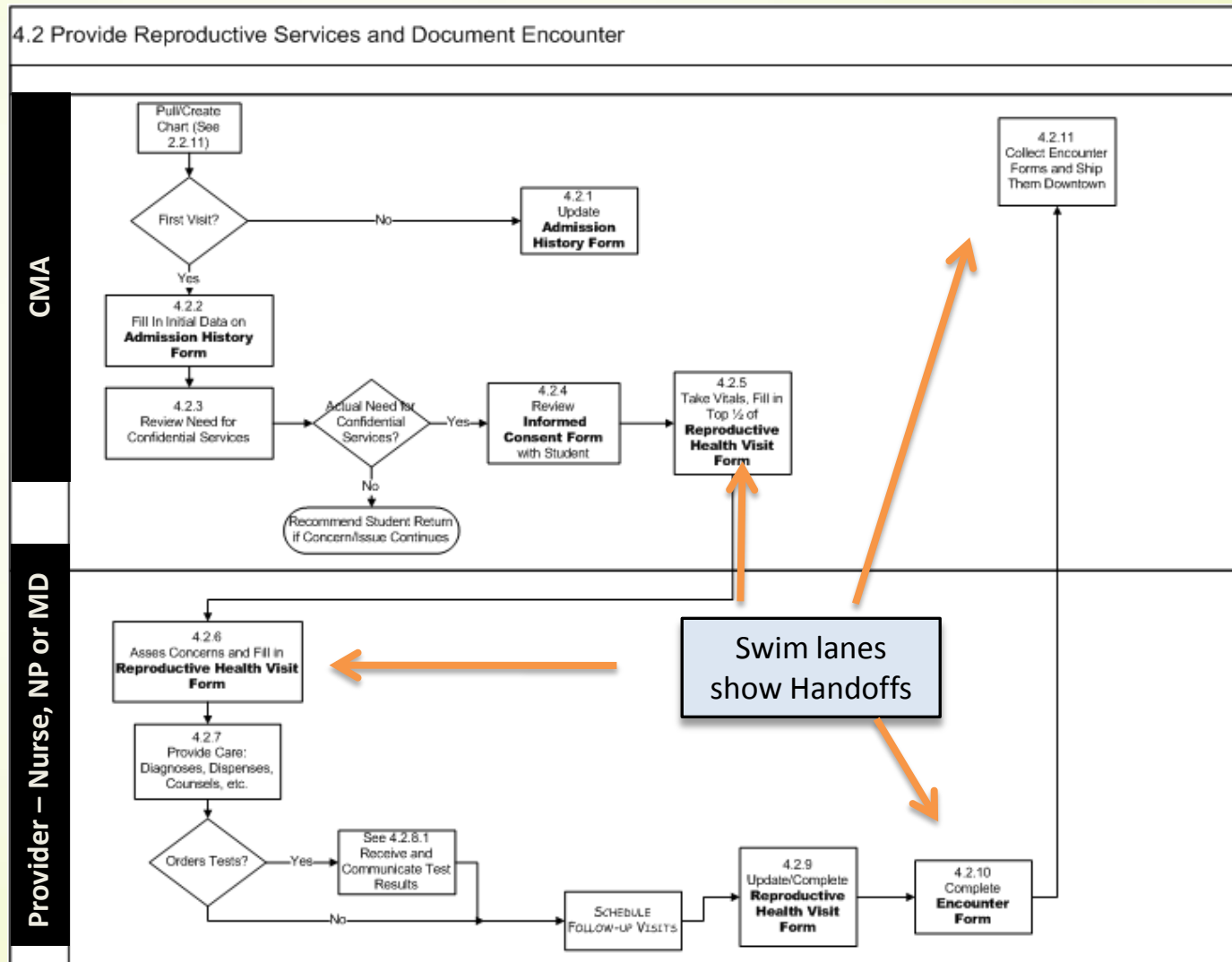


Notes:

- Completing CASII is a process flow step
- How to fill out CASII would be work instructions and would not appear on a flow chart
- If goal was to improve the Diagnostic Assessment process, then team would chart that process in more detail.
- Note use of Who / Does / What
- Note all sorts of opportunities for improvement

Power of Swim Lanes

Swim lanes show who does what



Swim lanes show Handoffs



Summary

- Map process using progressive levels of detail until the process is understood
- Use the 80/20 Rule when diagramming / documenting your process
(you can spend 80% of your time documenting only 20% of the process...try to do it the other way around!)
- Capture low hanging fruit or “ah-hahs!”

Process Mapping Tools

- Start with paper and sticky notes
- Move to an electronic format
 - Visio is great but expensive
 - Other products like FlowBreeze less expensive
 - PowerPoint has all the shapes
 - Excel works well
 - <http://www.breezetreec.com/articles/how-to-flow-chart-in-excel.htm>
- Worst case, write out without symbols using If statements instead of diamonds

Moving from Design to Implementation

- Redesign is the easy part of changing workflows
- When you know Who/Does/What you can begin to plan the change management effort
- Publicize the new design
 - Clear roles and tasks will ignite discussion and raise change management issues
- Training plan emerges from Who/Does/What
 - Training should be role-based and process-focused
- Need for new policies and procedures emerges as well

Metaphor of Head, Heart, Hands* to Manage Change



Head = Thought, Understanding

- I know why this is happening
- I know where we're going
- I know my role
- I know the expectations
- I know what's in it for me (WIIFM)
- ***I know how to make it happen!***



Heart = Feeling, Motivation

- I trust my leaders
- I've been asked to help by someone important to me
- I believe I will be fairly rewarded
- WIIFM for me is worth the effort
- ***I want to help make it happen!***



Hands = Action, Ability

- I can do my job well
- I have skills to help make the change a success
- ***I can make it happen!***

*Billings and Gibson: *Big Change at Best Buy* 2003 Nicholas Brealey Publishing

Principles for Change Management and Training

- Role based - Process focused
- The folks with the most change get the most effort
 - Comparing old to new makes it easy to spot those will need the most help
- Tell/show me what I have to do
- Think of training and communication as two sides of the same coin
 - Communication begins the training
 - Training completes the communication plan
- If the head and heart aren't engaged, the hands won't follow

Designing a Training Plan

- Understand and clarify constraints
 - Budget
 - Time
 - Space
- Begin with the workflow documentation
- Create a Role/Task Matrix
 - Identify which roles do which tasks
 - Establish training experiences for each role
- Determine training method best for each role/learning task
- Look for handoffs – these often result in breakdowns
- Go live is the end of the beginning

Conclusion

- The power of process mapping lies in the visual representation of complicated concepts
- Process mapping is a vital step in preparing for change implementation
- Engaging people who do the work is essential to success
- Understanding and communicating Who/Does/What empowers the change management effort

Small Group Exercise

Take one of the following HCH requirements:

- Establishing care plans
- Referral tracking
- Updating quality measures

And discuss

- Who does what at your clinic
- How you deal with the ongoing issues that result from change

Meaningful Use Outline

- Why the Push to EHRs?
- The Specifics of Meaningful Use
- Meaningful Use and Health Care Homes
- Workflow Redesign: How and Why
- **Resources**
- Pulling it all together

CMS Stage 2 Toolkit

http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/Stage2_Toolkit_EHR_0313.pdf

EHR Incentive Programs Stage 2 Toolkit

The Basics

- [Stage 2 Overview Tipsheet](#) – provides an overview of the major provisions included in the Stage 2 rule
- [Stage 1 Changes Tipsheet](#) – focuses on the changes that were made to Stage 1 of meaningful use in the Stage 2 rule
- [2014 Clinical Quality Measures Tipsheet](#) – provides information on the next phase of Clinical Quality Measures (CQMs) and how to report them to meet meaningful use in 2014 and beyond
- [Stage 2 FAQs](#) – provides answers to questions about the Stage 2 rule and how it affects hospitals and EPs
- [2014 eCQM Resources](#) – lists all of the 2014 CQM webpages and resources

Resources for Eligible Professionals (EPs)

Stage 2 Details

- [Stage 2 Meaningful Use Specification Sheet Table of Contents for Eligible Professionals](#) – lists all the core and menu objectives for EPs, with direct links to each individual measure specification sheet (requires internet access to view spec sheets)
- [Stage 1 vs. Stage 2 Comparison Table for Eligible Professionals](#) – compares core and menu measures from Stage 1 with measures for Stage 2 of meaningful use for EPs
- [Payment Adjustments & Hardship Exceptions Tipsheet for Eligible Professionals](#) – provides an overview of the payment adjustment and hardship exceptions included in the Stage 2 rule for EPs

2014 CQMs

- [2014 CQMs for Eligible Professionals \[PDF, 348KB\]](#) – contains the description and definition statements for the 64 CQMs for use by EPs in the EHR Incentive Programs beginning in 2014
- [Technical release notes for 2014 eCQMs for Eligible Professionals \[PDF, 131KB\]](#) – contains information about changes made to 2011 CQMs for the measures that were kept as part of the 2014 CQMs for EPs
- [Full Table of Recommended Adult Measures](#) – lists the 9 CQMs in the recommended core set for the adult population
- [Full Table of Recommended Pediatric Measures](#) – lists the 9 CQMs in the recommended core set for the pediatric population

Resources for Eligible Hospitals & Critical Access Hospitals (CAHs)

Stage 2 Details

- [Stage 2 Meaningful Use Specification Sheet Table of Contents for Eligible Hospitals and CAHs](#) – lists all the core and menu objectives for eligible hospitals and CAHs, with direct links to each individual measure specification sheet (requires internet access to view spec sheets)
- [Stage 1 vs. Stage 2 Comparison Table for Eligible Hospitals and CAHs](#) – compares core and menu measures from Stage 1 with measures for Stage 2 of meaningful use for eligible hospitals and CAHs
- [Payment Adjustments & Hardship Exceptions Tipsheet for Eligible Hospitals and CAHs](#) – provides an overview of the payment adjustment and hardship exceptions included in the Stage 2 rule for eligible hospitals and CAHs

2014 CQMs

- [2014 CQMs for Eligible Hospitals \[PDF, 377KB\]](#) – provides the description and definition statements for the 64 CQMs for use by eligible hospitals in the EHR Incentive Programs beginning in 2014
- [Technical Release Note 2014 eCQMs for Eligible Hospitals \[PDF, 362KB\]](#) – contains information about changes made to 2011 CQMs for the measures that were kept as part of the 2014 CQMs for eligible hospitals



CMS Resources:

- Meaningful Use:
 - <https://www.cms.gov/EHRIncentivePrograms/>
- Registration instructions:
 - <http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/RegistrationandAttestation.html>
- Meaningful Use Stage 1 Criteria Specifications updated for 2013
 - <http://www.cms.gov/EHRIncentivePrograms/Downloads/EP-MU-TOC.pdf>
- CMS Stage 2 web page (with information on revised Stage 1 as well as Stage 2):
 - http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Stage_2.html
- Stage 2 Toolkit (Updated February 2013)
 - [http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/Stage2 Toolkit EHR 0313.pdf](http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/Stage2_Toolkit_EHR_0313.pdf)

Other Resources:

- Quality Measure Specifications on the CMS web site:
 - <http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/ClinicalQualityMeasures.html>
- ONC-ATCB Certified EHRs and what modules they are certified for:
 - <http://healthit.hhs.gov/chpl>
- Office of the National Coordinator Health IT site:
 - <http://HealthIT.gov> (As of 4/12/13, not yet updated for 2013 Stage 1 or Stage 2)
- Regional Extension Assistance Center for Health Information Technology (REACH)
 - <http://www.khaREACH.org>
- Stratis Health HIT Toolkits for hospitals, clinics, home health, nursing homes and chiropractic
 - <http://www.stratishealth.org/expertise/healthit/>
- Minnesota Department of Health Info Sheet on Public Reporting Measures:
 - <http://www.health.state.mn.us/e-health/phreportmu.pdf>

Meaningful Use Outline

- A reminder of why we are doing this
- Changes to the timeline
- Reminder of the incentives
- Clarification of the Medicare penalties
- New EHR certification standards for 2014
- New and revised functional criteria requirements for Stages 1 & 2
- New quality measure requirements for 2014
- What you need to do now
- Resources
- **In closing**

Meaningful Use Outline

- Why the Push to EHRs?
- The Specifics of Meaningful Use
- Meaningful Use and Health Care Homes
- Workflow Redesign: How and Why
- Resources
- **Pulling it all together**

What you can do to prepare for Meaningful Use

- Prepare for sharing information with patients:
 - Complete patients' problem, medication and allergy lists. Make sure they are up to date and current
 - Decide what types of information you will share with patients
 - Patient portals will require a lot of decision making on the part of providers
 - Begin to encourage patients to get involved in their care
 - Talk up the fact that you will be adding technology to allow them to make appointments on line, message their provider and get their lab results
 - Help patients identify where they might access a computer (library, waiting room) and how to manage privacy in such a setting
 - Explore whether you will use your vendor's portal solution or some other option
- Prepare for exchanging information with others:
 - Establish relationships with other organizations to which you refer in order to begin planning exchange (be sure to include nursing homes and home care)
 - Think about a connecting with your cancer registry or some other national registry to submit data

What you can do to prepare for Meaningful Use

- Make sure your technology will be ready
 - Plan to undergo an EHR upgrade in late 2013 early 2014
 - Talk with your vendor about upgrade timelines
 - Look at the quality measures and let your vendor know which ones are important to you
 - For hospitals, prepare for bar-coded medication administration
- Plan for more decision support
 - Understand how your vendor will support having 5 “interventions” tied to relevant quality measures
 - Begin to think about the types of interventions you will incorporate into your EHR
- Evaluate your workflows
 - Look for efficiencies and make sure everyone is working at the top of their license

In Closing

- The EHR Incentive program is intended to encourage the health care industry to improve the quality, safety and efficiency of care through health information technology
- Requirements are becoming more demanding over time with demonstrated improvement of quality to be considered for incentives or payment increases in the future
- Effective use will require close attention to workflow
- Use your reports to track progress in your use of your EHR and to improved quality
- Remember that we are doing this to achieve the “Triple Aim” of health care:
 - Improving the patient experience of care (including quality and satisfaction)
 - Improving the health of populations
 - Reducing the per capita cost of health care



Key Health Alliance

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Key Health Alliance—Stratis Health, Rural Health Resource Center, and The College of St. Scholastica.

REACH is a project federally funded through the Office of the National Coordinator, Department of Health and Human Services.