

CAPTURING DATA TO UNDERSTAND END-USER EFFICIENCY

Presented by:

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**Tell me and I
forget.**

**Teach me and
I remember.**

**Involve me
and I learn.**

- Benjamin Franklin

PURPOSE STATEMENT:

Develop an internal observational tool to assess end-user Epic efficiency.

AGENDA

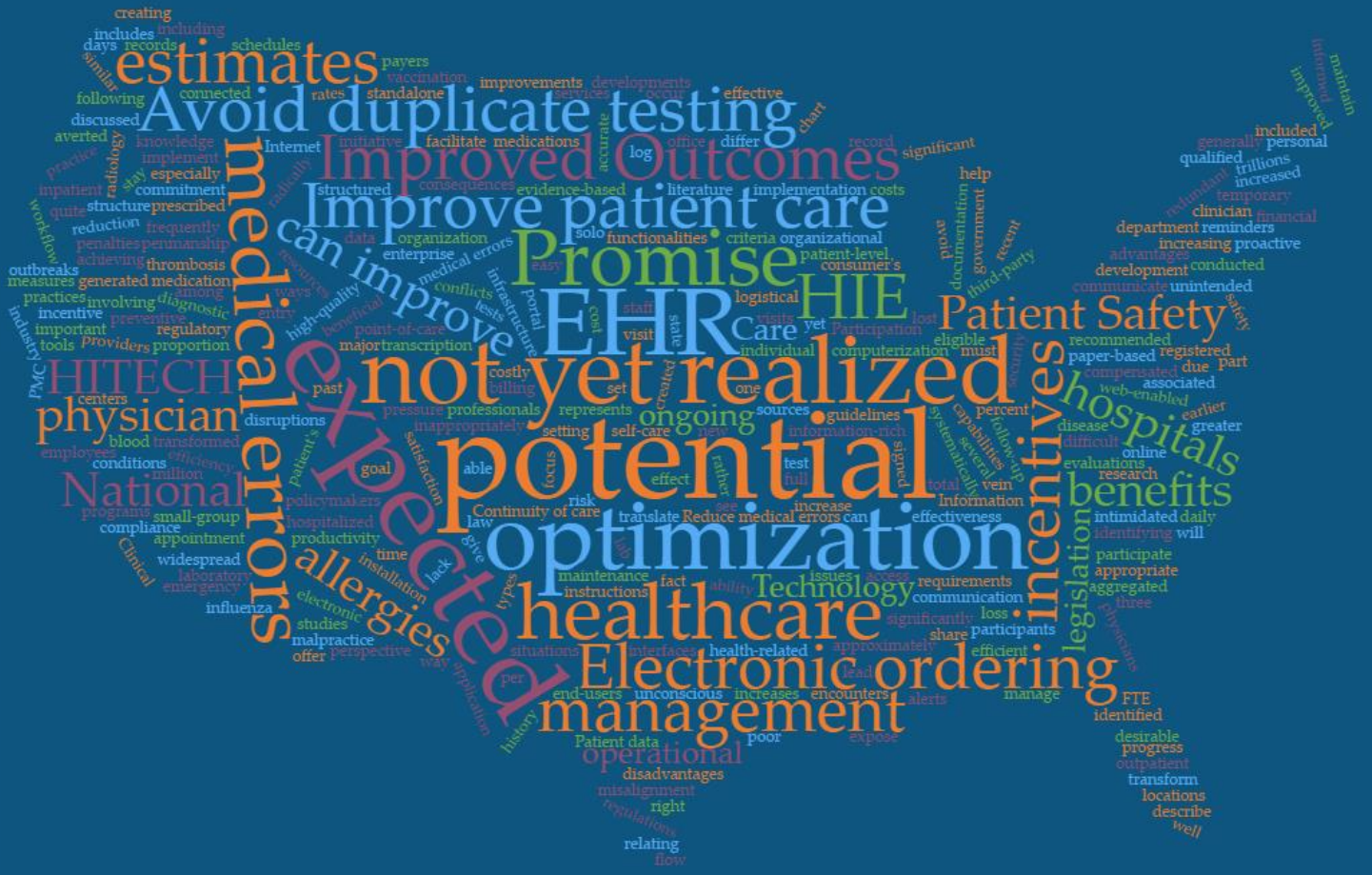
- Current State
- Tool Development
- Pilot
- Preliminary Results
- Next Steps
- Q & A

BACKGROUND

BACKGROUND

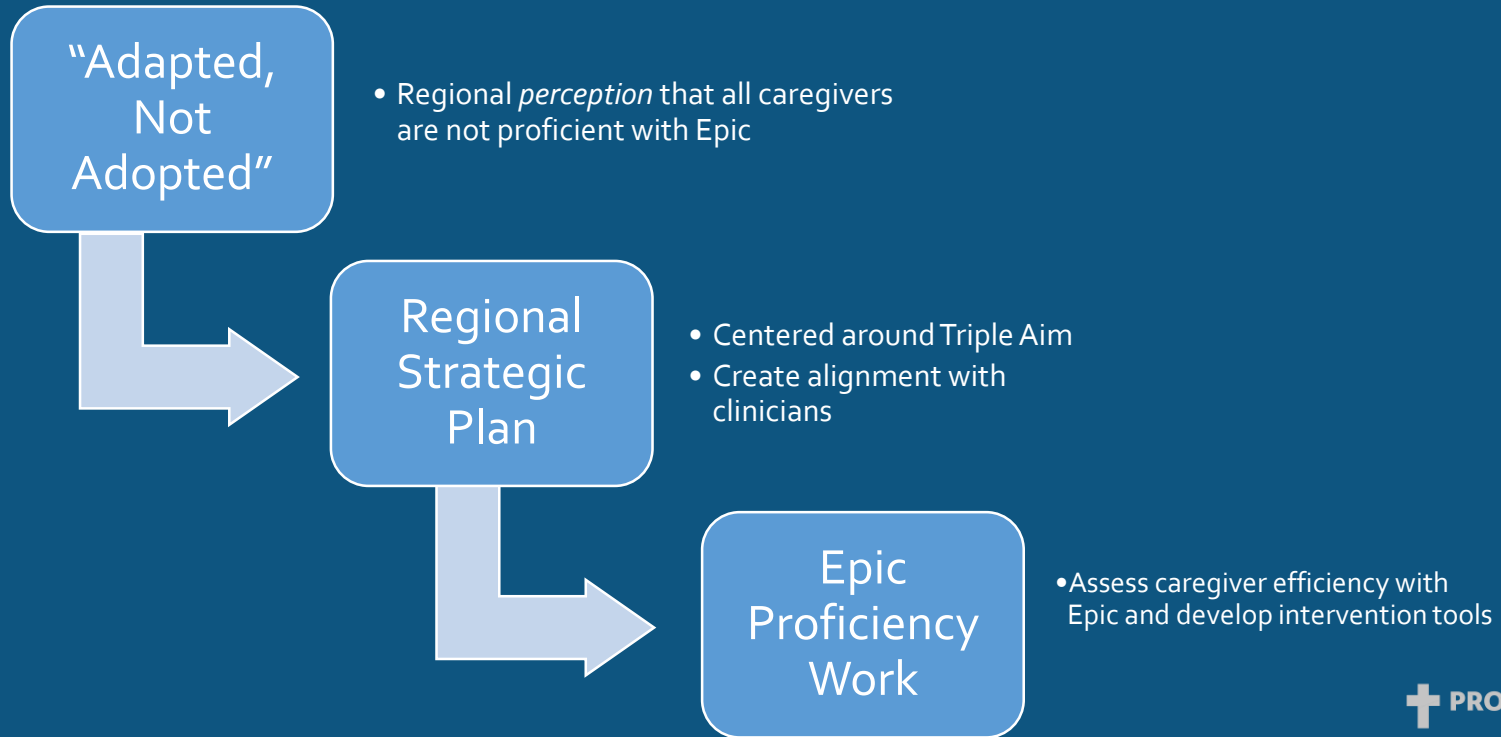
CURRENT STATE

- HITECH Act 2009
- 96 percent of all non-federal acute care hospitals possess certified health IT (as of 2015).
- 9 in 10 office-based physicians have adopted an EHR (2015).
- \$34.7 Billion Spent in Meaningful Use incentive payments (2016).



BACKGROUND

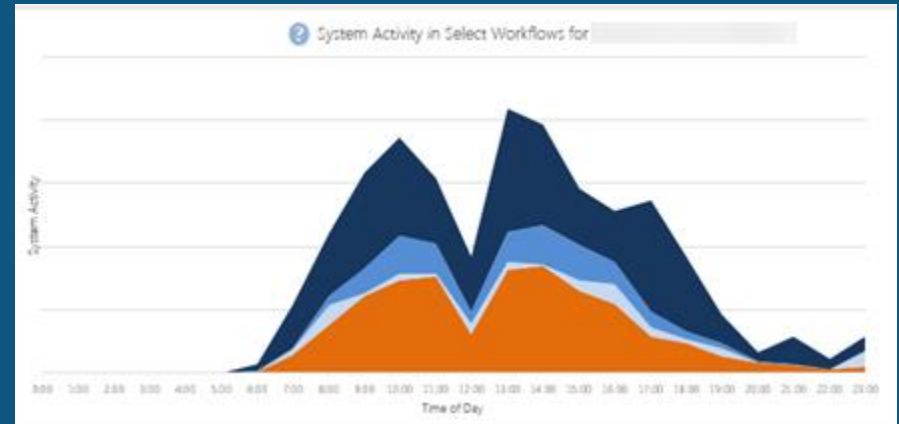
CALL TO ACTION



BACKGROUND

TOOLS

- Provider Efficiency Profile (PEP)
 - Based on the amount of time a provider spends in the system vs. scheduled time
 - High workload and low system usage, high efficiency
 - Available in Ambulatory and ASAP
- Caregiver Engagement Survey
 - “I am satisfied with ease and efficiency of the EMR system”
- Industry Review



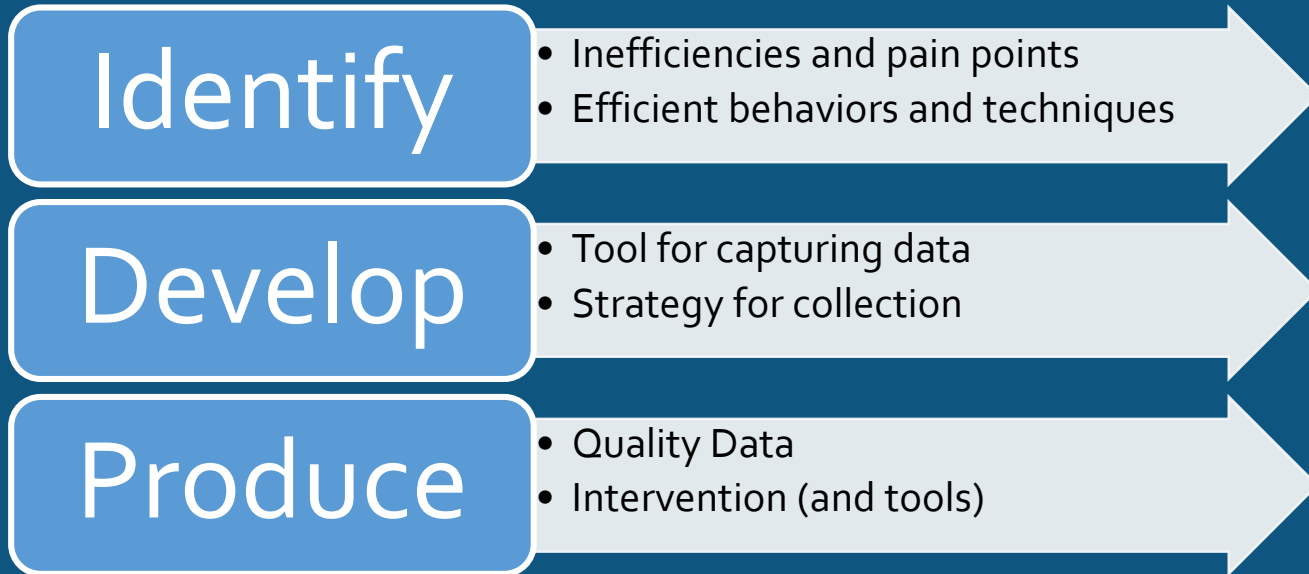
BACKGROUND

WORKGROUP

- Valerie Fong, Oregon CNIO and Andy Zechnich, Oregon CMIO formed a workgroup
- Diverse group of Clinical Informatics Specialists
 - Backgrounds: Ambulatory, Nursing Informatics, Training and Delivery, Various Acute Settings
 - Geographically: All facilities, CAH, Medford- Coast- Hood River
- Tasked us to understand perception and develop an assessment tool

BACKGROUND

GOALS



BACKGROUND

IMMEDIATE CHALLENGES

- We need to bring objectivity to the subjective.
- We need a tool that could give us:
 - Measurements of scale
 - Open-ended responses
- Standardized to use across a variety of users and modalities.

TOOL DEVELOPMENT

Define

High priority departments & users

Epic tools & functionality

End user proficiency

Guidelines & General instructions

Communication to Clinicians and Providers

Communication to Leaders, Managers & entire Clinical Informatics group

High Priority Departments



- ⇒ Ambulatory
- ⇒ Inpatient
- ⇒ Emergency

**High Priority
Users**



- ⇒ **Physicians**
- ⇒ **Advanced Practice Clinicians**
- ⇒ **MAs**
- ⇒ **RNs**



Epic Tools & Functionality – Clinicians (RNs & MAs)

General
Navigation

Documentation

Medication
Administration

Order
Management

Chart Review

Epic Tools & Functionality - Providers



Documentation

Order
Management

Chart Review

Problem List

In Basket



Novice

- Minimum level of performance requirements met with direction and support required from supervision.
- Basic competencies and skills displayed in achieving results.
- Knowledge is developing.
- Principles, based on experiences, begin to be formulated to guide actions

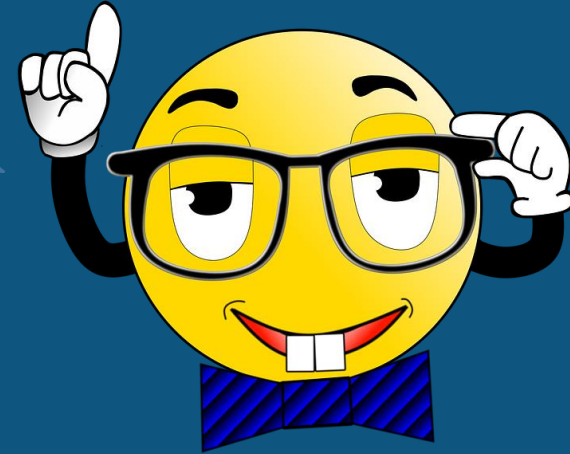
Proficient

- Skills and responsibilities are performed independently with consistent results and limited or minimal guidance



Expert

- Performs skills as an independent subject matter expert with a high level of understanding of high performance objectives and consistent results.
- Intuitive grasp of clinical situations.
- The expert operates from a deep understanding of the total situation.
- Performance becomes fluid, flexible and highly proficient.





Rate the user on the following efficiency observations using the general guidelines attached.

*The skills & responsibilities that the Expert user possesses is in addition to those of the Proficient user



In comments, enter observations for improvement.
Use additional space, if needed

After your observation, rate the overall efficiency and provide specific examples that demonstrate the user's efficiency

USER EFFICIENCY TOOL - CLINICIAN

CIT Name: _____

Date: _____

User Name: _____

User department: ED Hospitalist MedSurg Amb

Time start: _____

User role: MD RN Clinic support

Workstation type: WOW In room Station Other

Time stop: _____

Workflow(s) observed: _____

Please see last page for form completion instructions.

		N/A	Novice	Proficient	Expert	COMMENTS
Self	Self-Rated Proficiency					
	Self-Rated Technology (general/computer use)					
General	Navigation					
	Patient Lookup					
	Overview/Schedules					
Documentation	Flowsheets and Navigators					
	Transitions (i.e. admit, triage, rooming, DC, transfer)					
	Care Plans					
	Patient Education					
	Line, Drain, Airway (LDA)					
	Patient Care					
Administration - MAR						
Order Management						
Chart Review	General					
	BPAs					
	Care Everywhere					
	Chart Correction					

USER EFFICIENCY TOOL – GUIDELINES (CLINICIAN)

Area	Novice	Proficient	Expert
General – Navigation	<ul style="list-style-type: none"> • Uses no keyboard shortcuts • Difficulty navigating to intended activities • Does not follow navigators sequentially 	<ul style="list-style-type: none"> • Navigates directly to intended activity or task without wasted clicks • System List saved • Uses navigators for common workflows 	<ul style="list-style-type: none"> • Frequent use of keyboard shortcuts (copy, paste, navigation) • Personalized Epic interface (Hyperspace) • Adds Favorites • Consistently uses navigators to support workflows
General – Patient Lookup	<ul style="list-style-type: none"> • Difficulty with entering patient record in the proper context • Difficulty finding system lists to find patients throughout the hospital • Verbalizes use of patient information on Pt Banner(hover to see code, wt, fall risk, allergies, etc) 	<ul style="list-style-type: none"> • Assigns self and others to care or treatment team appropriately • Use Patient Lists to find current patients • Has 1 personalized patient list • Finds correct patient and encounter 	<ul style="list-style-type: none"> • Assigns self and others to care or treatment team appropriately • Creates and uses patient lists/schedules • Uses multiple modes for finding patient • Picks best tool for finding patient • Use Patient Lists column headers to sort within Patient Lists
General – Overview/Schedules	<ul style="list-style-type: none"> • Difficulty finding patients • Difficulty navigating to intended activity • Does not have wrenched in reports 	<ul style="list-style-type: none"> • Review a profile of assigned patients without opening their charts • Leave a non-clinical message for other staff members • Has wrenched in reports 	<ul style="list-style-type: none"> • Uses ‘Finding Patient Information’ using ‘Chart Search’ • Uses variety of reports (snapshot, index, overview, collection status, etc) • Uses schedule • Has customized reports in report pane
Documentation – Flowsheets and Navigators	<ul style="list-style-type: none"> • Does not use sequential flow in navigator • Verbalizes understanding of & identifies required documentation • Demonstrates entry of a comment on a documented value • Verbalizes understanding & use of WDL & WDL except 	<ul style="list-style-type: none"> • Uses appropriate navigator to complete required documentation • Verbalizes/demonstrates how to search and add/Wrench-in a flowsheet • Maintains Side-Bar Pt Index open, recognizing it as a tool for review • Documents near-real time, usually at bedside 	<ul style="list-style-type: none"> • Has customized navigators/flowsheets to support workflow • Uses <i>shift assessment</i> navigator • Uses available tools (i.e. to see last filed values, flag significant, row information) • Navigates within Side Bar Pt Index to view RN required documentation • Documents at point of care – real time
Documentation – Transitions	<ul style="list-style-type: none"> • Missing essential documentation elements for patients being: Admitted, Transferred, Discharged 	<ul style="list-style-type: none"> • Completes documentation of essential elements of each transition in correct sequence (i.e. VS, history, allergies) 	<ul style="list-style-type: none"> • Verbalizes/demonstrates Phase of Care elements



Timeline



PRELIMINARY FINDINGS

RESULTS

- Participation Results
 - 43 CI team members recorded observations (70 team members)
 - Initial ask was 5 per team member
 - 72 providers observed
 - 110 clinicians (RNs and MAs) observed
 - 182 total observations

Clinicians



■ Ambulatory ■ In-Patient ■ ED

Providers



■ Ambulatory ■ In-Patient ■ ED

RESULTS

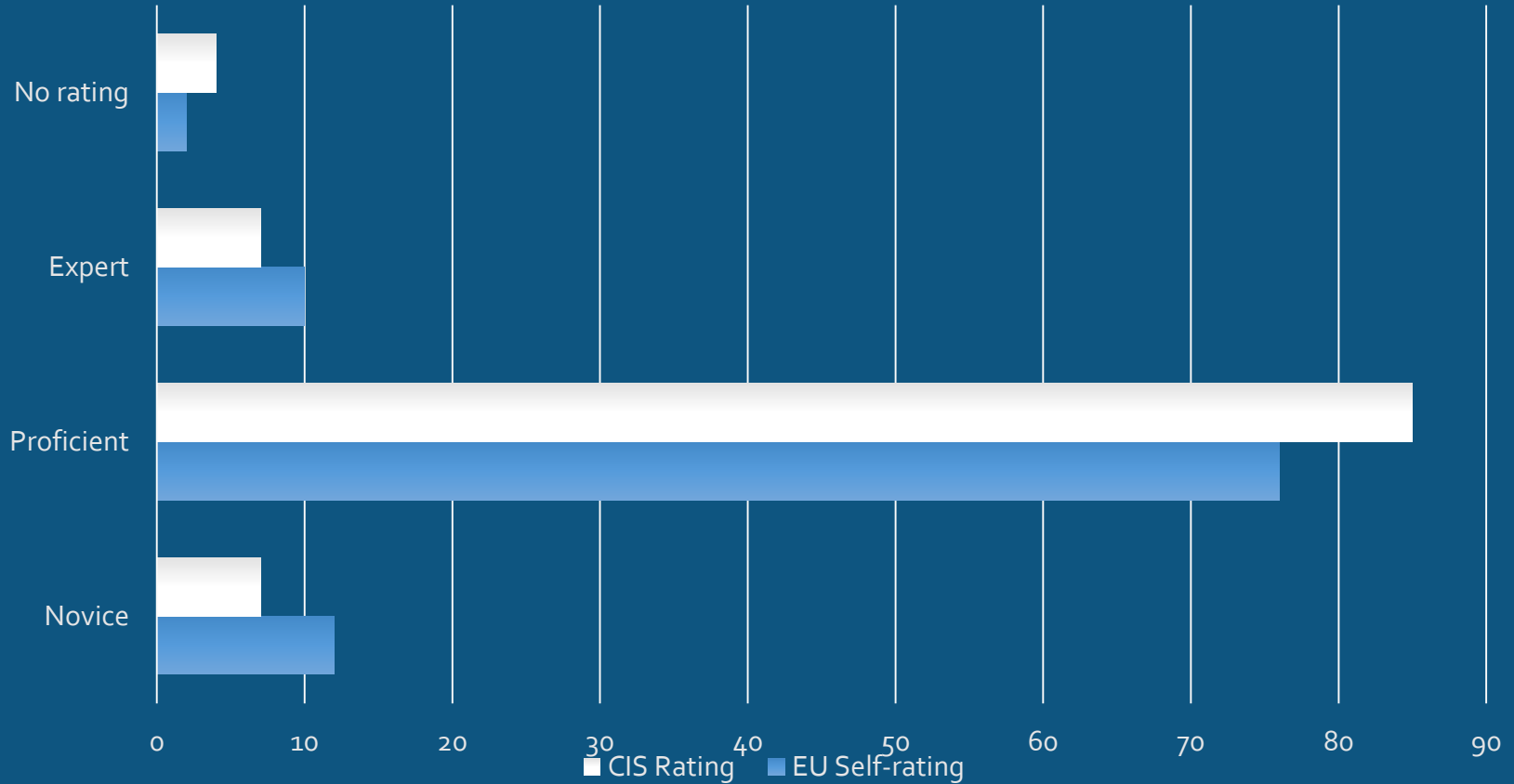
User Rated Efficiency

	NA/Not Recorded	Novice	Proficient	Expert
Clinicians	2	12	86	10
Providers	4	7	57	4

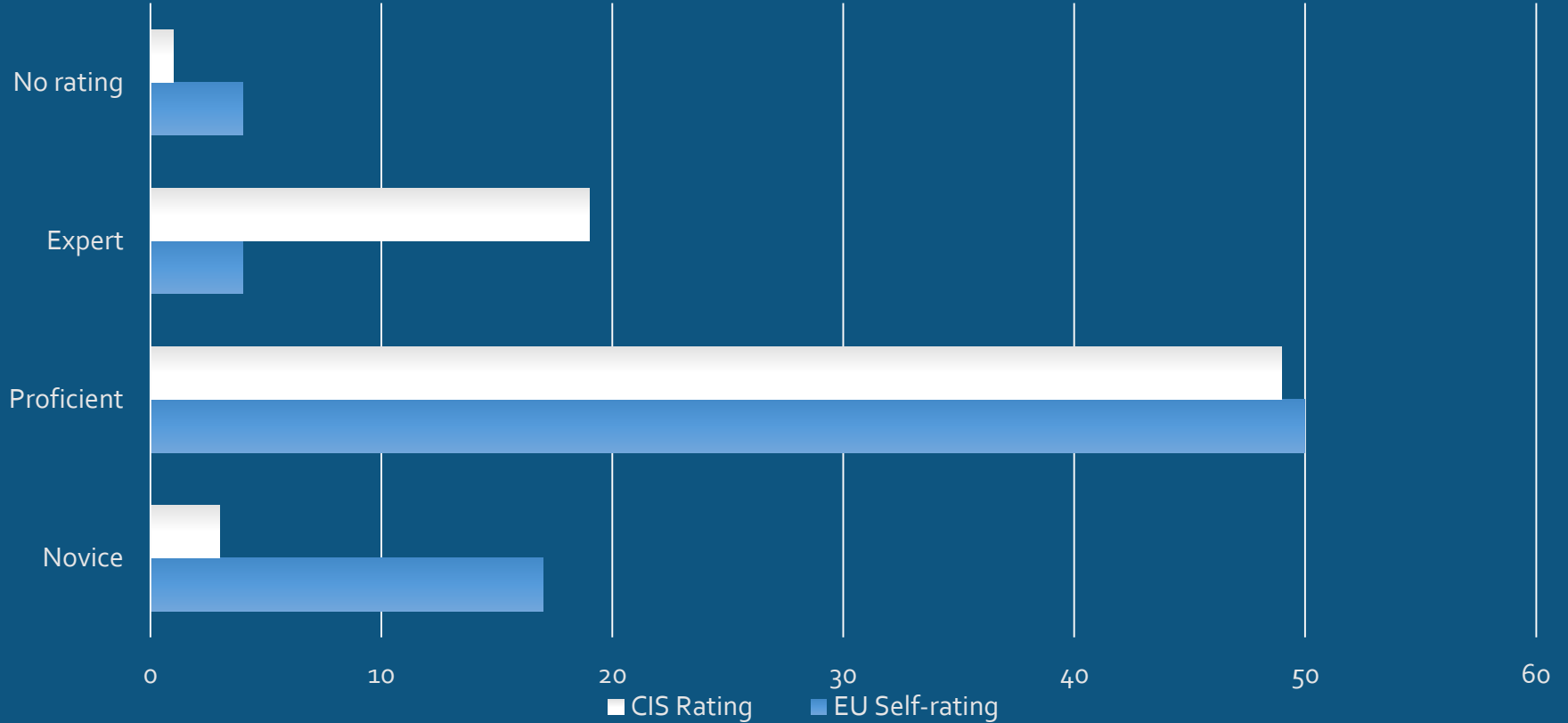
Observed Rated Efficiency

	Did not rate	Novice	Proficient	Expert
Clinicians	4	7	85	14
Providers	1	3	49	19

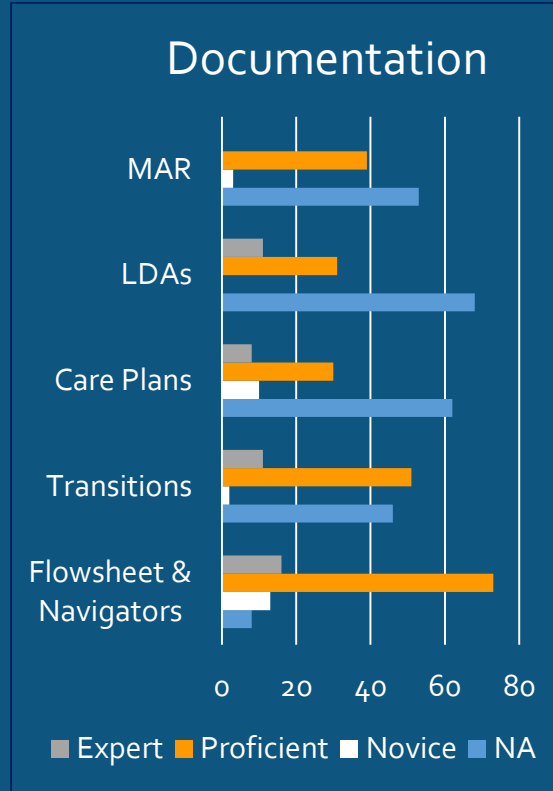
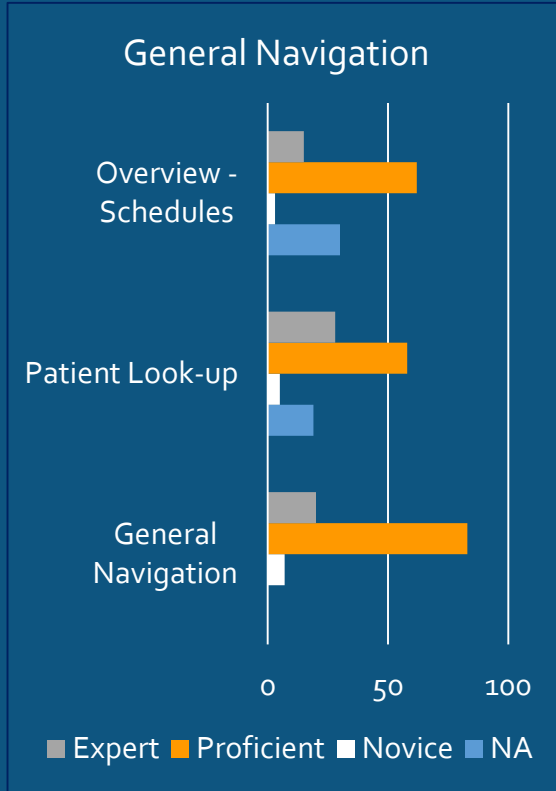
Clinician Efficiency Comparison



Provider Efficiency Comparison

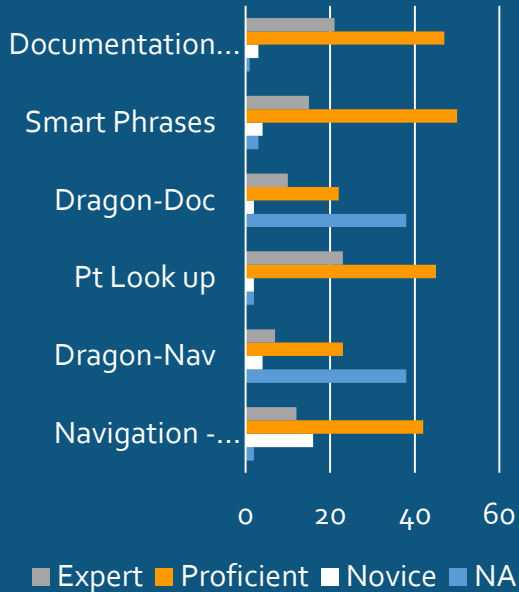


Clinician Results

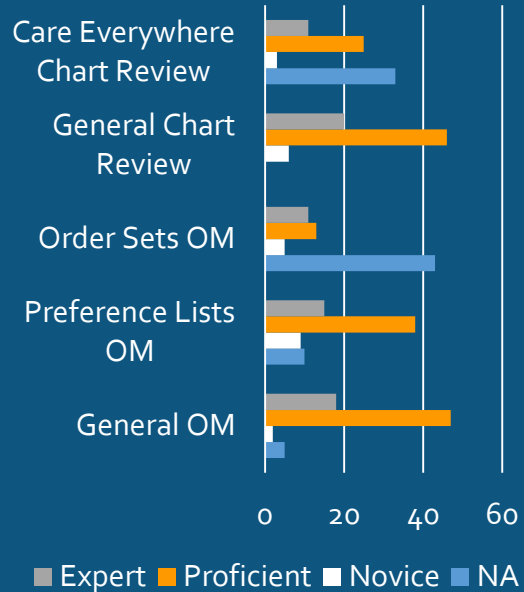


Provider Results

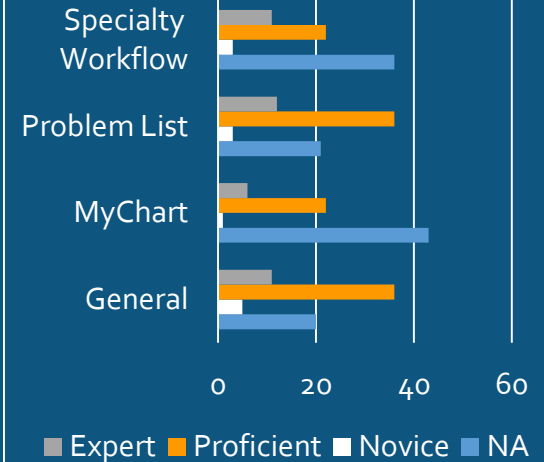
General & Documentation



Order Management & Chart Review



InBasket-Communication, Problem List, Specialty



CONCLUSIONS

TRENDS

- Data tells us that caregivers are overall proficient
- Proficiency is under-realized by caregivers
- Not all workflows were observed in given timeframe

STRENGTHS AND WEAKNESSES

Tool is able to:

- Easy to use, easy to train
- Able to capture more than mouse clicks (PEP)
- Standardized tool for objective observation of end-users

Limits:

- Sample size
- Variability between surveyors
 - Interrater reliability
- Time limit
 - Too many “Not Observed/NA’s”

TOOL AND PROCESS IMPROVEMENTS

- Refine the tool and process
 - Define and obtain proper sample size
 - 3,600 inpatient RNs alone and 3,700 MDs in Oregon working for Providence
 - Increase sample size \approx 500 for each group to be representative
 - Create and expand tool to other areas
- Address assessor variability
 - Improve buy-in
 - Smaller group of assessors to limit variability
 - Train assessors to standardize

NEXT STEPS

- This was the first step
 - We were tasked with defining the emotion/perception of user efficiency
 - “Pulse Check” of our users and current state
- Next Steps
 - Deliver Phase 2
 - Develop focused interventions
 - Improve training curriculum and delivery
 - Assist Epic optimization

QUESTIONS OR COMMENTS?