

FUN WITH EPIC USABILITY

- Sean Huang, MD
- University of Illinois – Chicago
- Clinical Informatics Fellow
- 2021 Annual Physician-Computer Connection
Association of Medical Directors of Information
Systems (AMDIS), Ojai, California



UNIV OF ILLINOIS HEALTH EPIC IMPLEMENTATION

- Transitioning EMR from Cerner to Epic Systems
- “Cernover”
- Go-Live 9/12/2020
- COVID-19 pandemic
- Process led to many resistant clinicians
- Poor efficiency
- Alternate workflows
- Burnout



BURNOUT

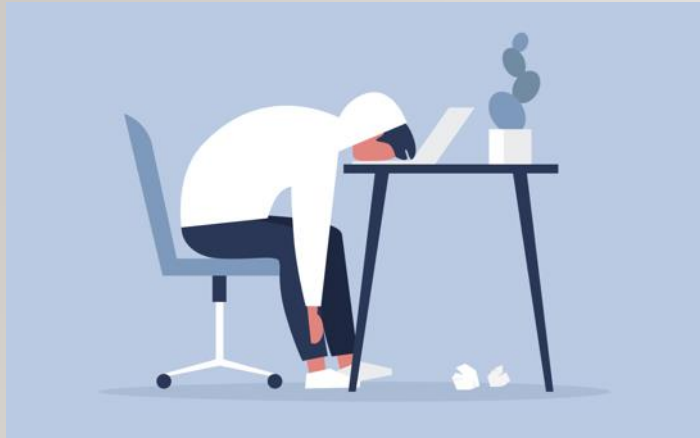
Physical signs and symptoms of burnout

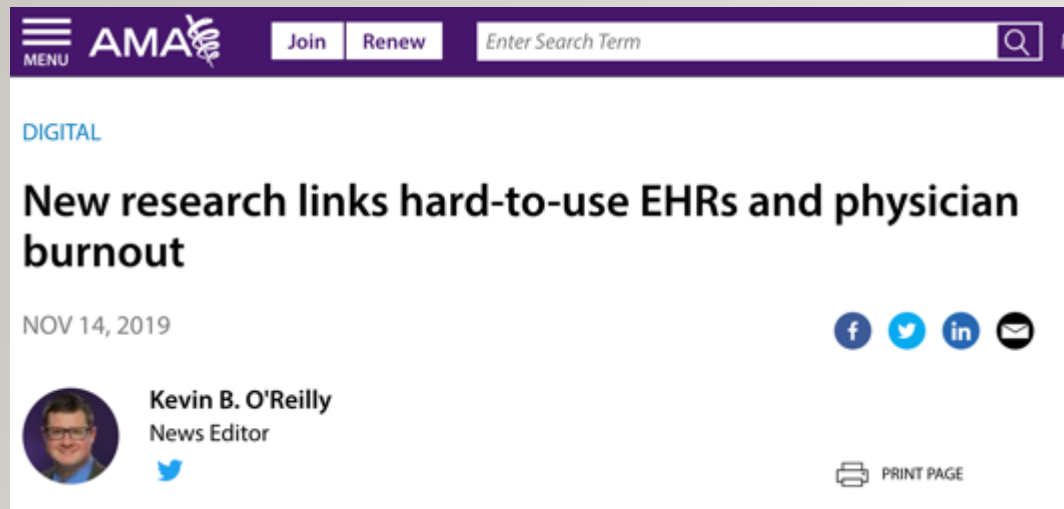
- Feeling tired and drained most of the time.
- Lowered immunity, frequent illnesses.
- Frequent headaches or muscle pain.
- Change in appetite or sleep habits.

Emotional signs and symptoms of burnout

- Sense of failure and self-doubt.
- Feeling helpless, trapped, and defeated.
- Detachment, feeling alone in the world.
- Loss of motivation.
- Increasingly cynical and negative outlook.
- Decreased satisfaction and sense of accomplishment.

BURNOUT





- The usability of current EHR systems received a grade of F by physician users
- A strong dose-response relationship between EHR usability and the odds of burnout



NEW SPECIAL ISSUE

Clinician Burnout

Start reading

MEASURING BURNOUT

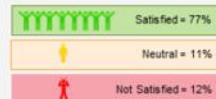


Definitions and Targets

Measure and Definition	Calculation	Success Criteria	
Joyful Workplace (Mini-Z Scores)	Sum of questions 1-10 Range = 10-50	a joyful workplace $\geq 80\%$	
Supportive work environment (Subscale 1)	Sum of questions 1-5 Range = 4-20	a highly supportive practice ≥ 16	
Work pace and no EMR stress (Subscale 2)	Sum of questions 6-10 Range = 5-25	an office with good pace and manageable EMR stress ≥ 20	

Satisfaction and Burnout

Satisfaction at 77% approaches national benchmark of 80%. (Q1)



Burnout at 53% is higher than national benchmark of 29%. (Q2)

Composite Mini-Z at 62% are below the desired target for Joyful Work Place, but close to the national benchmark of 63%.



Mini Z 2.0 Survey

1. Overall, I am satisfied with my current job:

5.Strongly agree 4.Agree 3.Neither agree/disagree 2.Disagree 1.Strongly disagree

2. Using your own definition of "burnout", please circle one of the answers below:

5. I enjoy my work. I have no symptoms of burnout.
4. I am under stress, and don't always have as much energy as I did, but I don't feel burned out.
3. I am definitely burning out and have one or more symptoms of burnout, e.g. emotional exhaustion.
2. The symptoms of burnout that I'm experiencing won't go away. I think about work frustrations a lot.
1. I feel completely burned out. I am at the point where I may need to seek help.

3. My professional values are well aligned with those of my department leaders:

5.Strongly agree 4.Agree 3.Neither agree/disagree 2.Disagree 1.Strongly disagree

4. The degree to which my care team works efficiently together is:

5 – Optimal 4 – Good 3 – Satisfactory 2 – Marginal 1– Poor

5. I feel a great deal of stress because of my job

5.Strongly disagree 4. Disagree 3.Neither agree/disagree 2.Agree 1. Agree strongly

6. The amount of time I spend on the electronic medical record (EMR) at home is:

5 – Minimal/none 4 – Modest 3 – Satisfactory 2 – Moderately high 1 – Excessive

7. Sufficiency of time for documentation is:

5 – Optimal 4 – Good 3 – Satisfactory 2 – Marginal 1– Poor

8. Which number best describes the atmosphere in your primary work area?

5. Calm 4 3.Busy, but reasonable 2 1. Hectic, chaotic

9. My control over my workload is:

5 – Optimal 4 – Good 3 – Satisfactory 2 – Marginal 1– Poor

10. The EMR adds to the frustration of my day.

5.Strongly disagree 4.Disagree 3.Neither agree/disagree 2.Agree 1.Strongly agree

Introduction to Usability

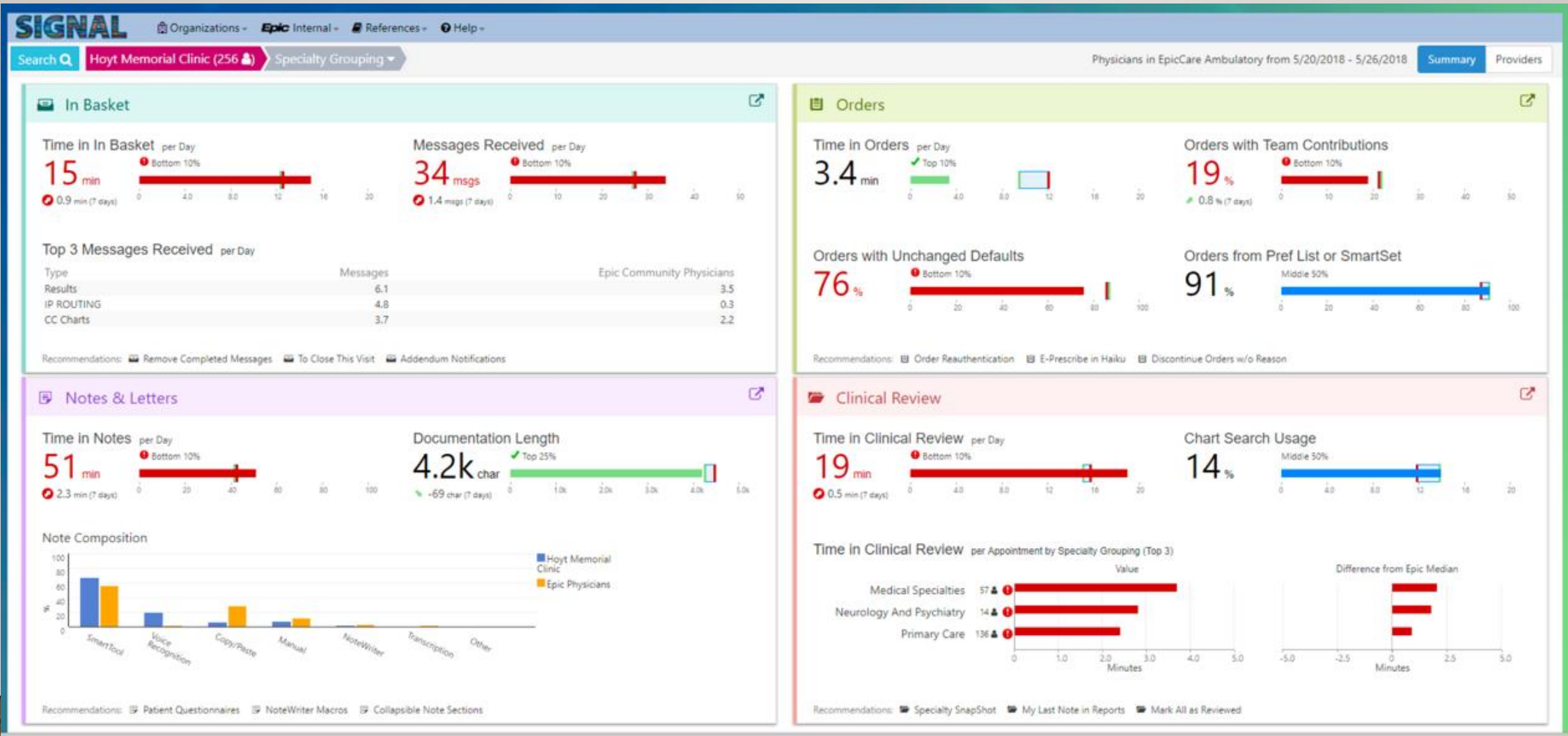
The Big Picture	1 • 3
Resources: Your Usability Toolkit	1 • 4
Defining User Experience and Usability	1 • 6
Building the User Experience	1 • 8

Conduct User Research

Introduction to User Research	2 • 3
Identify Your Users	2 • 4
Usability Project: Identify Your Users	2 • 4
Research Method: User Interviews	2 • 5
When to Conduct User Interviews	2 • 5
How to Conduct a User Interview	2 • 6
Usability Project: Plan User Interviews	2 • 6
Research Method: Observation Sessions	2 • 7
Conduct an Observation Session	2 • 7
Before the Session	2 • 7
During the Session	2 • 8
After the Session	2 • 8

IMPROVING OUTPATIENT EXPERIENCE

- Internal Medicine outpatient providers at Univ of Illinois Health
- I:I, personalized, 30 minutes, In-person or Zoom
- F/U sessions
- Surveys
- 10 minutes – Signal Data
- 20 minutes – Specific physician stressors



Compare With **Radiation Oncology - Provider Specialty (Hoyt Memorial Clinic) (8)**



Provider Type
Physician

Specialty
Radiation Oncology

Department
SJ CYBERKNIFE

Using Epic at this
Org For
4.6 years

Community ID
14010033

Overview

In Basket

Orders

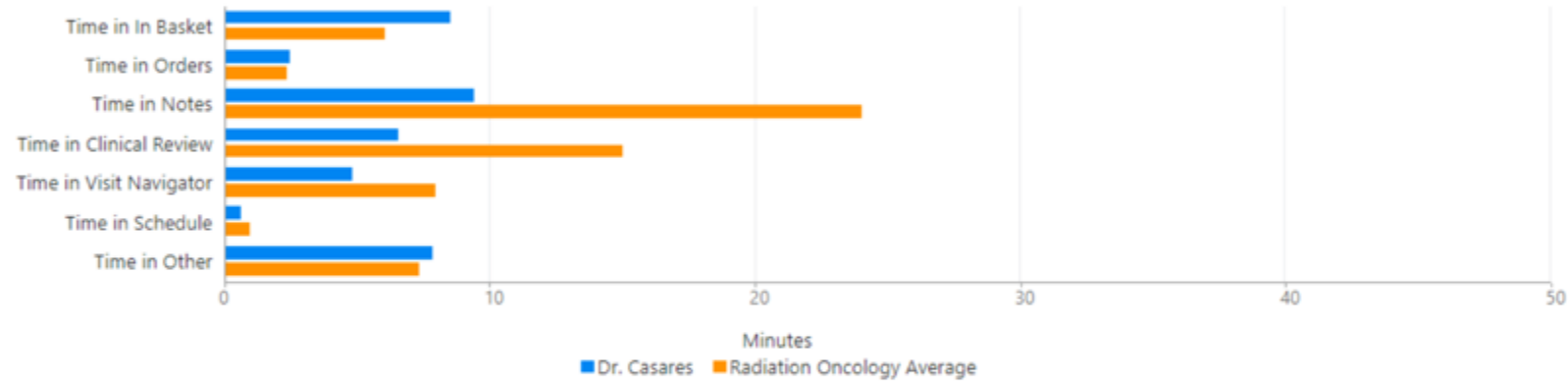
Notes & Letters

Clinical Review

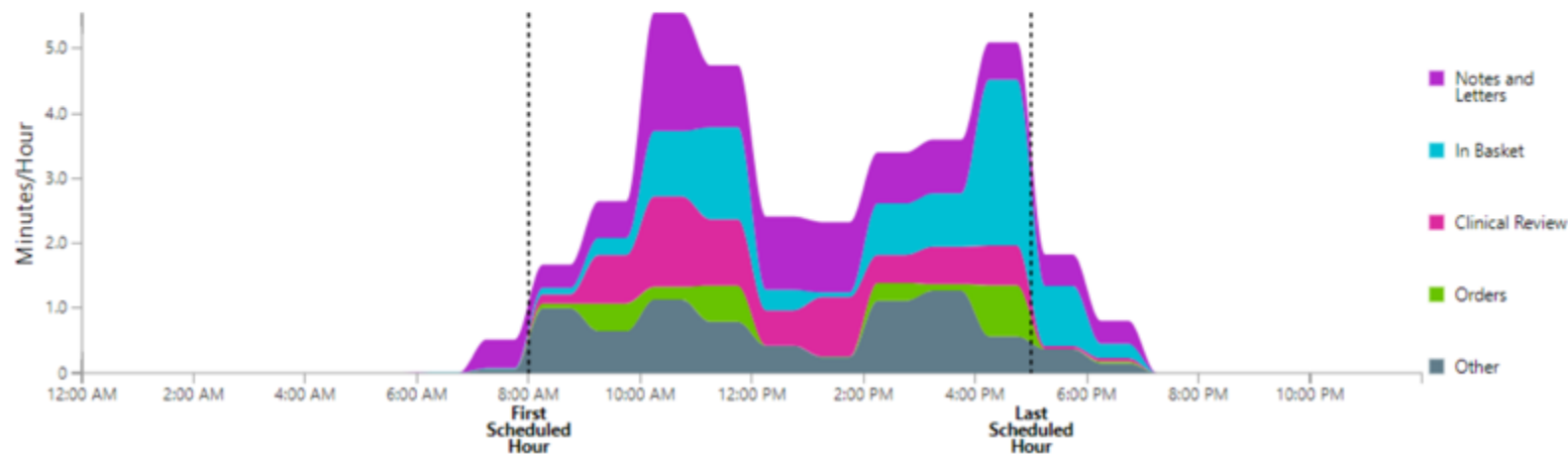
Workload

System Usage Summary [View Trend](#)

Hour of Day



Usage on Average Day



EPIC RECOMMENDATIONS

Focus on Notes

In addition to spending more time in Notes than their peers, Huang, Sean, MD's notes are also longer, which could indicate time is spent adding extra items to the note. Consider reviewing the content of a few notes with the provider and discuss items that may be omitted to improve efficiency and readability. Other tips that can improve documentation efficiency include things such as putting the note in the sidebar as well as creating and using note speed buttons.

USER RESEARCH

- Surveys



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Physician Use of Electronic Health Records: Survey Study Assessing Factors Associated With Provider Reported Satisfaction and Perceived Patient Impact

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12:29



Name (First and Last):

Current Role at UI Health:

Resident

Fellow

Attending

Years Spent in Current Role at UI Health

How many years have you used the following (include years as a student, resident, fellow, or attending):

12:29



following (include years as a student, resident, fellow, or attending):

Any electronic health record

EPIC in total

EPIC at UI Health alone

What "parts" of EPIC do you use at UI Health

Inpatient

Radiant
(Radiology)

Outpatient

Stork (Labor and
Delivery)ASAP (Emergency
Department)Kaleidoscope
(Ophthalmology)Optime/Anesthesia
(Operating Room)Beacon
(Oncology)Cupid (Cardiology
lab)

Please rate on a scale of 0-100, How does EPIC affect..

12:29



Please rate on a scale of 0-100, How does EPIC affect..

Very Negatively Very Positively
0 10 20 30 40 50 60 70 80 90 100

Your patients

You

Please rate on a scale of 0-100, Your efficiency..

Very Inefficient Very Efficient
0 10 20 30 40 50 60 70 80 90 100

Using EPIC

Using EPIC when compared to your peers in the same specialty or subspecialty

In relation to your use of EPIC, what

12:29

In relation to your use of EPIC, what are three aspects that particularly bother or frustrate you. Please list in three separate boxes

#1:

#2:

#3:

PHYSICIAN STRESSORS

- Focus here, I:I
- Finding solutions
- Understanding problems
- Entering tickets

Training



GERICLINICNEWF	New female patient Geri Clinic
GERICLINICNEWM	New male patient in Geriatrics Clinic
GERIFUFEMALE	Geriatrics clinic f/u template for female
GERIFUMALE	Geriatrics clinic f/u template for male

SUBJECTIVE

CHIEF COMPLAINT

HISTORY OF PRESENT ILLNESS

PAST MEDICAL HISTORY

@PMH@

PAST SURGICAL HISTORY

@PSH@

SOCIAL HISTORY

@SOCH@

FAMILY HISTORY

Non-contributory except for:

@FAMHXP@

PRIOR TO ADMISSION MEDICATIONS

@PTAMEDS@

ALLERGIES AND DRUG REACTIONS

@ALLERGY@

CURRENT MEDICATIONS

@MEDSCURRENT@

REVIEW OF SYSTEMS

@ROSBYAGE@

User SmartPhrase – SHATTEST [135429]

ⓘ Do not include PHI or patient-specific data in SmartPhrases.

★ B abc ↺ ? + Insert SmartText 📄 ↶ ↷ ⇅ Insert SmartList ☰

⌂ 1 2 3 4 5 6 7 8 9

I have seen and examined the patient with Dr. X on @DATECUR@. I agree with his/her above evaluation, assessment, and therapeutic management.

Sean Huang MD
Clinical Instructor - Internal Medicine/Geriatrics
Clinical Informatics Fellow

Training



Pre-Charting

Reconcile Outside Info

Allergies

Medications



Problems



Immunizations

Training



Tip Sheet




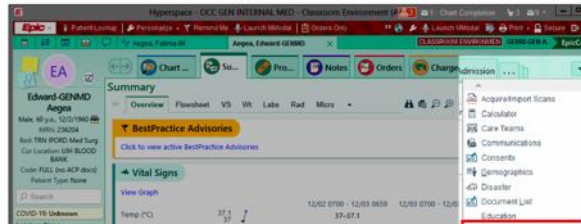
Entering Patient Provided External COVID Results in Epic

Providers can enter external COVID results into Epic when a patient presents in the hospital or clinics with documentation for a COVID test completed outside of UI Health by an IDPH approved testing site. This is completed via the Enter/Edit Results activity in Epic.

Entering COVID Results

These steps assume that the patient's chart is already open.

1. Select the **chevron** () located on the right hand side of the open patient chart.
2. A menu will display. Select **Enter/Edit Results**.



Tip Sheet



Outpatient Lab Order Add-On Tip Sheet

Add-On Blood Orders – Standard labs

If a test qualifies to be added onto another test that has been collected already it will appear in the Add-on section of the Order Composer. The Ordering Provider has the option of **"Use Existing Specimen"** (e.g. a provider has ordered a CMP and would like to add-on a Magnesium).

- Blood bank specimens cannot be added on to.
- Most specimens cannot be added on to after 8 hours.

Try It Out

1. Place the desired order.
2. If it qualifies to be added on to an existing specimen in the lab, the option will be defaulted as below.
 - a. Order the lab as **Future** status in case the lab sends for a new collection.
3. The clinic calls the lab at 312-413-1672 to verify that there is a viable specimen of sufficient quantity.

Training



In Basket

New Msg

New Patient Msg

Refresh

Edit Pools

Preferences

Search

Manage QuickActions

Attach

Out

My Messages

Tip Sheet

UI Health
IS Education

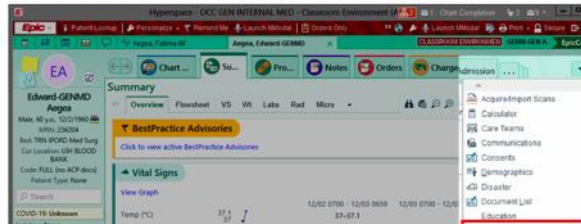
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In-Basket Folders and Actions

Type of message

Patient Calls

Telephone messages from patients (these are forwarded by nurses)

Patient Medical Advice

MyChart medical question from patient










Results

These appear after a diagnostic test which you ordered

Staff Messages

Messages sent by staff members as FYI

Training

In Basket  New Msg  New Patient Msg  Refresh  Edit Pools  Preferences  Search  Manage QuickActions |  Attach  Out

My Messages



Training



In Basket

New Msg

New Patient Msg

Refresh

Edit Pools

Preferences

Search

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My Messages

Tip Sheet

UI Health
IS Education

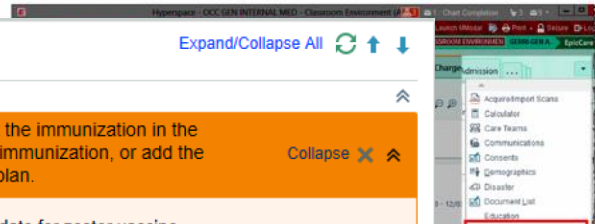
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BestPractice Advisories

High Priority (1)

Zoster vaccine due. Order the immunization, document the immunization in the Immunizations activity, give a reason for not giving the immunization, or add the exclusion modifier to permanently remove from zoster plan.

Add HM Modifier Do Not Add Not a candidate for zoster vaccine

Immunizations

Acknowledge Reason

Contraindicated Allergy Patient declines Financial limitations

Accept



Training



In Basket

New Msg

New Patient Msg

Refresh

Edit Pools

Preferences

Search

Manage QuickActions

Attach

Out

My Messages

Tip Sheet

UI Health
IS Education

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Immunizations

Acknowledge Reason

Contraindicated Allergy Patient declines Financial limitations

Accept

My Panel Metrics

Summary Level: Provider Provider: JENKINS, ELIZA

Chronic Kidney Disease

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
Blood Pressure Control	56%	57%	56%	56%	56%
Laboratory Testing	89%	91%	90%	90%	92%

Hypertension

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
BP Control	74%	72%	74%	72%	72%
Blood Pressure Measurement	92%	96%	94%	95%	96%
Monitoring of Persistent Medications	79%	79%	79%	79%	82%

Chronic Obstructive Pulmonary Disease

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
Spirometry Evaluation	80%	87%	88%	86%	88%

Obesity

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
Adult BMI Assessment	37%	61%	64%	66%	66%

Congestive Heart Failure

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
ACE Inhibitor or ARB Therapy for LVSD	95%	96%	98%	97%	99%
Beta-Blocker Therapy for LVSD	94%	91%	91%	89%	89%

Osteoporosis

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
Osteoporosis Pharmacologic Therapy	32%	30%	31%	31%	33%

Coronary Artery Disease

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
Beta-Blocker Therapy for Prior MI	80%	80%	82%	83%	81%
LDL Control	74%	74%	72%	72%	70%
LDL Testing	96%	92%	98%	99%	99%

Wellness

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
Cervical Screening	82%	84%	85%	83%	82%
Colorectal Screening	64%	66%	67%	68%	64%
Tobacco Use Screening and Cessation Intervention	70%	71%	68%	67%	70%
Breast Screening	76%	78%	77%	77%	78%
Adult Pneumonia Vaccination Status	85%	84%	83%	84%	81%
Immunizations	88%	88%	89%	90%	89%
Adolescent Immunization Status	62%	61%	60%	62%	58%

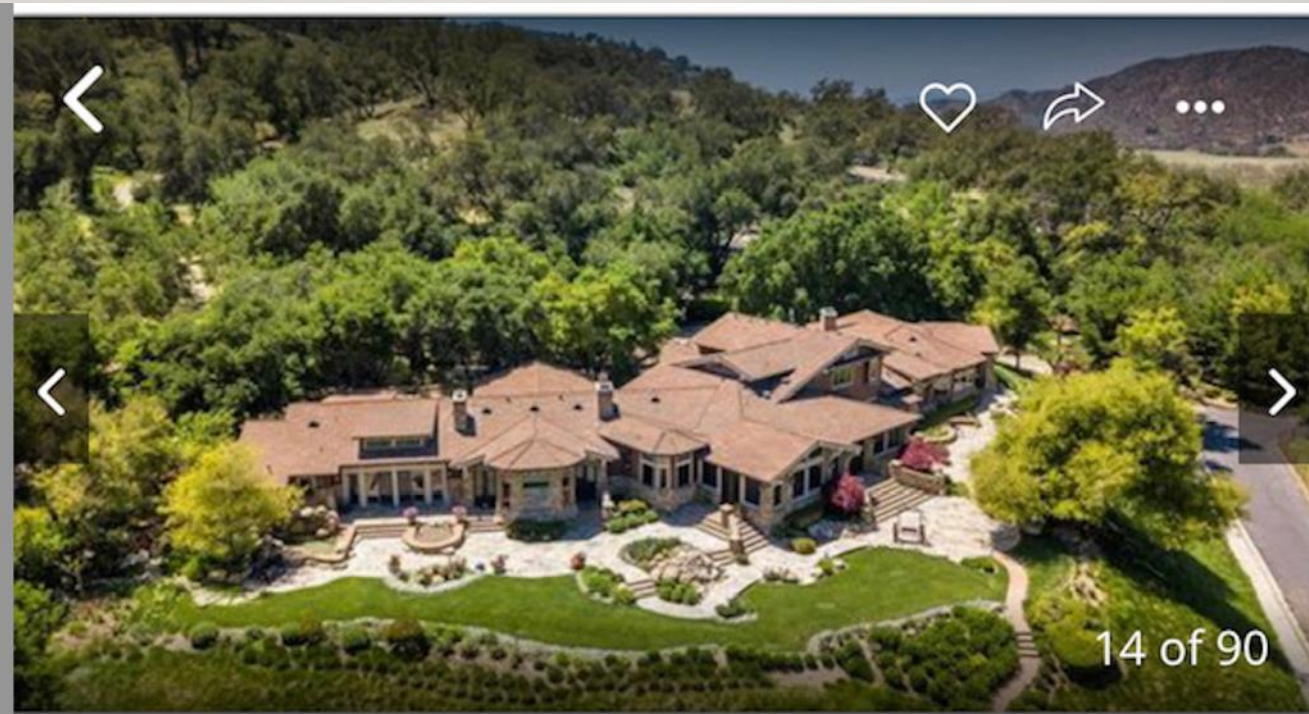
Diabetes

Eliza Jenkins, RN

	Q1 '16	Q2 '16	Q3 '16	Q4 '16	QTD
Foot Exam	76%	76%	76%	74%	74%
A1c Control	76%	74%	72%	73%	72%
Hemoglobin A1c Testing	97%	98%	99%	97%	95%
Blood Pressure Control	77%	77%	79%	78%	79%

EPIC Userweb

THANKS



14 of 90

\$100,000,000 7 bd | 12 ba | 25,661 sqft

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