Physician Burnout and EHR Transitions in the Age of COVID

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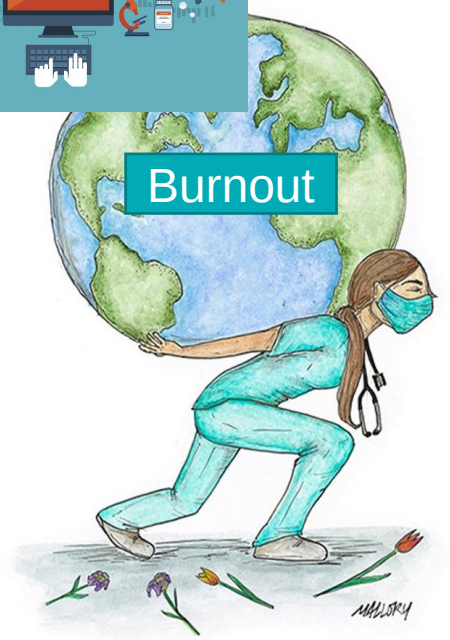
UI Health | UIC

OVERVIEW OF UI HEALTH

- 4,470 FTEs
- 720 Attending physicians
- 250 Advanced practice providers
- 800 Medical residents
- Annually:
  - >17K Discharges
  - >508K Clinic visits
  - >14K Surgeries
  - >41K ED visits
  - >1,750 Newborn deliveries

THE PERFECT STORM

EHR Change



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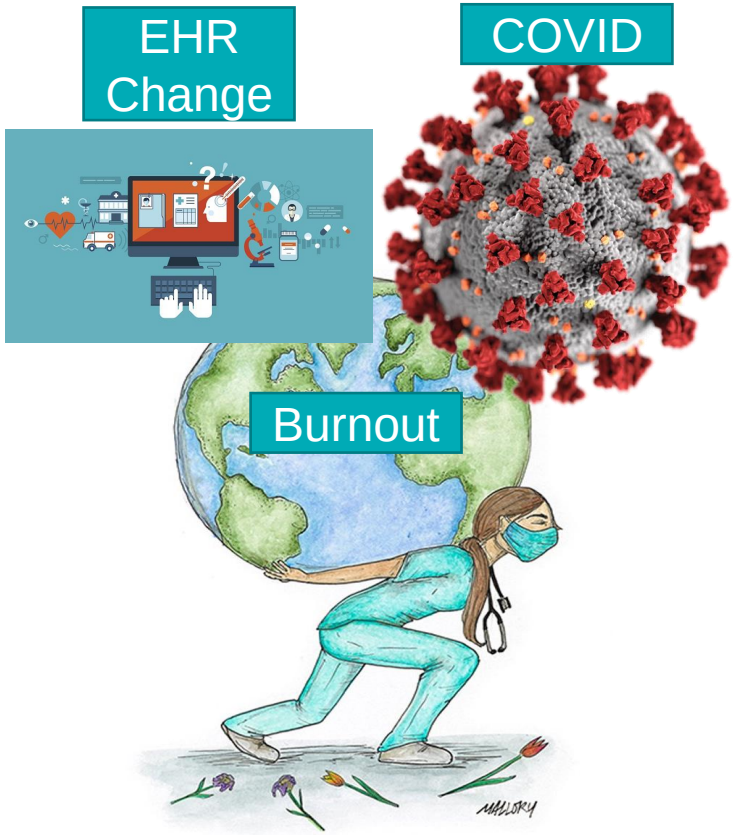

BURNOUT

PubMed Burnout Papers Over Time

Credit: Bill Galanter

1800
1600
1400
1200
1000
800
600
400
200
0

1975 1980 1985 1990 1995 2000 2005 2010 2015 2020 2025

EHR'S AND BURNOUT

- Documentation related tasks
- Lack of autonomy
- Poor design of workflows
- Inbox
- Alerts/Cognitive fatigue
- Lack of work-life balance

Muhiyaddin R, Elfadl A, Mohamed E, et al. Electronic Health Records and Physician Burnout: A Scoping Review. In: Mantas J, Hasman A, Househ MS, Gallos P, Zoulias E, Liaskos J, eds. *Studies in Health Technology and Informatics*. IOS Press; 2022. doi:10.3233/SHTI210962

Kruse CS, Mileski M, Dray G, Johnson Z, Shaw C, Shirodkar H. Physician Burnout and the Electronic Health Record Leading Up to and During the First Year of COVID-19: Systematic Review. *J Med Internet Res*. 2022;24(3):e36200. doi:10.2196/36200

SOLUTIONS

- Training
- Local Customization (templates and workflows)
- Scribes (cheating)
- Physicians practicing at the top of license (support staff)
- Reduce clicks/pop-ups
- Filter out irrelevant info
- Lessen documentation burden (sometimes not in our control)
- Throw it out (innovation)

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Nguyen OT, Jenkins NJ, Khanna N, et al. A systematic review of contributing factors of and solutions to electronic health record–related impacts on physician well-being. *Journal of the American Medical Informatics Association*. 2021;28(5):974-984. doi:10.1093/jamia/ocaa339

WHY AREN'T WE THERE YET?

- Few objective studies evaluating EHR usage and provider burnout
- Lack of standardization or quantitative measures make broad conclusions difficult
- Every EHR is a bit different, not all functionalities are equally burdensome

Yan Q, Jiang Z, Harbin Z, Tolbert PH, Davies MG. Exploring the relationship between electronic health records and provider burnout: A systematic review. *Journal of the American Medical Informatics Association*. 2021;28(5):1009-1021. doi:10.1093/jamia/ocab009

Moy AJ, Schwartz JM, Chen R, et al. Measurement of clinical documentation burden among physicians and nurses using electronic health records: a scoping review. *Journal of the American Medical Informatics Association*. 2021;28(5):998-1008. doi:10.1093/jamia/ocaa325

WHY AREN'T WE THERE YET?

- Well-being can be overshadowed by short term goals that have measurable outcomes which leadership is accountable to

THERE IS ALWAYS SOMETHING ELSE TO DO

Koon S. Physician Well-being and the Future of Health Information Technology. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*. 2021;5(4):753-761. doi:10.1016/j.mayocpiqo.2021.06.001

HERE BEGINS OUR TALE: EHR TRANSITION

3i Vision

Current State Problem

- Multiple Disparate Systems
  - Issues with Integration and Standardization
- Burning Platforms
  - **McKesson:** HealthQuest is at the end of its lifecycle with no replacement system.
  - **Cerner:** Vendor strongly recommends transitioning from HPUX to Linux in order to improve performance and implement any additional functionality / solutions.
  - **Epic:** Pending Version Upgrade

Future State Vision

- ***"One"*** Clinically Integrated System
- ***"One"*** Integrated Enterprise-wide EHR
- ***"One"*** Integrated Business and Clinical Process
- ***"One"*** Integrated Business and Clinical Workflow

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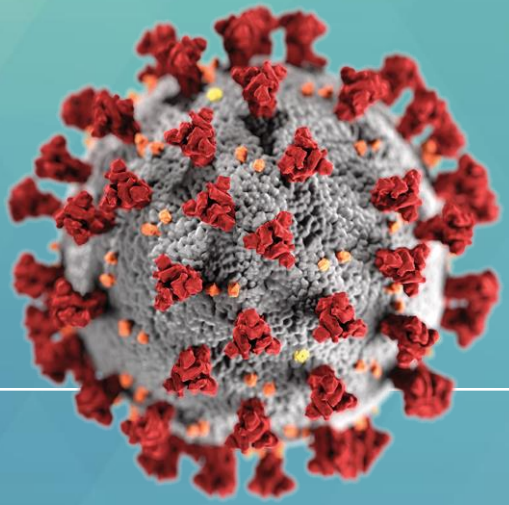
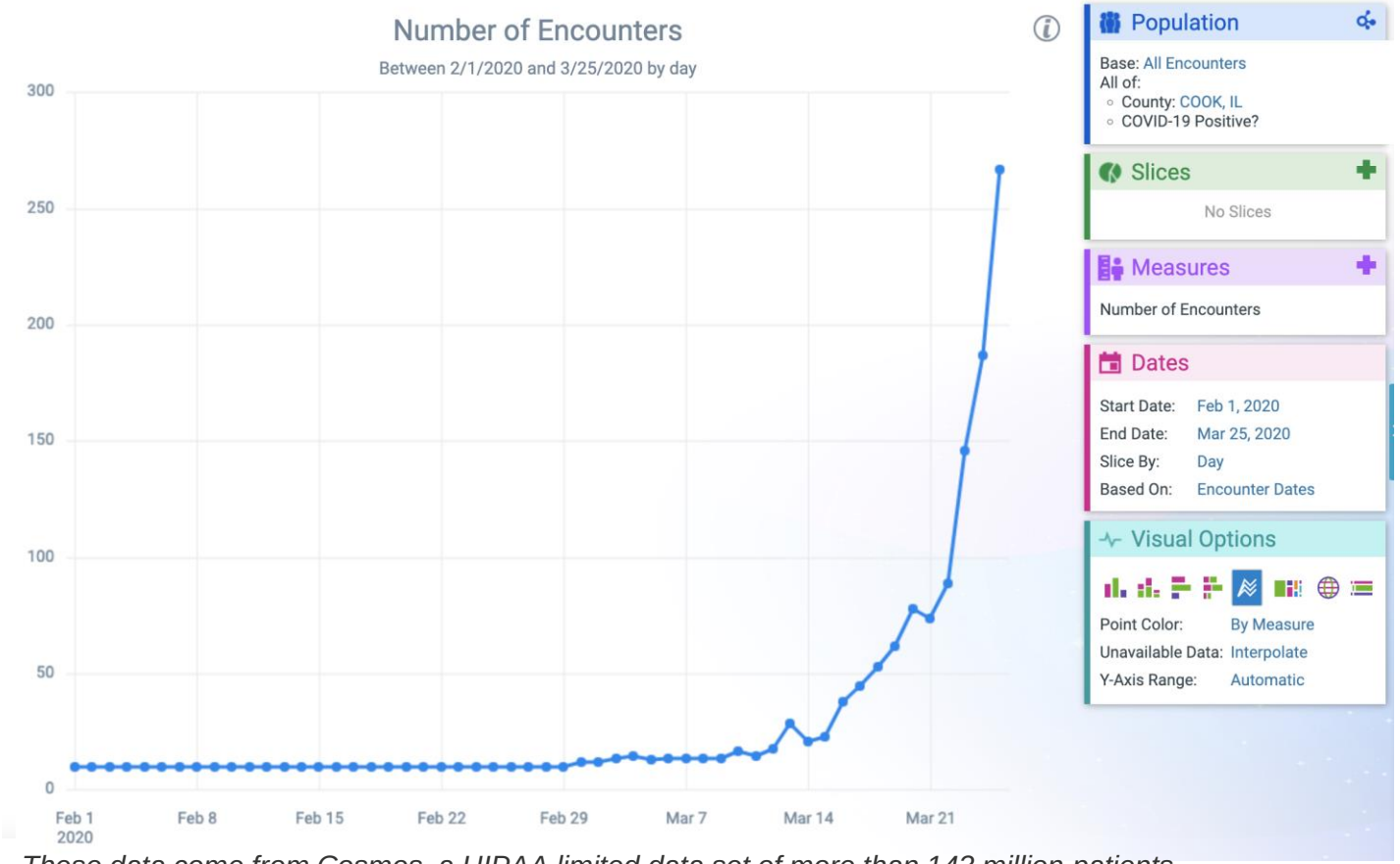
ADDED STRESSORS

- Epic On-site Visits: 75+
- Epic Workflow Walkthroughs: 100+
- Readiness Session: 350+
- CORe Meetings: 17
- Clinical Summit: 1
- High Impact Workflow Summit: 1
- Polar Vortex 2019: 1
- COVID Pandemic: 1

COVID



MAY 9TH 2020 SCHEDULED GO-LIVE



These data come from Cosmos, a HIPAA limited data set of more than 143 million patients

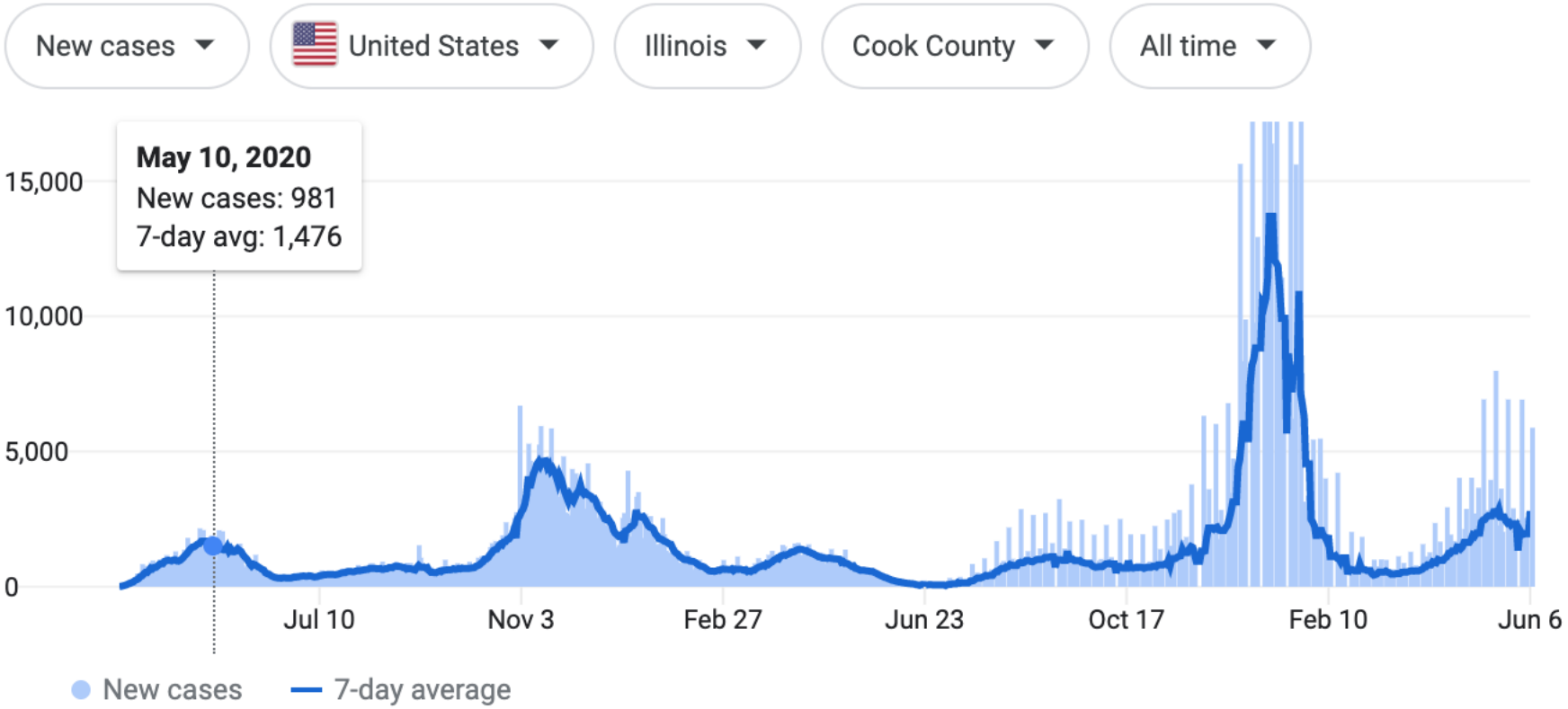
DECISIONS DECISIONS

- Legacy contracts expired June 30th (millions)
- Extending project consultant resources (millions)
- What if there is a worse surge in the fall?

- Need to set up virtual Training
- Reduced scope of in-person activities
  - Shadow charting in procedural areas
  - TDR
  - Go-live (Command Center, ATE, Superusers)
- Operational resources being pulled away

- March 25th decision to delay by 4 months

ORIGINAL GO-LIVE



NEW GO-LIVE (DELAYED BY 4 MO)

SHIFT OF FOCUS

- IS putting emergent COVID changes into legacy EHR
- While at the same time making sure we went live with all the newest COVID features in new EHR
- Added text messaging to scope
- Telemedicine
  - Inpatient
  - Outpatient

TRAINING CHANGES

	3/23	3/24	3/25	3/26	3/27
Total Classes	34	46	49	47	35
Total Registered	376	470	371	511	295
Completed	302	331			
No Shows	74	57			
In Process	n/a	82			

633 total users trained virtually

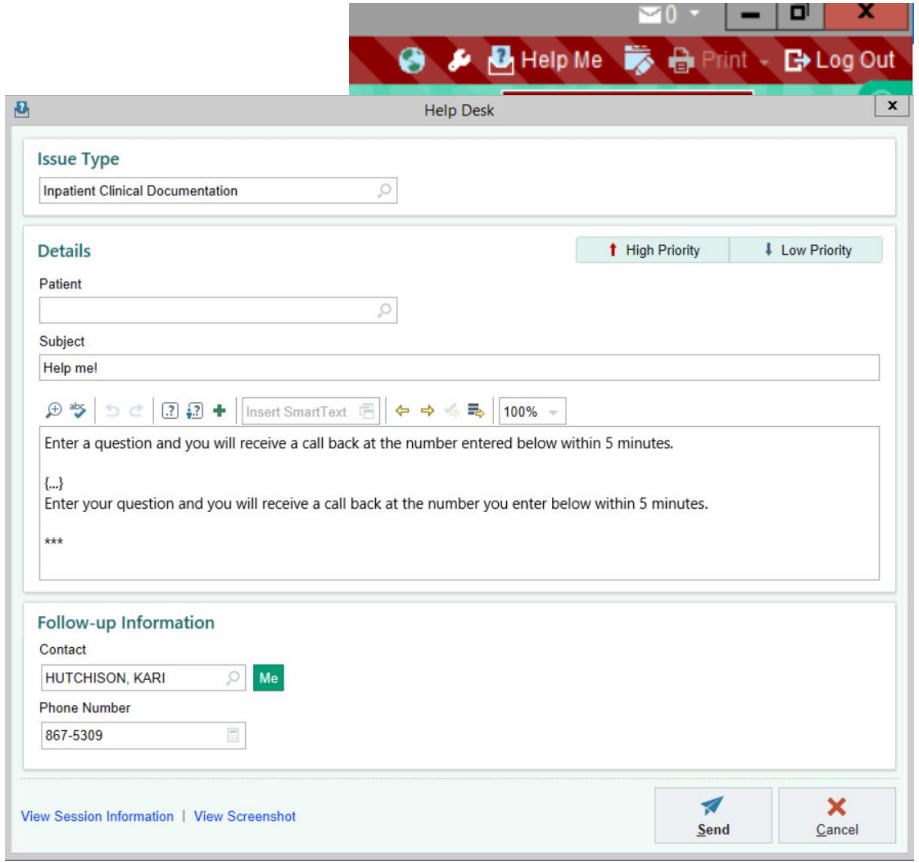
eLearning Modules 60% completed as of 3/25

OBSERVATIONS

- Operations comes first – some areas have pulled back (ED, Molecular, IC)
- Some areas adapting well (OR, Pharmacy, Providers)
- Login Labs a struggle in Virtual Classes
- STS Classes are primarily taught by our Specialty Champions
- Resource issues, specifically in Scheduling and Registration
- Communication channels

GO-LIVE SUPPORT CHANGES

- In person support scaled back
- Remote support added
- ”Help Me” button attached screenshot
- Weekly testing of Command Center staff
- Work stoppage, onboarding agency staff



CURRENT CHALLENGES

CONSTANT CRISIS

- 18 mo “sprint” of go-live prep (years of prior prep work)
- Initial COVID wave
- Telemedicine and COVID response in old system
- Go-live with new system during pandemic and work stoppage
- Telemedicine and COVID response in new system
- Mass vaccination site and pop-up vaccination sites with new system
- Automated patient communication to at risk communities for vaccination with new system
- New therapeutics
- COVID Research

WHEN DID THE SPRINT TURN INTO A MARATHON?

COMFORTABLE WITH THE SYSTEM

- Post Live Survey struggles at 1, 3 and 6 mo
  - Feeling supported in my use of the EHR
  - The training I received helps me do my job
- Continued lack of familiarity with available tools

FUTURE STEPS

SOLUTIONS

- **Training** – Targeted intervention from Signal data, Thrive
- **Local Customization** – Amb focused build effort, more to do
- **Scribes** – Active program
- **Physicians practicing at the top of license** – support staff
- **Reduce clicks/pop-ups** – Constant battle
- **Filter out irrelevant info** – Working with vendor and operations
- **Lessen documentation burden** – educate on new Amb rules
- **Throw it out** – perhaps…

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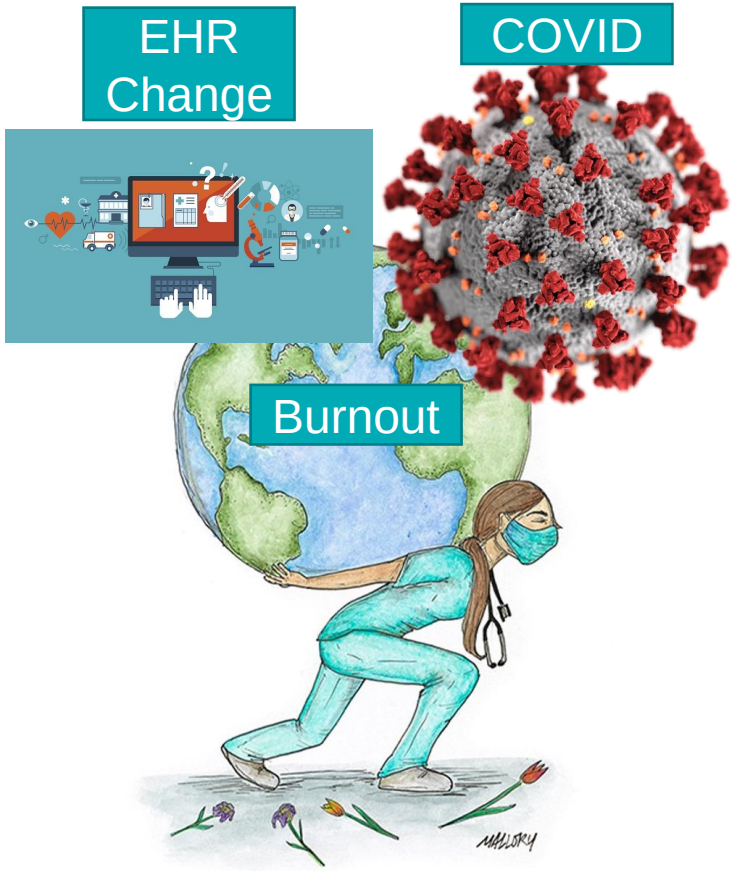
ARCH COLLABORATIVE

The Arch
Collaborative

a KLAS initiative

QUESTIONS?