

# Sprints to improve teamwork and reduce the EHR burden



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Professor, University of Colorado SOM

Blaming computer.  
Poor room setup.

Doc ain't happy,  
Ain't nobody happy.



# Efficiency of Practice

$$= \frac{\text{Value-added clinical work accomplished}}{\text{Time + Energy spent}}$$

- Impaired by Chaotic work environments
- Impaired by Excessive time pressure
- Improved by Re-engineering tools (usability of EHR)
- Improved by Clinical Workflows (staffing, reducing burden)

Here is the monthly email  
newsletter from CT Lin  
with all those EHR  
optimizations



HELP

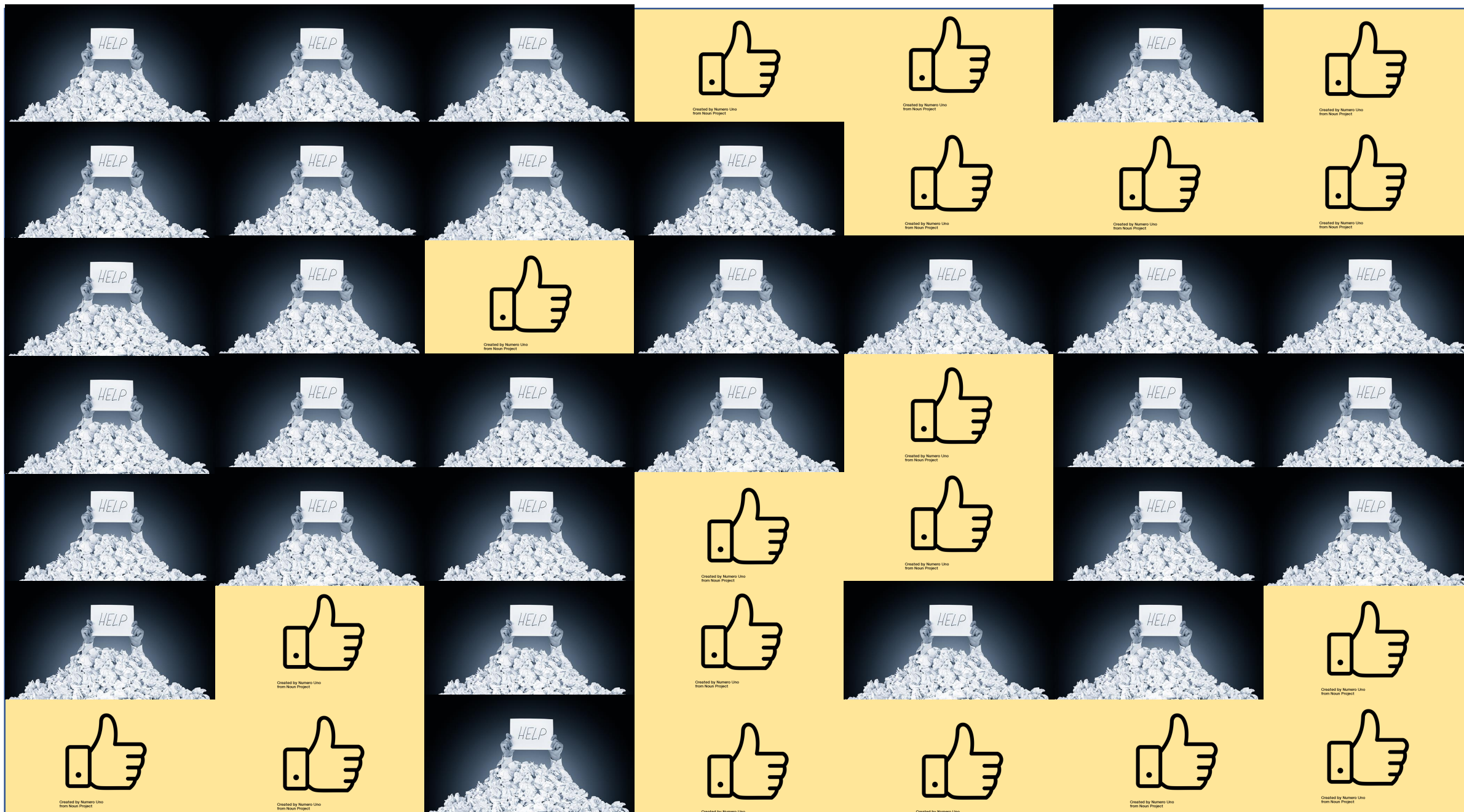




Created by Numero Uno  
from Noun Project



Created by Numero Uno  
from Noun Project





## EHR Sprint

Re-train EHR, custom tools



## Transform

Staff ratio, teamwork

# Brainstorming: what if?

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In addition to **Widely Disseminated** optimization news

*Newsletters   Tips and Tricks   Online webinars   Lunch and learns*



**Try a Deep approach:**

*Re-allocate resources  
and send in a team to  
optimize a clinic, one  
clinic at a time?*



# EHR Sprint

- A team of 11
- 2 weeks per clinic
- Observe, re-train
- New tools
- Rapid-cycle workflow improvements
- Experience in 70 clinics



*You have 2 weeks. Get in there. I don't care what you do, but make it better.*

# This is gonna be great!

--Mr. Poll Y Anna



# Why you will FAIL

- No \$\$\$\$
- Leaders not engaged
- It's not *only* the EHR





Success is due to



People

Process

Tools

# PEOPLE foster Success



## MD informaticist

- “Street cred”
- Repair relationships
- Empathy/shared goals
- Translate requests
- To model teamwork



## Project Manager

- AGILE methodology
- Scrum board
- Daily Huddles
- Email daily tips



## RN informaticist

- Observes/trains staff
- Improve teamwork
- Identifies scope and licensing issues



# Pilot test 11 people for 2 weeks



## Team Focus

- 1/3 new build
- 2/3 re-training

## Team Composition

- 1 MD Informatics lead
- 1 Project Manager
- 1 Nurse Informaticist
- 4 Trainers
- 4 EPIC analysts

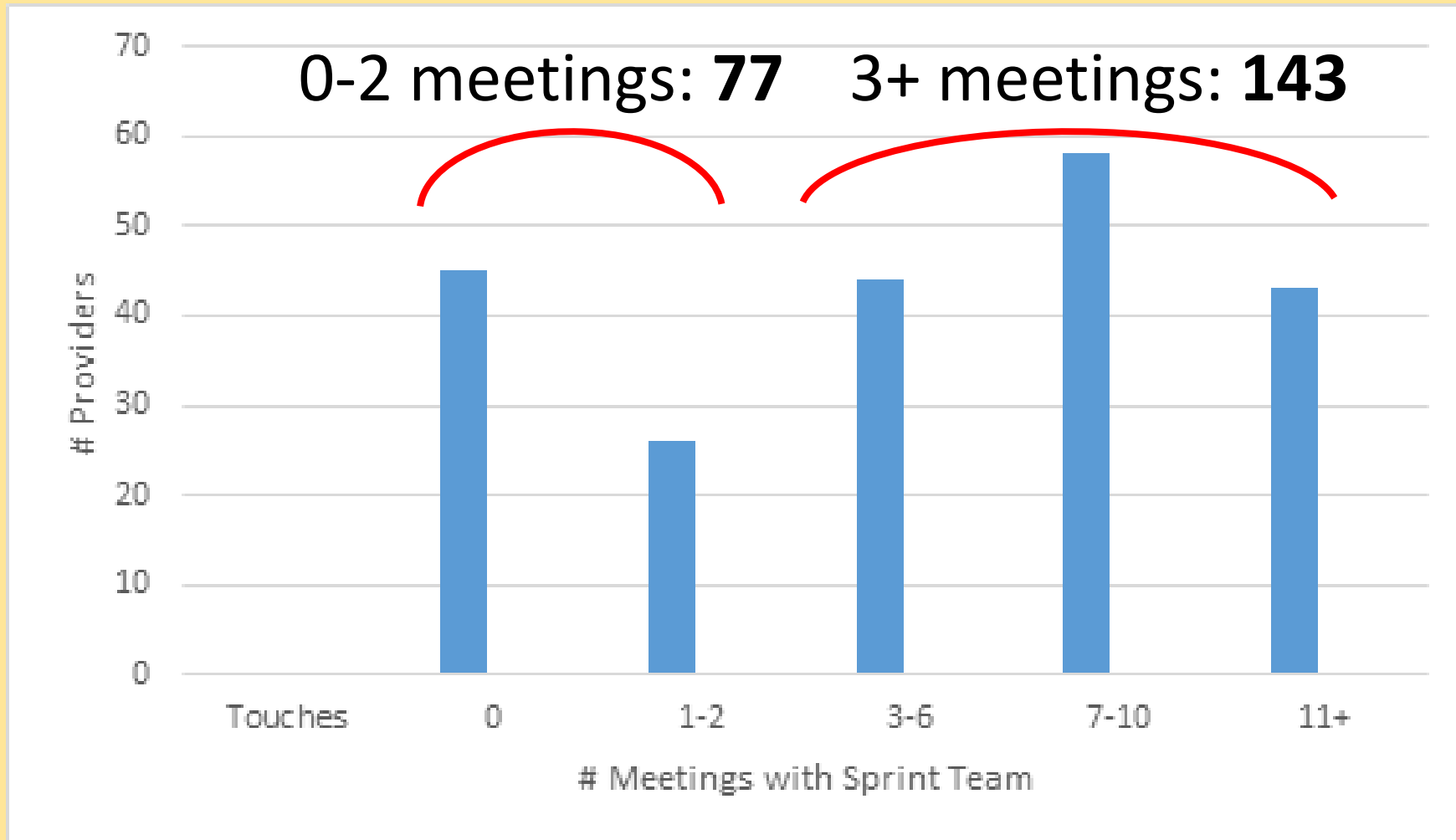


# Clinic Participation Criteria



- Strong MD director, clinic manager dyad
- 90-60-30 day pre-Sprint huddles
- 1 Physician Leader: 10-20h dedicated during Sprint
- Every MD: 3 x 1 hour 1:1 Training Sessions
- Kick Off and Wrap Up attendance (2h each)
- Dragon Training (1.5h), training optional

# Provider Engagement is a Continuum



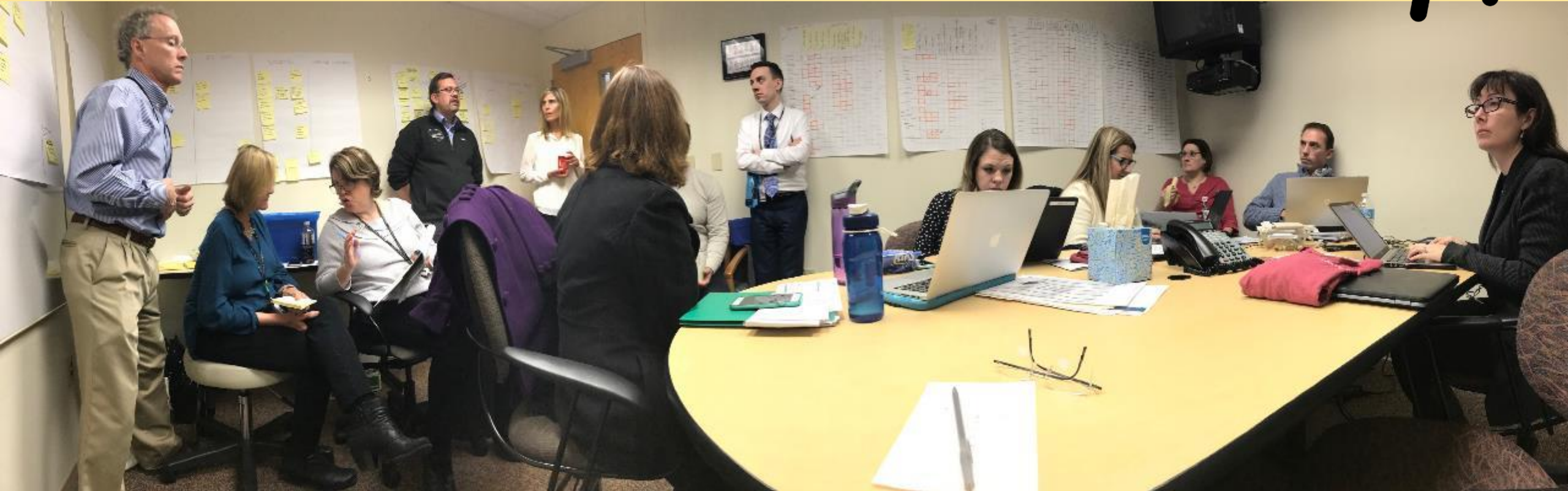
**2/3** of docs engaged

**1/3** not engaged

**10% NEVER** met with Sprint team – these MDs may need other interventions



# Sprint Teams action shot



Agile, Scrum: Daily huddles, Explicit Teamwork, Voice of customer, Rapid Cycle, Visual tracking, Tangible progress, Visceral rewards

# Process fosters success

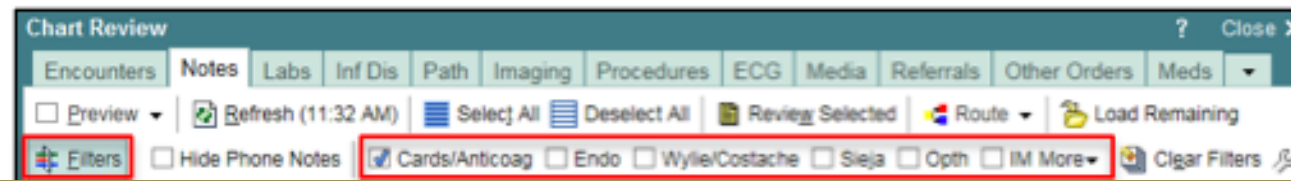


## SPRINT Daily News – Day 1

### Concept: Chart Review Efficiency

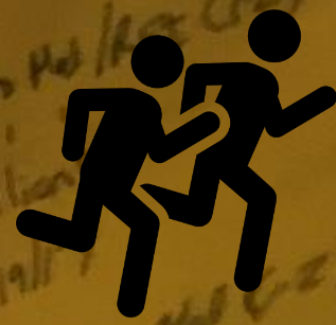
<b>*1. Chart Review Filters</b>	<b>*5. Route from Chart Review</b>
<b>2. The Encounters Tab</b>	<b>6. Use Medication Activity</b>
<b>*3. Results Review set up</b>	<b>7. Use My Sticky Note</b>
<b>4. Create a (custom/printable) Lab flowsheet</b>	<b>8. Synopsis Reports</b>

- 1. Chart Review Filters** – These personal filters allow you to quickly narrow your search to find desired information. To create filters, select a **complex** patient who sees many specialists and create filters for tests, labs, procedures or notes that you frequently reference. These can be made for all Chart Review tabs. Filters can have multiple criteria (ie. filter by Department AND by Author Type).





DONE!



CHANGE CONTROL

W/19/17  
Family History  
Add the Patient's  
History & current clinical  
info. to the summary  
& or change sheet

W/19/17 HEAT  
Early SE  
P. 558 change  
change sheet  
1/10

Robbie  
W/19/17  
Generalists (f1)  
Smartline  
Prenatal/obstetric - (contin)

Robbie  
W/19/17  
Generalists (f1)  
Smartline -  
Pregnancy Checklist to  
add to the collection  
1/10/20

Removal of Hx (G2)  
I'll have  
W/19/17  
RET / Repro Hx (G2)  
Reference table  
(Kang)

W/19/17  
Generalists (f1)  
Smartline  
- Postnatal Data

Robbie  
W/19/17  
Generalists (f1)  
Smartline -  
- Fetal height 3  
7/3  
Rob

Revised  
W/19/17  
MFM (f1)  
Smartset - MFM referral  
Smartset  
2/7  
Mugn

W/19/17  
Generalists (f1)  
Smartline -  
- Fetal height 3  
7/3  
Rob





# TOOLS foster success

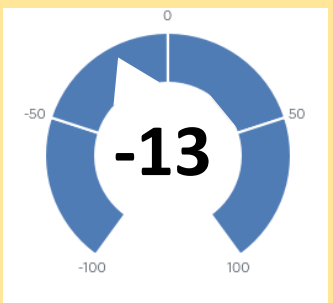


SPRINT modules helpful	Agree
1:1 Teaching	86%
Speech-recognition (Dragon)	80%
New tool Build	78%
Smartphrase creation	69%
Problem-based charting	68%
Chart Review efficiency	56%

# Success Metric: Net Promoter Score®

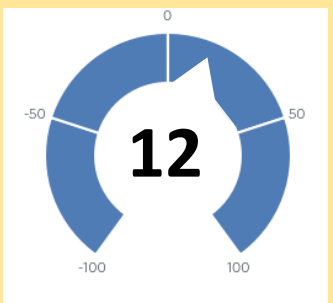
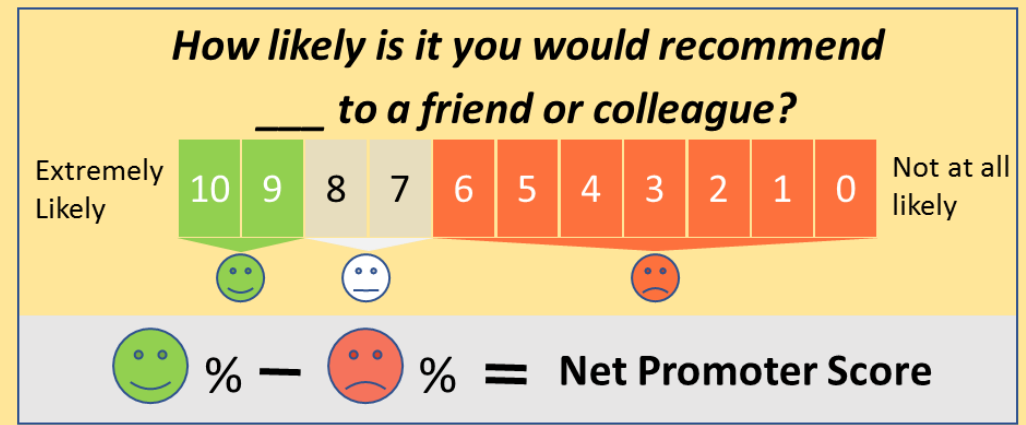
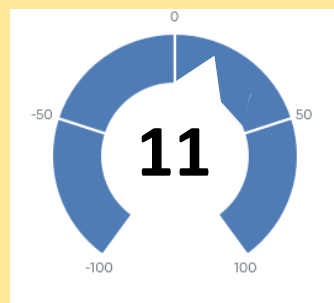


Pre-Sprint

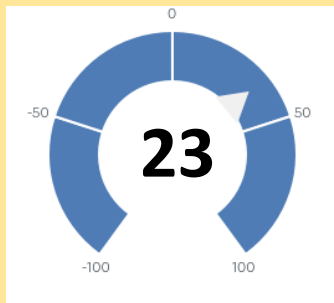


EHR rating  
Provider

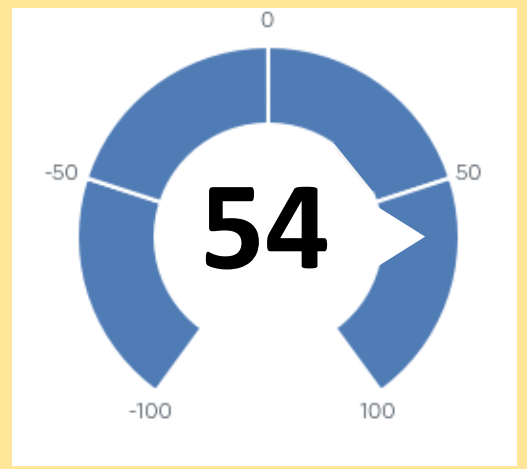
Post-Sprint



EHR rating  
Staff



NPS for  
Sprint



# Provider Burnout Decreases



“I feel burned out from my work”

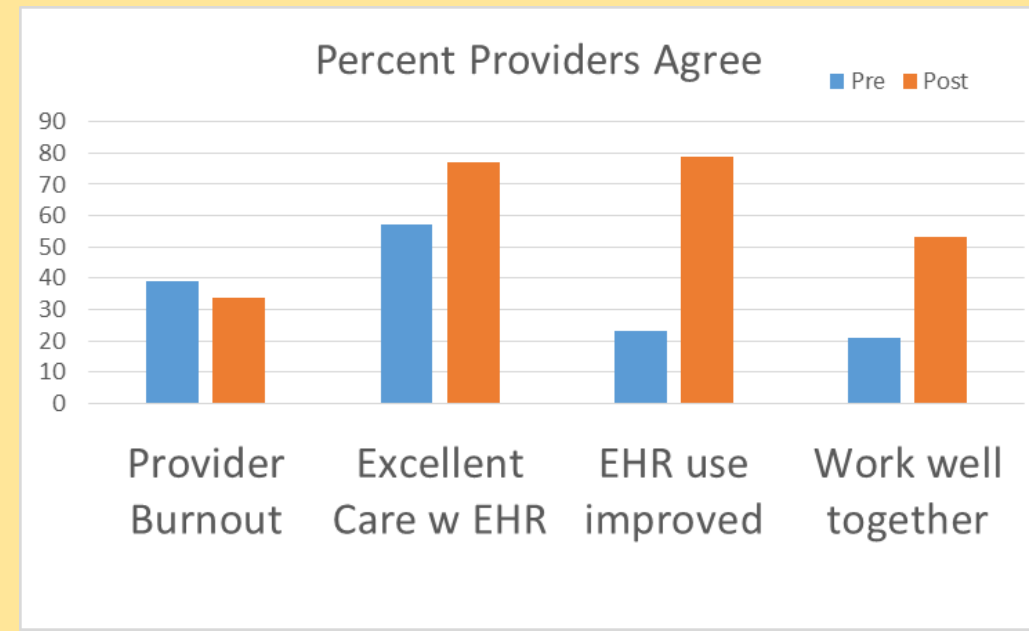
1Q: Maslach Burnout Inventory (MBI)

Once a week or more correlates with high emotional exhaustion

*West, et al. J Gen Intern Med. 2009 Dec; 24(12): 1318–1321.*

NEVER ▾	A FEW TIMES A YEAR OR LESS ▾	ONCE A MONTH OR LESS ▾	A FEW TIMES A MONTH ▾	ONCE A WEEK ▾	A FEW TIMES A WEEK ▾	EVERY DAY ▾	TOTAL ▾	WEIGHTED AVERAGE ▾
11.63% 5	25.58% 11	11.63% 5	11.63% 5	20.93% 9	11.63% 5	6.98% 3	43	3.67

	Pre-SPRINT n=107	Post-SPRINT n=97
I feel burned out from my work	39%	34%







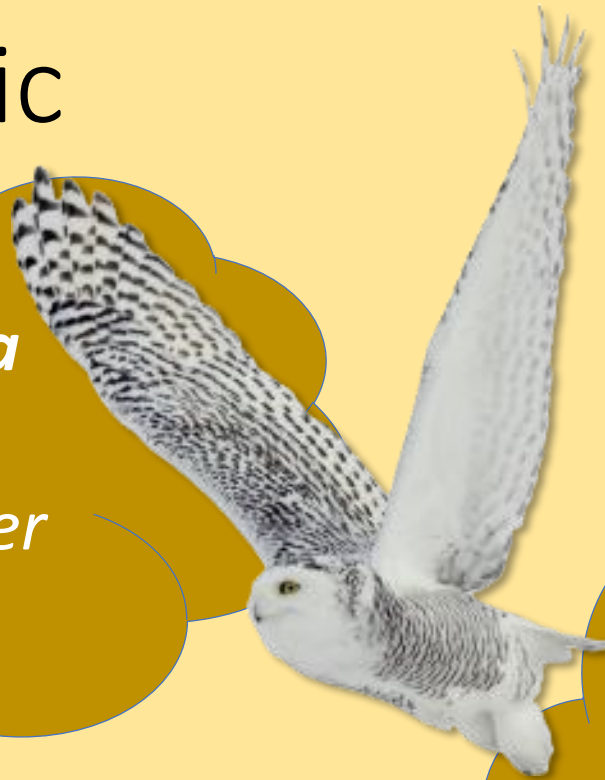




# Post-SPRINT Magic



*You have made me a better mother. I get home in time for dinner with my family*



*This is like a dream. Probably will save me 30 min a day in charting and placing orders alone*

*I'm no longer seeking early retirement to escape EMR!*



# Optimization Sprints: Improving Clinician Satisfaction and Teamwork by Rapidly Reducing Electronic Health Record Burden

Amber Sieja, MD; Katie Markley, MD; Jonathan Pell, MD; Christine Gonzalez, CSM; Brian Redig, MBA; Patrick Kneeland, MD; and Chen-Tan Lin, MD

## Abstract

**Objective:** To evaluate a novel clinic-focused Sprint process (an intensive team-based intervention) to optimize electronic health record (EHR) efficiency.

**Methods:** An 11-member team including 1 project manager, 1 physician informaticist, 1 nurse informaticist, 4 EHR analysts, and 4 trainers worked in conjunction with clinic leaders to conduct on-site EHR and workflow optimization for 2 weeks. The Sprint intervention included clinician and staff EHR training, building specialty-specific EHR tools, and redesigning teamwork. We used Agile project management principles to prioritize and track optimization requests. We surveyed clinicians about EHR burden, satisfaction with EHR, teamwork, and burnout 60 days before and 2 weeks after Sprint. We describe the curriculum, pre-Sprint planning, survey instruments, daily schedule, and strategies for clinician engagement.

**Results:** We report the results of Sprint in 6 clinics. With the use of the Net Promoter Score, clinician satisfaction with the EHR increased from  $-15$  to  $+12$  ( $-100$  [worst] to  $+100$  [best]). The Net Promoter Score for Sprint was  $+52$ . Perceptions of “We provide excellent care with the EHR,” “Our clinic’s use of the EHR has improved,” and “Time spent charting” all improved. We report clinician satisfaction with specific Sprint activities. The percentage of clinicians endorsing burnout was 39% (47/119) before and 34% (37/107) after the intervention. Response rates to the survey questions were 47% (97/205) to 61% (89/145).

**Conclusion:** The EHR optimization Sprint is highly recommended by clinicians and improves teamwork and satisfaction with the EHR. Key members of the Sprint team as well as effective local clinic leaders are crucial to success.

Google:  
“EHR Sprint Mayo”

<https://doi.org/10.1016/j.mayocp.2018.08.036>



## EHR 2.0 Optimization Sprint

Executive Summary, August 2018

### Summary

The EHR 2.0 Optimization Sprints are run by a team of analysts, trainers, and MD and RN informaticists who observe, train, fix, and create new tools to improve clinic teamwork and efficiency. In 2-week Sprint events, we aim to reduce the EHR documentation burden and improve provider & staff wellness.

### Narrative Responses:

**Physician:** *You have made me a better mother. I get home in time for dinner with my family*

**Physician:** *FYI, Dragon has changed my work world!!!! I can't believe I was not using it. My charts are closed every day now before I leave!"*

**Physician:** *Thank you so much for the Sprint training. It is making a huge difference in my charting. – Nisa Levy*

**Physician:** *I no longer seek early retirement to escape EMR!*

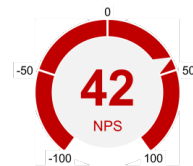
**Physician:** *I used to go in early to prep my charts. [Now] I'm able to sleep in an extra hour.*

**Manager:** *I cannot say enough good things about this pilot and how much it is needed in every single clinic ... annually!*

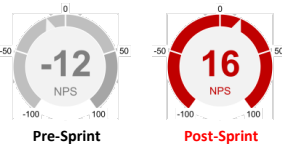
**Manager:** *Thanks for a great Sprint. This is as a catalyst to bigger things. – Jamie Bachman*

**Medical Director:** *This is the best program UHealth has ever offered to help [physicians] provide more efficient and better care. It will also improve our communications with referring physicians and prevent physician and APP burnout. --Dr. Edmundowicz*

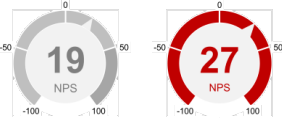
**Net Promoter Score (NPS)**  
or Likelihood to Recommend of  
**the Sprint process itself is 42**  
on a scale of -100 to 100.  
0-30 is good, 50 is excellent.



**NPS for Epic Providers**



**NPS for Epic Staff**



**Provider Burnout**  
(Mini-Z. From Jan-Jul 2018)

**Pre-Sprint**  
46%

**Post-Sprint**  
36%

### Examples of New Specialty Tools built:

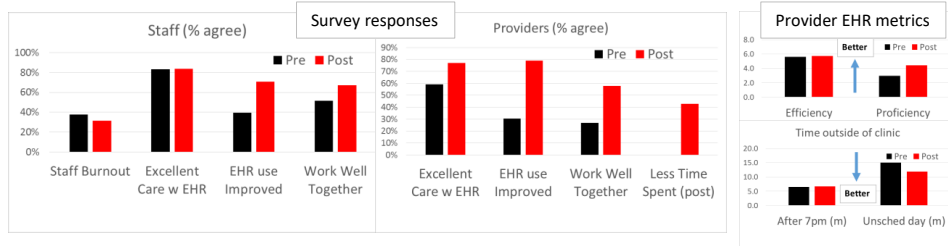
**Express Lanes** chart/order: Postop, Botox, Joint Inject, CHF

**Synopsis** compact views: Rheum, Breast, Upper GI, Trauma

**Flowsheet** tracking: Malnutrition, ILD exposure, CPAP, Afib

### Teaching: Core Competencies for MD/APP, RN, MA

Chart Review, Ordering, Inbasket, Documentation (Dragon)

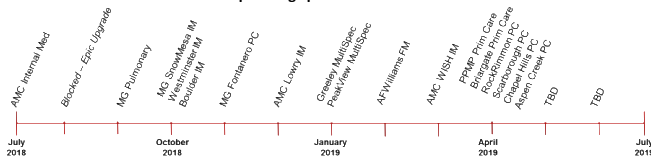


### Completed Sprints

AMC Endo	1/2016	Longmont	11/2017
PRP Neuro	2/2016	MHC Card	1/2018
AMC Neuro	2/2017	PPMP OB	2/2018
MHC Heme	5/2017	MHC MFM	2/2018
MHC Neuro	5/2017	AMC Gastro	3/2018
AMC ObGyn	6/2017	AMC Pulm	3/2018
HRM Heme	7/2017	MHC GVS	4/2018
Cheyenne	8/2017	Lone Tree	6/2018
AMC Breast	9/2017		

**TOTAL MDs: 496**

### Upcoming Sprints FY18-19



My Blog: [ctlin.blog](https://ctlin.blog)

Download this  
***Aug 2018 Executive Summary***  
Blog entry from TODAY 6/19/19

UPDATE: now over **830** clinicians,  
**hundreds** of clinic staff (MA,RN),  
over **70** clinics Sprinted





# Keep SPRINTing!

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