The Arch Collaborative

a **KLAS**® initiative
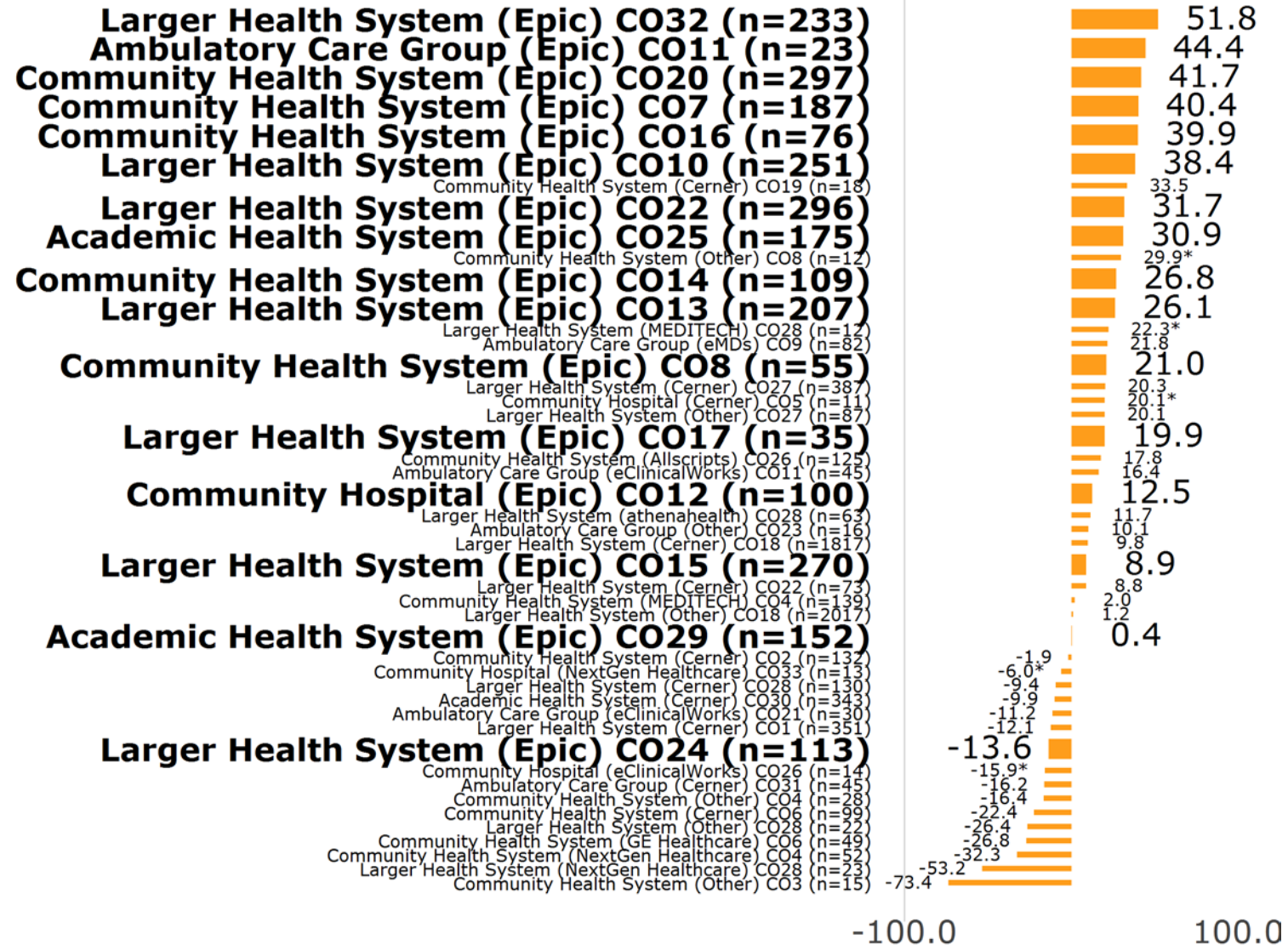
BRIDGING THE PRODUCTIVITY PARADOX IN HEALTHCARE

As the name implies, the Net Experience score is found by subtracting the percent of negative user feedback from the percent of positive user feedback. Users can report positive, negative, or indifferent feedback regarding EMR efficiency, impact on care, functionality, etc. The Net Experience score ranges from -100 (all negative feedback) to 100 (all positive feedback).

Net EMR Experience—By Organization

Larger Health System (Epic) CO32 (n=233) — 51.8
Ambulatory Care Group (Epic) CO11 (n=23) — 44.4
Community Health System (Epic) CO20 (n=297) — 41.7
Community Health System (Epic) CO7 (n=187) — 40.4
Community Health System (Epic) CO16 (n=76) — 39.9
Larger Health System (Epic) CO10 (n=251) — 38.4
Community Health System (Cerner) CO19 (n=18) — 33.5
Larger Health System (Epic) CO22 (n=296) — 31.7
Academic Health System (Epic) CO25 (n=175) — 30.9
Community Health System (Other) CO8 (n=12) — 29.9*
Community Health System (Epic) CO14 (n=109) — 26.8
Larger Health System (Epic) CO13 (n=207) — 26.1
Larger Health System (MEDITECH) CO28 (n=12) — 22.3*
Ambulatory Care Group (eMDs) CO9 (n=82) — 21.8
Community Health System (Epic) CO8 (n=55) — 21.0
Larger Health System (Cerner) CO27 (n=387) — 20.3
Community Hospital (Cerner) CO5 (n=11) — 20.1*
Larger Health System (Other) CO27 (n=87) — 20.1
Larger Health System (Epic) CO17 (n=35) — 19.9
Community Health System (Allscripts) CO26 (n=125) — 17.8
Ambulatory Care Group (eClinicalWorks) CO11 (n=45) — 16.4
Community Hospital (Epic) CO12 (n=100) — 12.5
Larger Health System (athenahealth) CO28 (n=63) — 11.7
Ambulatory Care Group (Other) CO23 (n=16) — 10.1
Larger Health System (Cerner) CO18 (n=1817) — 9.8
Larger Health System (Epic) CO15 (n=270) — 8.9
Larger Health System (Cerner) CO22 (n=73) — 8.8
Community Health System (MEDITECH) CO4 (n=139) — 2.0
Larger Health System (Other) CO18 (n=2017) — 1.2
Academic Health System (Epic) CO29 (n=152) — 0.4
Community Health System (Cerner) CO2 (n=132) — -1.9
Community Hospital (NextGen Healthcare) CO33 (n=13) — -6.0*
Larger Health System (Cerner) CO28 (n=130) — -9.4
Academic Health System (Cerner) CO30 (n=343) — -9.9
Ambulatory Care Group (eClinicalWorks) CO21 (n=30) — -11.2
Larger Health System (Cerner) CO1 (n=351) — -12.1
Larger Health System (Epic) CO24 (n=113) — -13.6
Community Hospital (eClinicalWorks) CO26 (n=14) — -15.9*
Ambulatory Care Group (Cerner) CO31 (n=45) — -16.2
Community Health System (Other) CO4 (n=28) — -16.4
Community Health System (Cerner) CO6 (n=99) — -22.4
Larger Health System (Other) CO28 (n=22) — -26.4
Community Health System (GE Healthcare) CO6 (n=49) — -26.8
Community Health System (NextGen Healthcare) CO4 (n=52) — -32.3
Larger Health System (NextGen Healthcare) CO28 (n=23) — -53.2
Community Health System (Other) CO3 (n=15) — -73.4

-100.0   100.0

Can Physicians Be Happy?

Would this do it?

Take something you care deeply about

Make it "not work right" . . .

Add a feeling of powerlessness . . .

Add a feeling of stupidity

And make it hurt people you care about

Core Beliefs of the Arch Collaborative

- Physicians are care providers and are logical, caring, and rational in their feedback. *Their feedback matters, and they can consistently be highly satisfied.*

- Healthcare is dramatically improved when caregivers are consistently grateful for their EMRs

- The EMR has huge potential to change the world

- Industry EMR success will likely require industry culture change

- There are no "bad guys" making EMR problems

- We have a huge opportunity to learn from variation
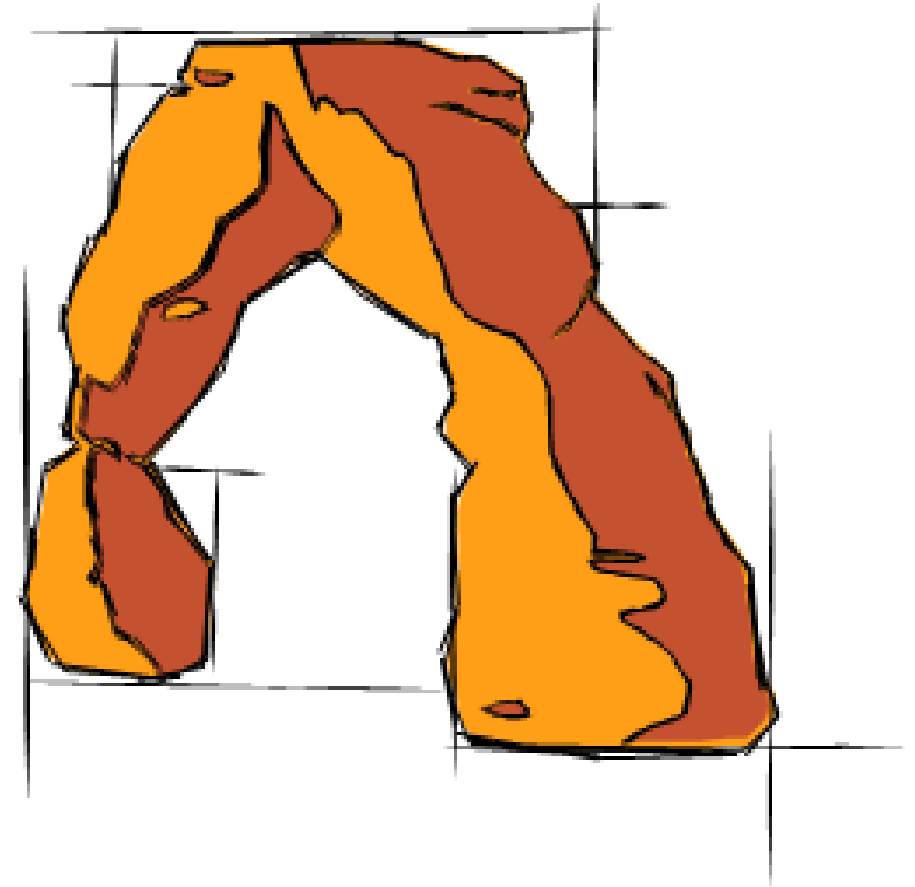
Japan, Deming, and Reducing Variation

W. Edwards Deming
1900–1993

"We have learned to live in a world of mistakes and defective products as if they were necessary to life. It is time to adopt a new philosophy in America."

Measure, Focus, Test Solutions

Keeping Score

True or False: We are successful when clinicians uniformly report that the EMR helps them deliver great care and be highly efficient.

We All Have to Work Together
Pointing Fingers Does Not Help

EMR
Improvement Collaborative
Initiative

Excellent EMR Experience
Driving Quality Care

EMR Vendors

A well-designed, consistent, stable, and usable EMR solution with strong clinical training

Clinician End Users

Commitment to training, personalization to meet needs, and solution-oriented communication

Organizational Leadership/IT

Executive leadership provides support for the adoption and extension of EMR functions

The Keys to Helping Clinicians

- **The Keys to Clinician Success:** The Collaborative is still learning, but we are confident that consistent end-user delight is possible when:
  - **Make it work right:** The EMR is tailored to the specific needs of specific users
    - Epic's physician builder program clearly drives significant benefits and sees dramatic underinvestment from Epic customers
    - EMR personalizations appear to have a significant, dramatic, causal impact on EMR satisfaction
  - **Help users feel empowered:** Organizational governance is working and not bureaucratic.
    - Successful organizations have staffed their governance groups and are hungry for user feedback
    - Physicians are allowed to actually build
  - **Help doctors feel smart:** Users feel confident and trained
    - 65% of users report no ongoing training, and a huge variance exists in how much organizations are staffing and supporting ongoing training
    - Stagnancy is a huge enemy to EMR success. The likelihood of users reporting that they are experts is not going up over time. EMR satisfaction levels out over time.
  - **Help doctors be super doctors:** Users can get to needed data quickly
    - Organizations typically spend over 90% of their training time on helping organizations get data *into* the EMR
    - Providers report that the combination of bloated notes, weak personalization, and weak search tools make finding the right information difficult and frustrating at times

Making the EMR Work for All Sizes

Allowing for Different Body Types

Do We Treat EMRs Like This?

KLAS Finding:
The #1 challenge with EMRs is the lack of personalization in training and functionality to meet user needs.
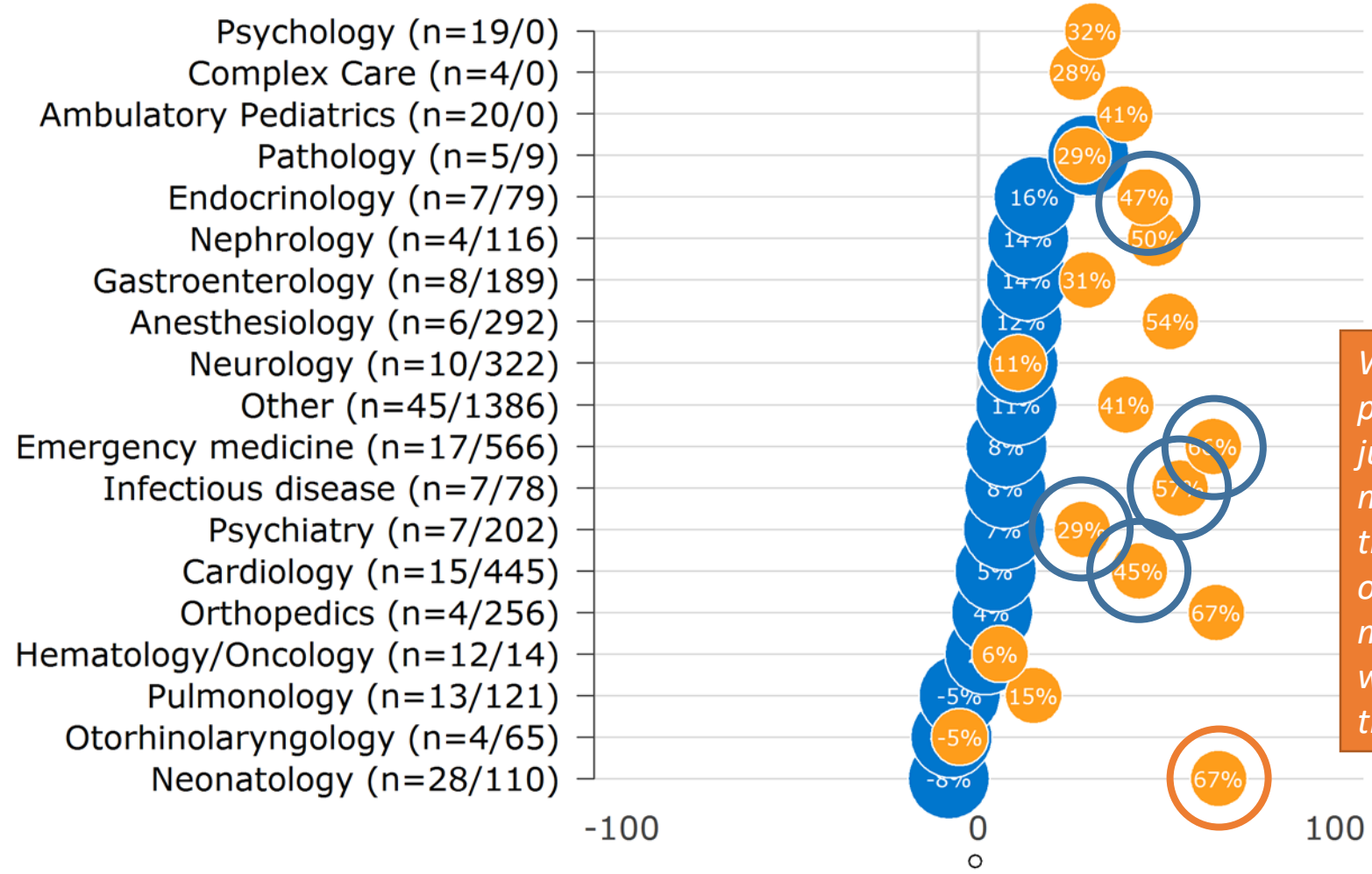
I Need Help in *My* Specialty!

- *We need more prompt documentation of routine screening test results in the **newborn checklist.*** [Pediatrician]

- *EMR is not well designed for **specialty care such as dermatology**. [Dermatologist]*

- *When a vaccine is given at [our health system], **the list of immunizations should automatically update.** It does not. . . . Also, you need to allow us to reconcile always (not just sometimes). Patient instructions and when to follow up get lost in the AVS because there is so much there. . . The system is not designed for specialties.* [Endocrinologist]

- *I work as a radiologist and my default workspace is Radiant. Radiologists (wisely!) chose to be PACS driven in their workflow. **It would be helpful to learn how to easily change my "view" to a medical record view**. It would be very nice to be able to easily see how people experience radiology orders etc.. I am not aware of a way to do this.* [Radiologist]

I Need Help in *My* Specialty!

- *Shorter templates.* **Include hip exam in the first year of life** *on all physical visits.* [Pediatrician]

- ***For pediatric medications, calculations should only be to the tenths place on mL dosing.*** *With the new changes, sometimes there will be up to 5 numerals after the decimal point that often confuse parents so I end up having to free text the medication dosing. This happens most often on Tylenol and Motrin prescriptions, which I do a lot of because Medicaid will cover these OTC medications.* [Pediatrician]

- *I work in Palliative Medicine. Some patients have* **old Advanced directives** *- Health Care Power of attorney from before 2010. They are not on EMR and it would be nice if they did get uploaded.* [Palliative Care Physician]

Benchmarked Net EMR Experience—By Specialty

Legend:
- Community Health System (Epic) CO20 (orange)
- Collaborative Average (blue)

Psychology (n=19/0): 32%
Complex Care (n=4/0): 28%
Ambulatory Pediatrics (n=20/0): 41%
Pathology (n=5/9): 29%
Endocrinology (n=7/79): 16%, 47%
Nephrology (n=4/116): 14%, 50%
Gastroenterology (n=8/189): 14%, 31%
Anesthesiology (n=6/292): 12%, 54%
Neurology (n=10/322): 11%
Other (n=45/1386): 11%, 41%
Emergency medicine (n=17/566): 8%, 6%
Infectious disease (n=7/78): 8%, 57%
Psychiatry (n=7/202): 7%, 29%
Cardiology (n=15/445): 5%, 45%
Orthopedics (n=4/256): 4%, 67%
Hematology/Oncology (n=12/14): 6%
Pulmonology (n=13/121): -5%, 15%
Otorhinolaryngology (n=4/65): -5%
Neonatology (n=28/110): -8%, 67%

X-axis: -100, 0, 100

Callout: *While not a certified physician builder, we just had a neonatologist retire that worked a lot with our Informaticists to make that environment work really well for them.*

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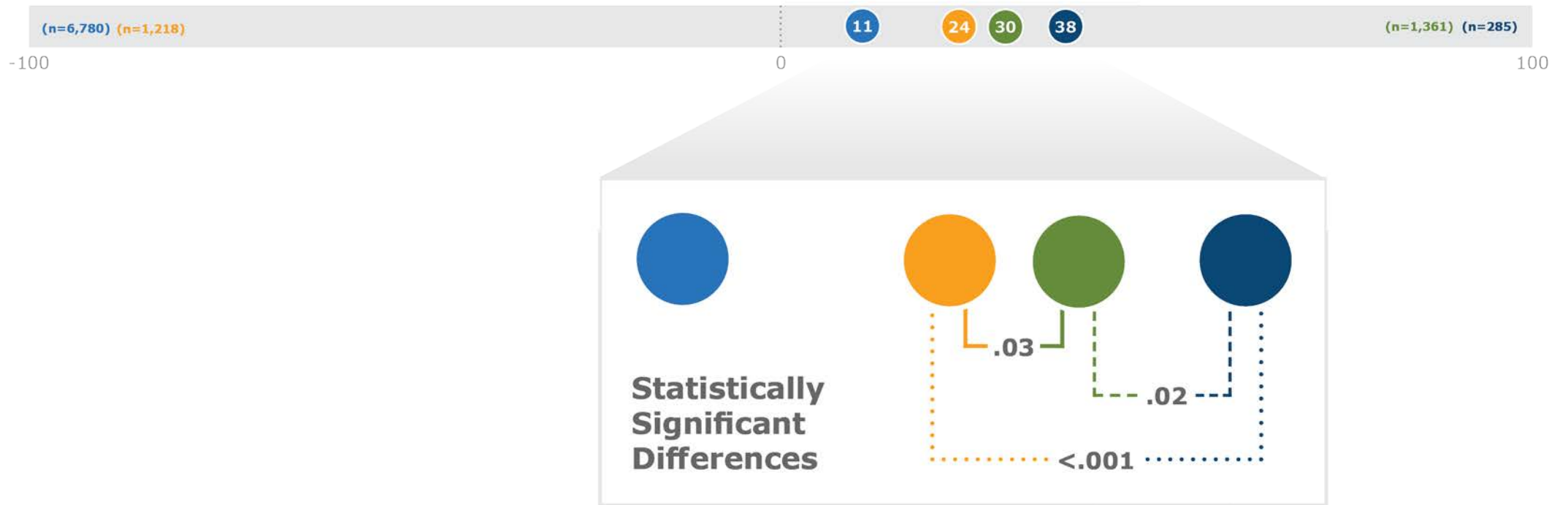
The Power of EMR Personalizations

What Drives Satisfaction Differences?

Variable	Weighted Average Impact on Predicted Net Experience	Variable P-Value
Personalization Level	18.5	<.001
Respondent Specialty	12.0	<.001
Clinical Background (Physician/Nurse)	11.3	<.001
Average Working Hours	9.3	0.04
Inpatient Efficiency	5.9	<.001
Documentation Method	5.7	0.06
Ambulatory Efficiency	5.1	0.003
Yearly Follow-Up Training	4.2	0.01

$$r^2 = .245$$

Level of EMR Personalization
Physicians only (n=4646)

Legend:
- High Personalization
- Moderate Personalization
- Low Personalization
- Very Low/No Personalization

eMDs
Greenway
eClinicalWorks
Epic — 311 | 410 | 585 | 439
Allscripts
Cerner
athenahealth
Other
GE Healthcare
NextGen Healthcare
MEDITECH

0% — 100%

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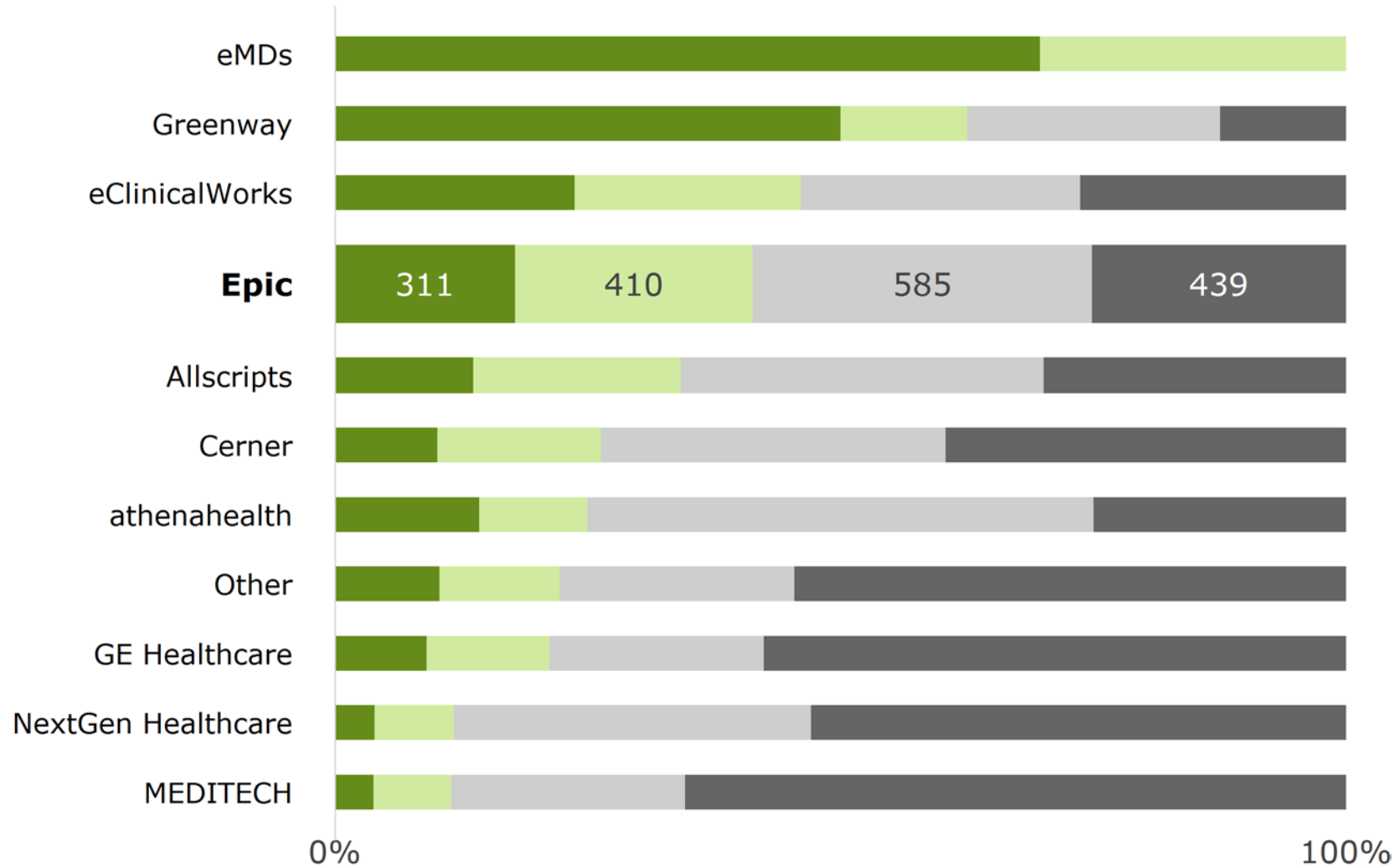
EMR Personalization Comparison
Percent of respondents reporting some effort in personalization

- Epic
- Other Collaborative Members
- Collaborative Average

Templates

Order Lists

Order Sets

Filters

Macros

Speed Buttons/Shortcuts

Layouts

Report Views

Sort Orders

0%   100%

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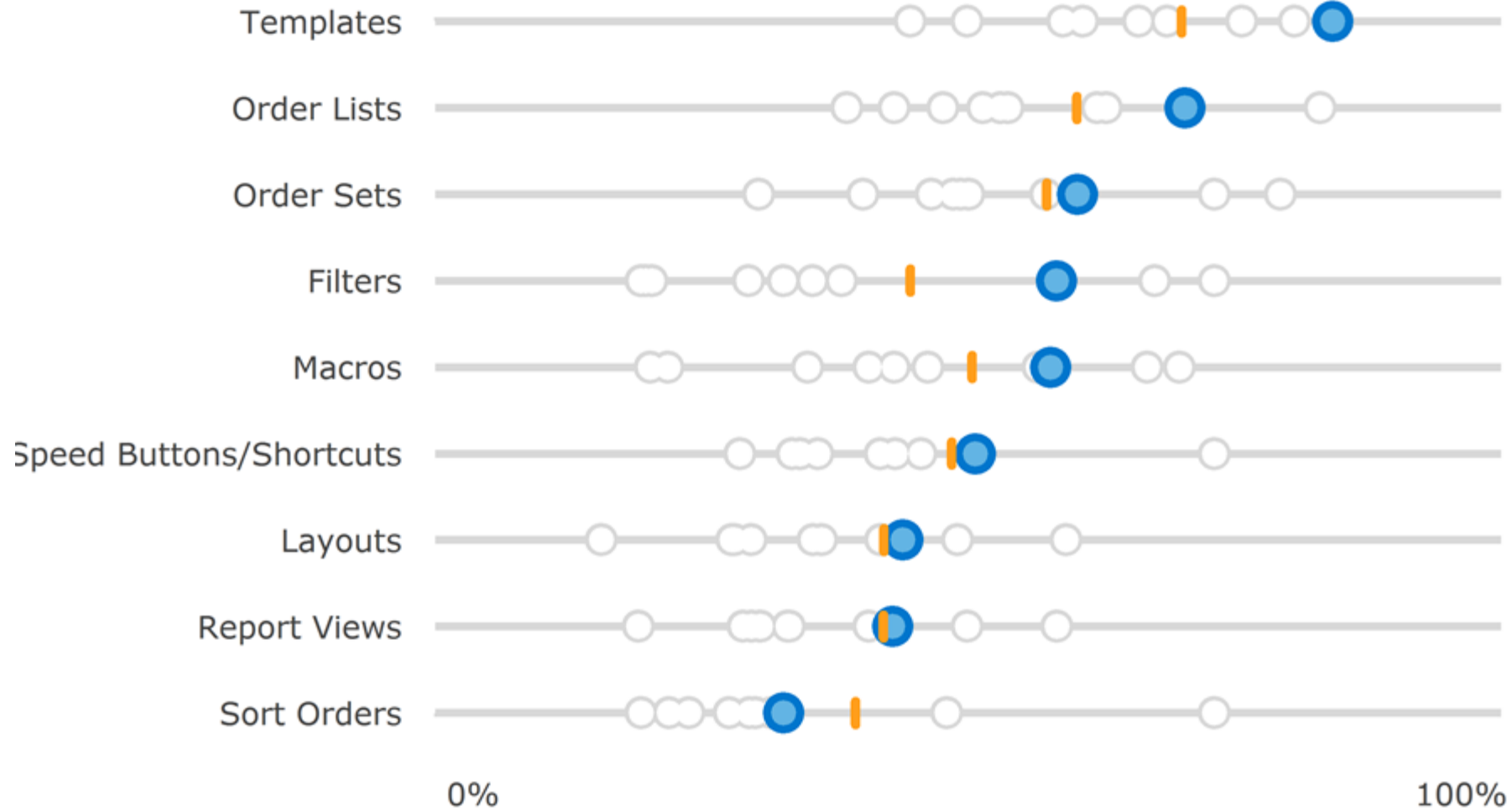
EMR Governance

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Is This Working?

We have a group of operational review boards. There are bout 30-35 of them. . . . These groups are the ones where the ideas come and they decide if it is a good idea. It gets entered into the idea cube. If it is okay, it gets bumped up to a different level, gets assigned and completed.

We wish we had more extensive physician input. We have some very functionality operational group and some that are not nearly as functional.

Things are getting better. People are realizing that if they come to a meeting and speak their mind and something gets done, that is helpful.

CMIO

NES <20

The Link Between Burnout and EMR?

With only two organizations reporting on this question, it appears the link between burnout and EMR is not as linear as possibly expected.

Legend:
- Very Satisfied
- Satisfied
- Dissatisfied
- Very Dissatisfied

Do you agree with the following statement: I find great fulfillment in work as a care provider?

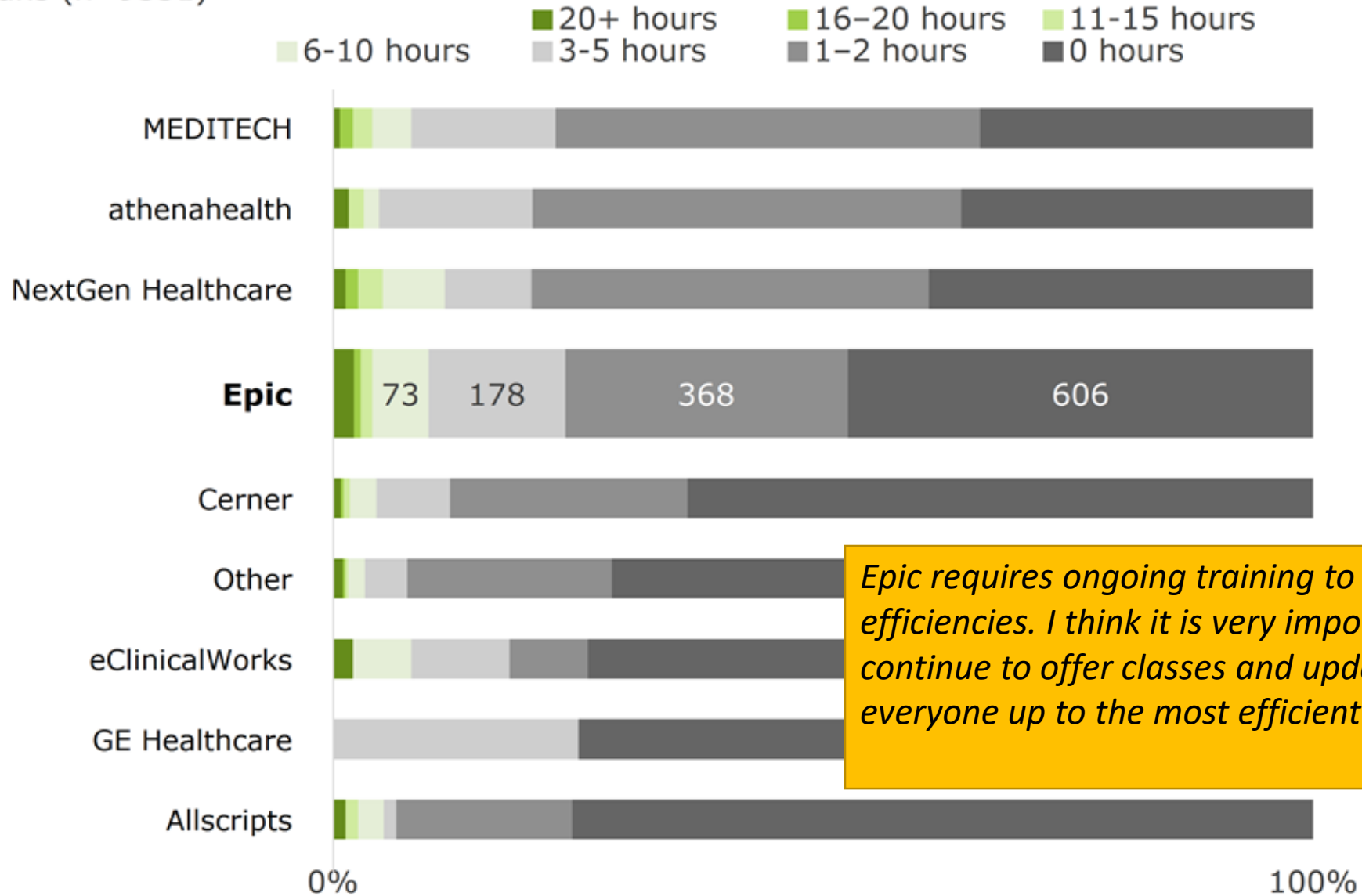|	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
Strongly agree (n=209)	26%	44%	23%	7%
Agree (n=202)	20%	45%	29%	6%
Indifferent (n=30)	7%	30%	47%	17%
Disagree (n=13)	8%	38%	38%	15%
Strongly disagree (n=25)	20%	48%	20%	12%
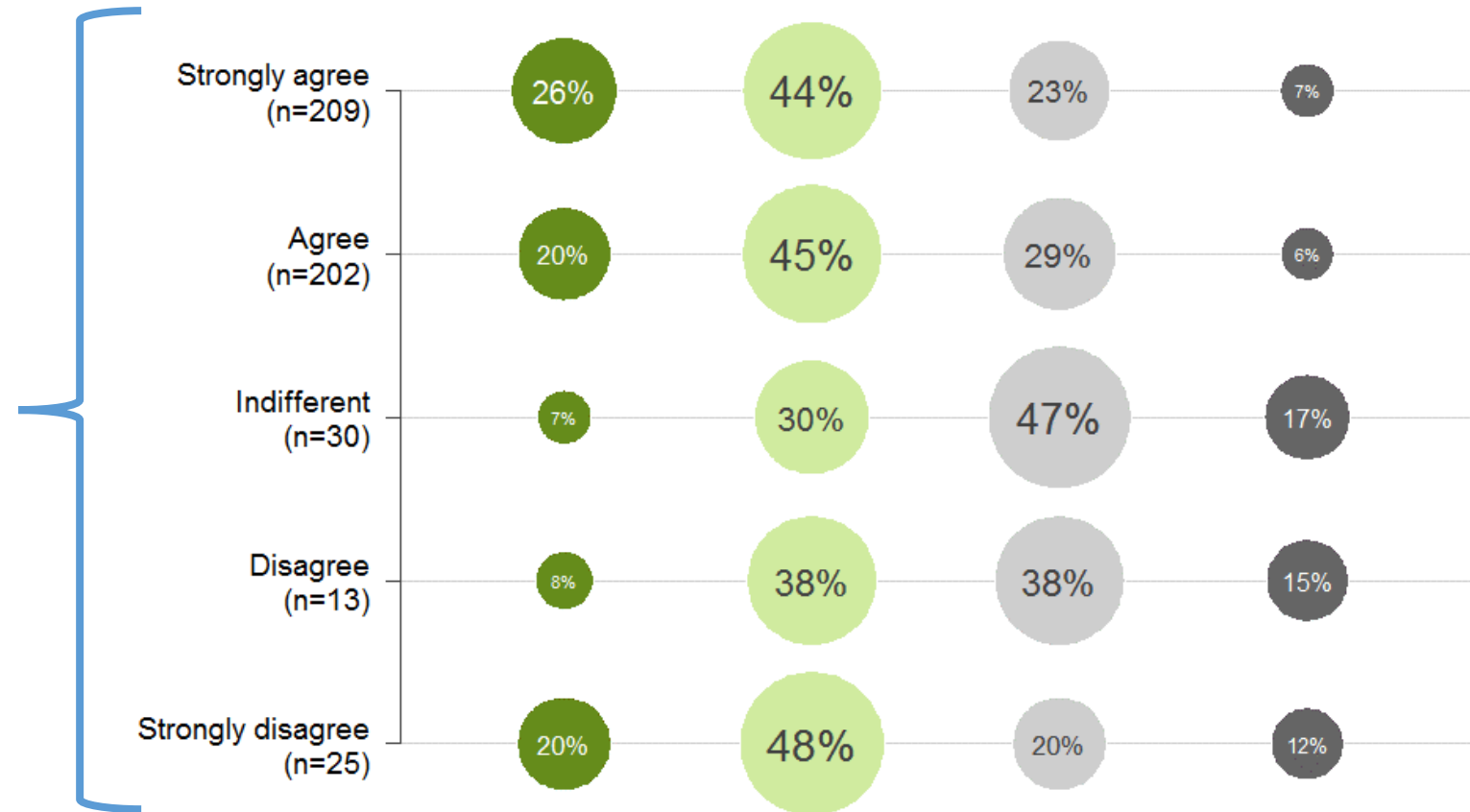
Creating EMR Experts
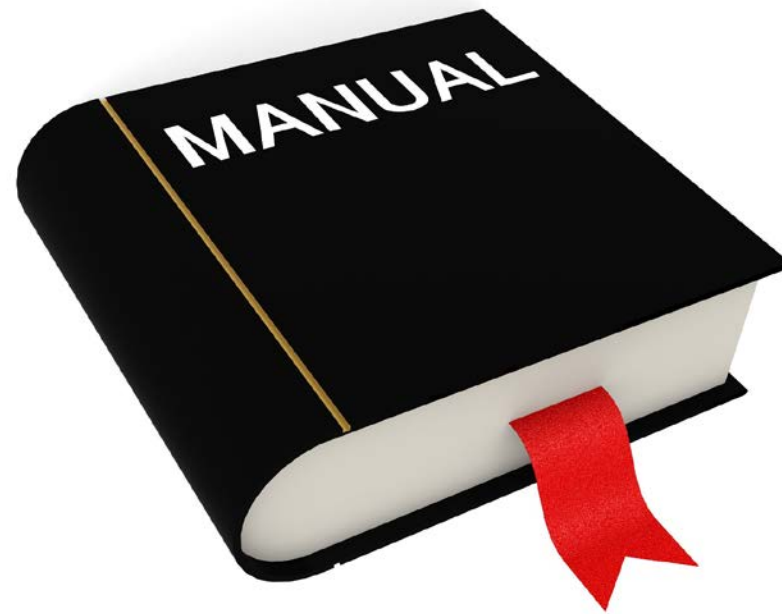
The Keys to Helping 'Jim' . . . And Others

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KLAS™

Hours of Yearly Follow-Up Training

All clinicians (n=9351)

Legend:
- 20+ hours
- 16–20 hours
- 11-15 hours
- 6-10 hours
- 3-5 hours
- 1–2 hours
- 0 hours

MEDITECH

athenahealth

NextGen Healthcare

Epic — 73 | 178 | 368 | 606

Cerner

Other

eClinicalWorks

GE Healthcare

Allscripts

0%   100%

Epic requires ongoing training to maintain efficiencies. I think it is very important that we continue to offer classes and updates to bring everyone up to the most efficient level.

-Pediatrician

KLAS

Failed the Test—No Consequence?

I was onboarded with a group of about 30 other physicians. **Approximately three of us had NEVER used Epic to order testing and NEVER used it to create notes. We failed the test. We were given the answers and sent on our way.** *The other physicians had all learned how to use Epic elsewhere. This was unfair to those of us with NO prior experience. I was so glad that I wasn't going to have to order tests or write notes in Epic-- then that all changed.*

-Transfusion Medicine Physician
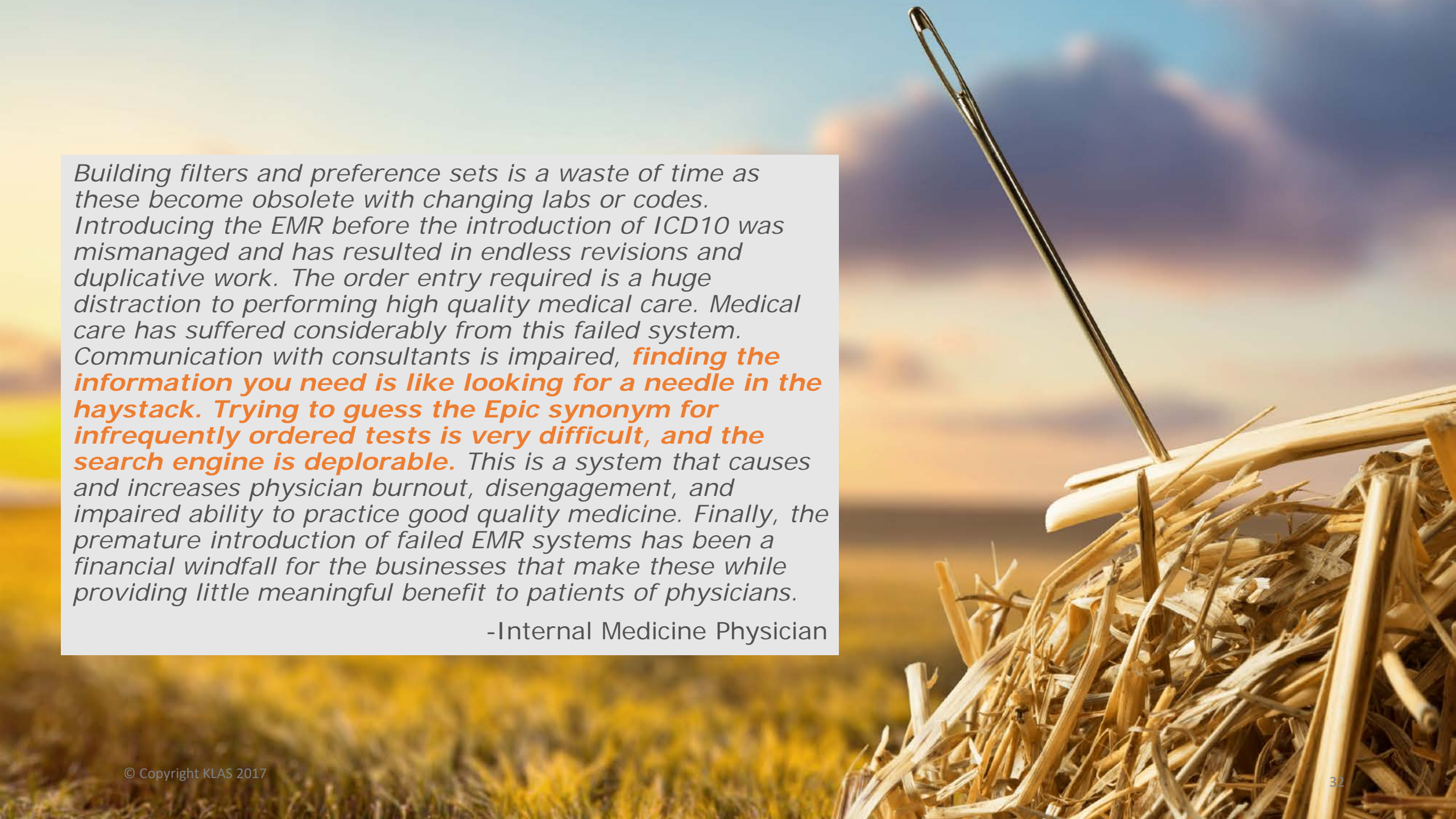
Traditional Training Does Not Work?

- *Cannot fully judge this system due to lack of follow up on a personal basis. **The follow-up training sessions are useless/unavailable to me as they are at a different location and scheduled in the middle of my workday which is usually filled with patients.** If our system goes out IT assigns their priority to the situation which may be hours to days for a response if it cannot be handled by a remote in. **I have 1 effective template that I set up with the initial support help/training. It works well for progress notes but I have to alter it each use for initial evaluations and none of the other medical or psychiatric templates in the system fit my needs.** The evaluation template I set up, when I finally had time to try on my own, moves around when entering information and is more inefficient than altering the immobile progress note template. There has been no assistance available when it is needed for setting up templates, order sets or any of the other items I checked as not using and I did not even know what some referred to. The other big issue for me is that the rooming in area and orders are so busy that it is easy to omit or forget or mistype(particularly for orders) when distracted by patient discussion, calls, in-basket, etc.. **And every mistype or omission requires a reorder or occasionally even a phone call from us or the pharmacy to correct. Seems like we are out on an island at our location with low priority for assistance.** Also frustrating when the system kicks you into print, perhaps from previous order of a drug, when you think you are e-scribing. That is all the frustrations I can come up with for now. I did appreciate my use of Dragon medical when others who stuck with dictation lost that option with the recent worm/virus impacting Nuance. Also hardware responses have improved over time.*

-Psychiatrist

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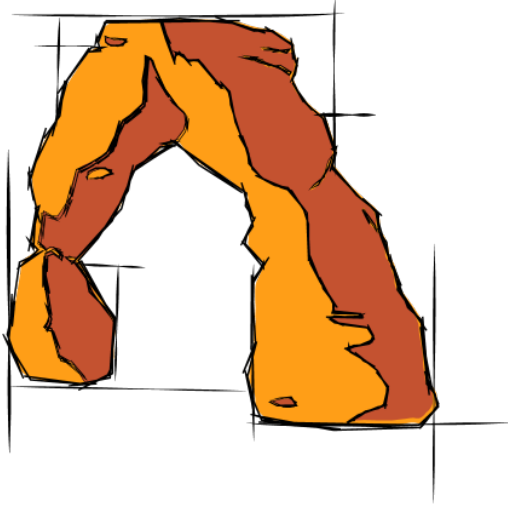
Building filters and preference sets is a waste of time as these become obsolete with changing labs or codes. Introducing the EMR before the introduction of ICD10 was mismanaged and has resulted in endless revisions and duplicative work. The order entry required is a huge distraction to performing high quality medical care. Medical care has suffered considerably from this failed system. Communication with consultants is impaired, **finding the information you need is like looking for a needle in the haystack. Trying to guess the Epic synonym for infrequently ordered tests is very difficult, and the search engine is deplorable.** This is a system that causes and increases physician burnout, disengagement, and impaired ability to practice good quality medicine. Finally, the premature introduction of failed EMR systems has been a financial windfall for the businesses that make these while providing little meaningful benefit to patients of physicians.

-Internal Medicine Physician

The Keys to Helping Clinicians

- Make the EMR work right for the clinicians
- Help users feel empowered
- Help doctors feel smart
- Help doctors be super doctors

The Arch
Collaborative
a KLAS® initiative

BRIDGING THE PRODUCTIVITY PARADOX IN HEALTHCARE

https://klasresearch.com/usability-studies