Arch Collaborative At-a-Glance



Association of Medical Directors of Information Systems

KLAS is entirely dedicated to improving healthcare by providing **accurate**, **honest**, and **impartial** insights that move the market.

3,100 Healthcare customer executives (VP and C-Level) who actively participate by sharing their experiences. They also benefit from accessing KLAS data and reports. 5,400+ Healthcare organizations worldwide represented in the KLAS data through the participation of their employees each year who share their voices and experiences. 20,000+**Interviews** conducted each year. Over 90% are person-toperson interviews with current customers. 900+ Healthcare IT products and services measured by KLAS. 420 +**Vendors** measured and highlighted in KLAS reports. 27,839 **Downloads** of KLAS specialty reports published last year by healthcare customers. Average of 400–500 healthcare customer downloads per report. Members of the KLAS Advisory Board 28 CLICK HERE to see complete list of Advisory Board Members

Research focus is on the customer experience.





KLAS insights assist organizations.

In-Depth Interviews

Across 120+ Healthcare Technology and Services Markets

In 2020, KLAS conducted 22,056 interviews of

over 14,000 individuals at 5,463 different healthcare organizations.



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R E S E A Rack AS initiative

- 340B Management Systems
- Acute Care EMR
- Acute Care EMR Global
- Advanced Visualization
- Ambulatory EMR
- Ambulatory RCM Services
- Ambulatory Specialty EMR
- Application Hosting
- Automated Dispensing Cabinets
- Behavioral Health
- **Business Decision Support**
- **Business Solutions** Implementation Services
- Cardiology
- Cardiology Hemodynamics
- **Care Management Solutions** (Payer)
- Claims & Clearinghouse
- **Clinical Communications**
- Clinical Decision Support Care Plans & Order Sets
- Clinical Decision Support -Point-of-Care Clinical Reference
- Clinical Documentation Improvement
- Clinical Optimization
- **Complex Claims Services**
- Computer-Assisted Coding (CAC)
- **Computer Assisted Physician** Documentation (CAPD)
- Credentialing
- Customer Relationship Management (CRM)
- Data Archiving
- Data Visualization and Reporting
- Digital Pathology (Non-US)
- **Digital Rounding**
- Drug Diversion Monitoring
- **Eligibility Enrollment Services**

Emerging Technology Solutions EMR-Centric Virtual Care

Enterprise Resource Planning

Enterprise Software Suite

Extended Business Office

Extensive IT Outsourcing

- Data Science Solutions

Intelligence & Analytics

Healthcare IoT Security

Healthcare Management

Healthcare Safety, Risk, and

HIT Implementation Leadership

Compliance Management

HIT Advisory Services

Healthcare Business

Healthcare Artificial Intelligence

Financial Improvement

Go-Live Support

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Platforms

Solutions

Enterprise Imaging

- - **Oncology** Radiation
 - **Oncology Treatment Planning**
 - Other KLAS Validated Services
 - Other KLAS Validated Software
 - Outsourced Codina
 - PACS
 - PACS Global
 - Partial IT Outsourcing
 - Patient Access
 - Patient Accounting & Patient Management
 - Patient Education
 - Patient Financial Engagement
 - Patient Financing Services
 - Patient Flow
 - Patient Intake Management
 - Patient Outreach
 - . Patient Portals
 - Patient Privacy Monitoring
 - Platforms
- HIT Implementation Leadership
- HIT Staffing
- Home Health EHR

(Large)

- Hospice
- Human Capital Consulting
- Identity & Access Management
- Image Exchange
- Infection Control & Monitoring
- Integration Engines
 - **Interactive Patient Systems**
- Interoperability Platforms
- **IV Workflow Management**
- Long-Term Care
- Medication Inventory . Management

Mobile Charge Capture

Revenue Cycle - Charge

Revenue Cycle – Claims

Revenue Cycle – Contract

Revenue Cycle Optimization

Revenue Cycle Outsourcing

Risk Adjustment and Analytics

Security and Privacy Consulting

Security and Privacy Managed

Social Determinants of Health

Speech Recognition - Front-End

Speech Recognition - Front-End

Small Practice Ambulatory

EMR/PM (10 or fewer

Strategy, Growth & Consolidation Consulting

Talent Management

Technical Services

Time & Attendance

Transcription Services

Value-Based Care Consulting

Video Conferencing Platforms

Virtual Care Platforms (Non-

3

Worksite Health Services

Value-Based Care Managed

Robotic Process Automation

Scheduling - Nurse & Staff

Scheduling - Physician

Integrity/Underpayment

Revenue Cycle - Chargemaster

Capture

Management

Management

Management

Revenue

Services

Services

Services

Physicians)

Networks

EMR

Imaging

Services

EMR)

Smart Pumps

- **Oncology** Medical

- Payer Claims & Administration
- Payer IT Consulting Services
 - Payer Quality Analytics

Pharmacy Automation – IV

- Pharmacy Automation -Dispensing Robotics
- Robots

(RTLS)

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- Pharmacy Surveillance
- Physician Advisory Services

Quality Management

Release of Information

Remote Patient Monitoring

Population Health Management Practice Management

Radiation Therapy - Equipment

Real-Time Location Systems

The Arch Collaborative is a group of healthcare organizations committed to improving the EHR experience.

BENEFITS OF THE ARCH COLLABORATIVE For Healthcare Providers

Become a member of the Arch Collaborative to:

- Benchmark EHR satisfaction against similar organizations
- Connect with and learn from other healthcare organizations
- Improve clinician satisfaction with your EHR
- Fine-tune your clinician education
- Alleviate technology-related burnout
- Deliver better care





What Is the Arch Collaborative?

The Arch Collaborative is a provider-led effort to unlock the potential of EHRs in revolutionizing patient care. Through standardized surveys and benchmarking, healthcare organizations collaborate to uncover best practices and move the needle in healthcare IT. Currently, the Arch Collaborative is using measurement data to improve the EHR experience through training, personalized user experience, and shared ownership.

Measurement and Benchmarking

- 264 provider organizations measuring to date
- Over **280,000** clinicians participating
- 9 Countries
- 35 Questions, 10 Minutes

Collaboration

- 100+ case studies of highperforming organizations
- Best practice reports
- Webinars
- Yearly Summits
- Quality and satisfaction benchmarking



- 290 organizations
- Over 300,000+ clinical responses
- 214 organizations measured nursing
- On-boarding approx. 4-5 new healthcare provider orgs/month

Do you agree that your EHR...

- 1. is available when you need it (has almost no downtime)
- 2. has the fast system response time you expect
- 3. provides expected integration within your organization
- 4. provides expected integration with outside organizations
- 5. has the functionality for your specific specialty/clinical care focus
- 6. is easy to learn
- 7. makes you as efficient as possible
- 8. enables you to deliver high-quality care
- 9. keeps your patients safe
- 10. this EHR has alerts that prevent care delivery mistakes
- 11. allows you to deliver patient-centered care



"I'm looking at our results, and I'm trying to figure out how depressed I should be."

Do you agree that your EHR enables you to deliver high-quality care?

Percent of Providers Who Agree Their EHR Enables Quality Care n = 48,181 providers from 241 organizations: each bar is an EHR deployment with >20 responses





We've been so heads-down building our version of the Epic Ferrari, that we've never looked up to see how fast we're going. (Recent CMIO KLAS spoke to)







I've felt this is where we were tracking with our EHR satisfaction, based on conversations in the halls of the hospital, but I've never had the data to prove it. (Recent CMIO KLAS spoke to)



Where Does Variation in EHR Experience Come From?

Stakeholder Impact on Net EHR Experience Score[†]

Percent of variation in satisfaction that is attributable to each EHR stakeholder; all Collaborative respondents





What Makes a Successful Clinical EHR User?



Personalization

"This EHR is in a great place that meets my unique needs. I have taken time to make sure it works."

Shared Ownership

"I have the ability to share feedback that can shape this EHR. My voice is heard."

Expert User

"I am confident in my ability to use this EHR effectively and efficiently."



How do measuring healthcare providers stack up?

EHR Satisfaction Metrics

All clinicians







Optimizing EHR Workflows

Sutter Health completely redesigned the workflow and documentation requirements for the nurses in their perioperative area, significantly decreasing the time nurses spent in their flowsheets.



Co Co

Case Studies



Giving End Users a Voice in IT

Using a multipronged approach, Rush University Medical Center tackled EHR inefficiencies and the EHR frustrations of



A Model for Improvement

OrthoVirginia collaborated with other organizations to implement training, support, and governance programs that jointly helped improve their EHR satisfaction by 44 points.

- 107 Case Studies
- Summaries of organization best practices. No need to reinvent the wheel
- Drill down by organization, topic, EHR, cost, time to implement, bed size, and organization type
- Connect with the authors





Available Tools of the Arch...



Improving Through Sprints -MD...



Impacting Physician Burnout with...



Increasing EHR Usability Through...



Improving Life by 1,000 Correlations



Nursing EHR Success -Sutter Health



Improving the EHR Experience - Rush...



Operationalizing the Arch...

Webinars

- 42 Webinars
- Listen to the experts themselves
- A deeper dive into an organization's EHR experience





THE SCIENCE OF IMPROVING THE EHR EXPERIENCE

The Arch Collaborative

Impact Reports



Arch Collaborative Guidebook

- 36 Reports
- Deeper look into evidence-based practices
- Latest insights on variety of topics (Training, Nurse Experience, Burnout)
- Arch Collaborative 2020 Guidebook



NURSE BURNOUT 2020

The Arch Collaborative

What Do Repeat Measurements Teach Us?

59% of Organizations Have Seen Statistically Significant Improvement

46 organizations have measured clinician satisfaction with the EHR organization-wide at least twice



Repeat respondents see average increase in Net EHR Experience Score (NEES) of 6.5 points (n=8,651 respondents from 46 organizations)

Provider subgroup (repeat and non-repeat individuals) saw an average NEES increase of **10.1** points (n=29,991 respondents from 46 organizations)

Nurse subgroup (repeat and non-repeat individuals) coincidentally also saw an average NEES increase of **10.1** points (n=25,926 respondents from 26 organizations) **27** organizations saw a statistically significant **boost** in at least one of the metrics to the left

18 organizations saw **no statistically significant change** between their two most recent measurements

1 organization saw a statistically significant **decrease** in NEES



Messaging the Survey: Examples



RUSH UNIVERSITY MEDICAL CENTER

According to the EMR Improvement Collaborative Survey completed in 2017, 59 percent of responding Rush University Medical Center providers felt that EMR enabled quality care. Unfortunately, a large number of these same providers felt ongoing support and optimization were lacking at our institution. This feedback was taken very seriously.

You spoke and we heard you.

Over the past year the Clinical Information Services team has been focused on addressing your concerns. We have begun rolling out several IS-related physician wellness and optimization projects to help you get back to the bedside and home on time.

Provider Optimization & Experience Team (POET) Program

In response to your concerns regarding lack of hands-on support, Rush has partnered with NITHealth to implement the Provider Optimization and Experience Team (POET) program. Our team is comprised of one director and five liaisons who will offer in person, one-on-one field support for physicians and other providers. The POET program is currently in plot with our hospitalist, ICU, CV surgery and inpatient pediatric services. POET members are an extension of the associate chief medical information officers, and focus specifically on resolution of Epic issues, supplemental provider training and finding solutions for provider optimization concerns. Please stay tuned for more details as we continue to get this program up and running.



Voice to Text Dictation

The rollout of Dragon continues, and providers are encouraged to participate in training to get the greatest benefit out of this tool.

- Sign up via LEAP Online for a 90-minute dassroom training session. Once logged in, hover over "Classes & Events" and click "Self-Enrollment." Search "Dragon." CME will be offered for this activity. Training in the Emergency Department was completed in March, with positive feedback from providers:
- 100% of providers who completed a 1:1 training session felt their Epic efficiency would improve.
- Two-thirds of providers found the session so useful they would like additional efficiency sessions.
- . The vast majority of surveyed ED physicians recommend this training to a colleague.
- Email ProviderHelp@rush.edu to schedule a one-on-one optimization session. These sessions offer further Dragon personalization in addition to other documentation efficiency tips (including template optimization, integration of problem-oriented charting, etc.)



A Real-life Story: in our backyard (almost literatly)







Dr. Gary Garner



Arch Collaborative National Learning Summit (July 2021)



- ~318 Virtual Attendees
- ~91 Live Attendees
- ~30 KLAS Attendees
- ~439 Total
- 16 Healthcare Organization Presentations
- 4 Vendor Presentations
- 2 Panel Presentations
- 30 Live Networking Sessions
- 10 Virtual Networking Sessions



Abundance of Arch Collaborative Participants







EMR BENCHMARK REPORT



Measurement Deliverables from KLAS

- 1 hour presentation
 - Benchmarking dashboards
 - Recognizing success
 - Opportunities for improvement
 - What can we learn from others?
 - Next Steps
- Raw data Excel file with individual responses
- Clinician Commentary in Word grouped by clinical background



Better Care Health: Example Output



The Net EHR Experience score is a snapshot of your clinicians' overall satisfaction with the EHR environment(s) at your organization. The survey asks respondents to rate factors such as the EHR's efficiency, functionality, impact on care, and so on. The Net EHR Experience score is calculated by subtracting the percent of negative user feedback from the percent of positive user feedback. Net EHR Experience scores can range from -100% (all negative feedback) to +100% (all positive feedback).



Better Care Health: Example Output

Better Care Health 19 Satisfaction Metrics Dashboard

Advanced practice providers only

	Score/ Percent Agree	Overall Collaborative Percentile	Epic C Organizations Percentile	ommunity Health Systems Percentile
Net EHR Experience	59	76 th Percentile	62 nd Percentile	58 th Percentile
Is Reliable	88%	67 th Percentile	55 th Percentile	65 th Percentile
Has Fast System Response Time	75%	80 th Percentile	70 th Percentile	70 th Percentile
Has Needed Internal Integration	79%	64 th Percentile	45 th Percentile	57 th Percentile
Has Needed External Integration	70%	89 th Percentile	81 st Percentile	78 th Percentile
Has Needed Functionality	62%	41 st Percentile	22 nd Percentile	35 th Percentile
Has Needed Analytics	45%	53 rd Percentile	40 th Percentile	39 th Percentile
Is Easy to Learn	67%	85 th Percentile	79 th Percentile	83 rd Percentile
Enables Efficiency	61%	82 nd Percentile	73 rd Percentile	87 th Percentile
Enables Quality Care	83%	93 rd Percentile	91 st Percentile	91 st Percentile







Measurement Toolkit

Offerings	How We Hope These Helps You
User Experience Survey	Identifies where to focus (users, location, specialties)
Pre/Post Survey(s)	Quickly measure effectiveness of changes made
Trainer Quality Benchmark	Track and improve the quality of your trainers



Collaboration Toolkit

Offerings	How We Hope it Helps You
Snapshot Report	Helps distribute results of user survey
BFF Call	A call for KLAS to inform Epic partners (BFF & TC) about health system performance
Outside Data Matching	Better understand data trends
Learning Center	Library of resources (best practice reports, case studies, webinars, member directory, my data)
National Learning Summit	Annual conference to learn and collaborate alongside other Arch members
*Workshops	Hands-on problem-solving sessions with your team and leading Arch members
*Data Review Deep Dive	Half day onsite/virtual deeper look into your data and understand how to address specific issues
*Peer Guidance	Workings sessions to conceptualize and create initiatives as well as in depth feedback from peers on initiatives



Measurement Timeline Example

	Octobe	er 2021		Nov	vember 2	021			Decemb	er 2021			Ja	nuary 20	022			Februa	ary 2022	
	10/18	10/25	11/1	11/8	11/15	11/22	11/29	12/6	12/13	12/20	12/27	1/3	1/10	1/17	1/24	1/31	2/7	2/14	2/21	2/28
Pre-measurement scoping																				
Kick-off call w/ key stakeholders (executive sponsor, clinical leaders, project manager)		1																		
Survey edits call (clinical leader, project manager)																				
Delivery of live survey link, data collection dashboard																				
Data collection and review																				
Survey go-live/data collection		1																		
Survey close/Delivery of raw data file, overview dashboards, and clinician commentary																				
Logistics call																				
Data analysis/presentation building																				
Data review call with key stakeholders																				
Provider organization digests data, develops potential interventions, goals, plans																				
Collaborate and improve																				
Care plan call																				
Ongoing collaboration (national summit, additional surveys, outside data match-ups, etc.)									0											



Provider Participation Options

Measurement & Benchmark ONE-TIME FEE	Standard Membership ANNUAL FEE	Advanced Membership ANNUAL FEE
Benchmark survey with the option to add custom questions.	Everything in the Measurement & Benchmark plan, plus:	Everything in the Standard Membership, plus:
Access to best practice data.	Measurements using the core Arch Collaborative survey.	Up to 2 onsite visits by KLAS analysts.
Identify areas to target improvement efforts.	Participation in our yearly Arch Collaborative Learning Summit,	Yearly deep dive report to help disseminate Arch Collaborative results.
Compare responses by the following to understand how your organization performs: • EHR • Specialty • Clinical background • Organization type	Pre and Post surveys to measure targeted initiatives clinic by clinic or department by department. Benchmarking of trainers to compare them to other trainers across the Collaborative. Connecting outside data. Access to the experience and insights of other Arch Collaborative members.	 Committment to participate in at least 2 annual surveys from the following: Arch Collaborative core survey. Trainer Quality Benchmark. Pre or post survey around an EHR satisfaction initiative.

Healthcare Provider Organization Pricing

Ambulatory Clinics (Physicians)		Pricing	
11-75	n/a	\$5,000	\$20,000
76-250	\$5,000	\$10,000	\$35,000
251-750	\$10,000	\$20,000	\$50,000
751-1,500	\$15,000	\$30,000	\$70,000
1,500+	Varies	Varies	Varies
Hospitals (Beds)		Pricing	
Hospitals (Beds) 1-250	\$5,000	\$10,000	\$35,000
	\$5,000 \$10,000	-	\$35,000 \$50,000
1-250		\$10,000	
1-250 251-500	\$10,000	\$10,000 \$20,000	\$50,000
1-250 251-500 501-1,000	\$10,000 \$15,000	\$10,000 \$20,000 \$30,000	\$50,000 \$70,000



Efficiency Is Number One Predictor of Burnout for Physicians





Reduced Burnout

Those who strongly disagree that their ongoing training experience is helpful and effective are three and a half times more likely to state that they are completely burned out (i.e., at the point where they may need to seek help).

Higher Retention[†]

Those who strongly disagree that their ongoing training experience was helpful and effective are over four times more likely to state that they are planning to leave their organization in the next two years.

[†]The <u>AMA</u> estimates that losing a physician costs an organization two to three times the physician's annual salary.

Odds of Reporting Complete Burnout

—by Agreement That Ongoing Training Is Effective (n=28,629)



Odds of Reporting Plans to Leave in Next Two Years

-by Agreement That Ongoing Training Is Effective (n=2,997) Estimated Odds



Increased Efficiency -> Decreased Burnout for Providers

On average, the percentage of providers reporting at least some degree of burnout dropped by nine percentage points following an optimization sprint. Several factors likely contribute to this reduction in burnout. However, of particular note is that pre-intervention, less than half of participating providers viewed their EHR as a tool that enables efficiency; post-intervention, that number rose to almost two-thirds, with several organizations reporting a dramatic reduction in afterhours charting. Provider perceptions of the efficacy of their ongoing EHR training also saw a significant boost. <u>Other Collaborative</u> data has shown that providers who don't agree that their ongoing training is sufficient are 3.0-4.5 times more likely to report plans to leave their organization within two years.

Pre- and Post-Sprint Burnout and Satisfaction with Ongoing Training






EHR User Mastery Findings

EHR House of Success

EHR Satisfaction





80th Percentile House

53.2 Net EPR Experience Score



*Percentages Seen are Percent of Respondents that Agree





Report Findings

EHR Mastery Success Principles

- Training has, of all the Arch Success pillars, the biggest impact on burnout due to the impact training has on clinician efficiency
- The 3 Rights of Training:
 - The Right Number of Hours
 - The Right Trainer
 - The Right Location
- Any effort to train will have an impact, although maximizing training efforts have a much larger impact
- Clinicians prefer one on one training
- Training is most effective if given to "self requested" clinicians
- Training should be broken up into bite sized pieces for maximum effect

Initial Training Has Consistently High Correlation with Satisfaction

Clinicians who strongly agree that their initial EHR training prepared them well to use the EHR have an average Net EHR Experience Score (NEES) 89.7 points higher (on a -100 to 100 scale) than those who strongly disagree. This is the exact same spread reported in the <u>2019 Clinician Training report</u>, even with 50,000 additional responses collected since then. (More insights on initial training can be found in the Expanded Insights and on <u>the Arch Collaborative website</u> in the form of webinars, case studies, and other reports.)

Net EHR Experience Score—By Agreement That Initial Training Prepared Respondent Well

All clinicians (-100 to 100 scale)



Early Insights on the Use of Simulations

A new question in the executive survey (conducted with executive leaders at member healthcare organizations) asks whether the organization uses simulations for initial EHR training. Preliminary results show that organizations that do use simulations have, on average, a higher NEES than organizations that don't.

Early Data: Net EHR Experience Score—By Use of Simulations in Initial Provider Training Providers only (-100 to 100 scale)

Providers only (-100 to 100 scale)



The Net EHR Experience Score (NEES) is a subsplot of clinicians' overall satisfaction with the EHR environment(s) at the organization. The survey asks respondents to rate factors such as the EHR's efficiency, functionality, impact on care, and so on. The Net EHR Experience Score is calculated by subtracting the percent of negative user feedback from the percent of positive user feedback. Net EHR Experience Score is calculated by subtracting the percent of negative feedback) to +100 (all positive feedback).

Nurse EHR Mastery Impact

Satisfaction with training highly correlated with higher overall satisfaction

Agree

Disagree

Net EHR Experience Score-

By Agreement That Training Was Helpful and Effective

Nurses only (-100 to +100 scale)



Onboard Training - # of Hours

• **Guidebook Says:** Clinicians should receive a minimum of five hours of onboarding EHR education and would greatly benefit from eight or more hours

Organization Net EHR Experience Score-

By Number of Training Hours New Providers Are Required to Complete in First Three Months



Onboard Training – Who Should Train

- **Guidebook Says:** Clinicians who train should do so because they are great clinicians and great teachers. Knowledge alone is not enough.
- Training should be focused mostly on workflows and how the EHR can facilitate better medical practice. Having a shared clinical background helps make this possible.

Organization Net EHR Experience Score-

By Who Teaches Initial Training Classes



Onboard Training – Should There be a Certification Test

- Guidebook Says: Letting clinicians bypass some training because they already know a vendor's software can be done, but it should be done cautiously— EHR education also encompasses learning an organization's shared clinical workflows, which vary from organization to organization. Where resources permit, one-on-one proficiency tests administered by training specialists should be considered a best practice.
- Requiring general EHR proficiency tests can be an effective way to measure EHR aptitude, but if done poorly, such requirements and the consequences of not meeting them can be detrimental and burn bridges with clinicians who don't pass.

Organization Net EHR Experience Score-

By Whether Organization Requires an EHR Certification Test



Leading Practices

Advertising is beneficial for successful EHR education

• Catchy headlines such as "Remove the Suck from Your EHR Use," "Home for Dinner," or "SWAT Program" pique interest.

• If emails are used as a conduit for EHR education, they should have a familiar structure and be sent at a regular cadence. Including metrics in these emails can be a huge motivator for participation.

• Focus more education on influential organization leaders and clinicians, such as chief residents who will teach other residents.

Integrate trainers into the EHR governance so they know what EHR changes are coming, why they are coming, and how to help communicate those changes

• Being able to speak to why an EHR change is being made is just as important as being able to speak to what changes have been made. Similarly, trainers can be critical in guiding EHR governance and IT efforts.

When it comes to ongoing training, there is a 101.2-point difference in NEES between clinicians who strongly agree ongoing training is sufficient and those who strongly disagree. This is very close to the gap found in KLAS' 2019 Clinician Training report (102.7 points). The static nature of these results indicates ongoing training remains a key contributor to clinician satisfaction.

Figure 7 Net EHR Experience Score—By Agreement That Ongoing Training Is Sufficient All clinicians (-100 to 100 scale)





Ongoing Training – Hours of Follow-Up Education

• Clinicians should spend 3–5 hours annually refreshing their EHR knowledge. Spending more than 3–5 hours can be helpful but the resulting gains in satisfaction are not as significant.

- Successful organizations understand that users learn the most about the EHR outside the classroom during day-to-day use within a clinical context.
- Peers are a clinicians' most common source of EHR learning. Successful organizations work to create practice environments in which a knowledgeable peer—e.g., a rounding informaticist or a successful local user is always accessible.
- Some training is better than no training. Not having any ongoing training leads to lower EHR satisfaction.

Respondent Net EHR Experience Score-

By Self-Reported Yearly Hours of Follow-Up Training/Education





Ongoing Training – Department Meetings

- Department meetings are a good ٠ time to focus on workflow training as they typically bring together groups of similar clinicians.
- Incorporating EHR training and ٠ education into departmental meetings means training is included in a meeting that people are already expecting to attend and allows clinicians the opportunity to learn without having to set aside extra time to dedicate to training.

Physician Satisfaction with Ongoing Training-

By How Often EHR Education Is Incorporated into Departmental Meetings

(1-5 scale)

Often

Rarely

Never



Ongoing Training – Rounding

- Rounding can be a cost-effective way to provide quick training. It allows clinicians to get immediate answers to questions and allows rounders to identify common issues and the types of education that would benefit a larger audience.
- Rounding allows organizations to build relationships both at the individual level, between the informaticist and the clinician, and at the organization level, between IT and clinical operations.
- The role of rounding informaticists and at-the-elbow trainers is to support clinicians, not act as police. Clinical management, not EHR educators, must be the ones to deal with compliance concerns.

Organization Net EHR Experience Score— By Frequency of Rounding Visits





What Does An Optimal Training Look Like?



Types of Ongoing EHR Training Provided by 10 Most-Satisfied Organizations

Organizations with Highest Net EHR Experience Scores

Provider Net EHR Experience Score (adjusted for EHR in use)			Ongoing Training Programs Available				
(-100 to +100 scale) All n-counts are greater than 20		Classroom Training	Online Training	At-the-Elbow Training	Departmental Meeting	Other Training Effort	
1	66.0	•			•		
2	62.6	•	•	•	•	•	
3	62.5		•	•			
4	61.4	•	•		•		
5	60.7	•			•		
6	58.1	•	•	•	•		
7	57.6	•	•	•	•		
8	57.4	•	•				
9	57.0		•	•		•	
10	55.4		•	•	•	•	
(0	100					



Types of Ongoing EHR Training Provided by 10 Least-Satisfied Organizations

Organizations with Lowest Net EHR Experience Scores





Longer than 1 hour

What Does An Optimal Training Look Like?



High interactivity (not self led)



Taught by someone with a similar clinical background



55

55

Optimal Training Increases Scores for those that are "not new to the organization" by +17.8 points

Training Satisfaction by Clinical Background Training Satisfaction By Organizational Tenure Adjusted For Best Practices New to organization in past New to organization in past 76.8 79.6 3 months (n=15,262) 3 months (n=12,332) Not new to organization Not new to organization 45.9 63.7 (n=8,724) (n=6,221) 100 0 -100 0 -100 100



Training Satisfaction by Clinical Background Adjusted For Best Practices



Best Practices Can Make Huge Difference



Baseline vs Optimal Training Scores

Clinical Background	Baseline Training Scores	Optimal Training Scores	Change
APP	69.6	76.1	+6.5
Other	62.0	77.8	+15.8
Physician	53.2	72.5	+19.3
Allied Health Professional	49.7	74.7	+25.0
Nurse	48.2	71.0	+22.8



Keys to Successful EHR Training

More than 20 organizations have participated in the Trainer Quality Benchmark survey, which collects responses from clinicians after they receive EHR training. Data from this survey reveals two aspects of training are highly correlated with satisfaction: type of training and length of training. Various types of training can be effective as long as an actual trainer is involved—self-directed e-Learning is much less effective. More than an hour of training is also likely to result in higher training satisfaction.

Net EHR Training Score⁺

All clinicians (-100 to 100 scale)





⁺ The Net EHR Training Score (NETS) is a snapshot of clinicians' overall satisfaction with the EHR training they received at the organization. The survey asks respondents to rate factors such as the quality of the trainer, time saved, value, and so on. The Net EHR Training Score is calculated by subtracting the percent of negative user feedback from the percent of positive user feedback. Net EHR Training Scores can range from -100 (all negative feedback) to 100 (all positive feedback).



Training Satisfaction By Training Type All Clinicians

Is Self-Directed eLearning Failing?







Agreement Across Training Metrics (Self-directed eLearning) All Clinicians (Strongly agree)







Agreement Across Training Metrics (Non Self-directed eLearning) All Clinicians Agreement Across Training Metrics (Self-directed eLearning) All Clinicians (Strongly agree)



Meets Unique User Needs Matrix

- The following charts are based on the question:
- Do you agree with these statements?
 - This EHR reduces duplicate orders of diagnostic tests and procedures
 - This EHR improves communication regarding diagnostic procedures and their results
 - This EHR helps me achieve my workplace's safety goals (i.e., reduced rates of septic shock, CLABSI, CAUTI, falls, etc.)

Personalization and Meeting Unique User Needs







66% of Providers have little to no personalization in place

Level of EHR Personalization Most Used Personalizations Templates (n=20,058) 83% Order Lists (n=19,047) 65% High Personalization 13% Order Sets (n=18,797) 58% Moderate Personalization 0% 100% Low Personalization Least Used Personalizations Very Low/No Personalization 41% Layouts (n=14,923) Report Views (n=18,997) 38% Sort Orders (n=17,853) 28% 35% 0% 100%

Where to StartHelping providers adopt any one personalization can have an immediate impact, but the
following three personalizations appear to make the biggest splash:

Layouts Providers who use layouts and find them very useful have a Net EHR Experience score 38.7 points higher than those who do not use layouts.

Templates Providers who use templates and find them very useful have a Net EHR Experience score 38.0 points higher than those who do not use templates. **Filters** Providers who use filters and find them very useful have a Net EHR Experience score 37.6 points higher than those who do not use filters.



Gap in satisfaction between clinician's with personalization's in place vs little/none is 54 points

Average EHR Satisfaction of Organizations That Have **High Levels of EHR Personalization** Low Levels of EHR Personalization Above Average Below Average Satisfaction Satisfaction 11% 19% Above Average Below Average Satisfaction Satisfaction 81% 89%





EHR Personalization in a Nutshell

Improving clinician efficiency is all about adoption of personalization's and the right training

Difference¹ in Net EHR Experience Score– By Personalization Tool Category





1 Average difference between respondents who have not used personalization tools and those who use them and find them very helpful



Creating Clinician Efficiency: Personalization



Evidence-Based Practices: Best practices validated by Arch Collaborative research that differentiate the highperforming organizations or have been documented to help organizations improve.

Leading Practices: Commonly reported keys to success as identified by leading organizations, though not yet broadly validated or too unquantifiable to fully validate.

Evidence-Based Practices	Clinician Efficiency & Personalization			
1/3 Don't Personalize	Personalization is key to provider efficiency with the EHR, but about one-third of physicians use almost no personalization tools. Successful organizations help providers understand that personalization is critical for strong EHR efficiency.			
Speech Rec	Organizations using speech recognition to solve their EHR challenges are likely setting poor expectations as speech recognition works best when utilized on top of strong EHR proficiency. Speech recognition only accelerates EHR satisfaction when providers know how to use speech recognition to perform tasks in the EHR.			
Holistic View	Organizations should holistically audit the full spectrum of technology used by clinicians. While tools like hardware, badge logins, and Citrix are not part of the EHR, they are part of the EHR and efficiency experience. Utilize your EHR vendor's efficiency tool <i>i.e. Signal/PEP, Advance/Lights On</i>			
Same Day Chart Closure	Completing Documentation same day leads to higher satisfaction this requires – Personalization Good Workflows Reasonable Schedule Discipline Provider organizations with strong same-day documentation rates report it is possible to make improvements.			
	Case Study Examples			
1/3 Don't Personalize	<u>Arch Collaborative Guidebook – 1st Bullet Point</u>			
Speech Rec	Arch Collaborative Guidebook – 3 rd Bullet Point			
Holistic View	Arch Collaborative Guidebook – 4 th Bullet Point UW Health – Multifaceted Approach to EHR Personalization // MetroHealth – EHR Top 10 Tips and Tricks			
Same Day Chart Closure	<u>Arch Collaborative Guidebook – 2nd Bullet Point</u> <u>Legacy Health – Vendor Collaboration // Kadlec Regional Medical Center – Increasing RVUs through EHR</u> <u>Personalization // NYU Langone Health – A Provider Optimization Program</u>			
Leading Practices	Clinician Efficiency & Personalization			
IT Leadership	IT leadership cannot help improve efficiency when they don't thoroughly understand current workflows. Successful and efficient organizations start by understanding. <u>Arch Collaborative Guidebook – 1st Bullet Point</u>			
Scribes	Scribes have not proven to be a consistent solution to improve EHR satisfaction. But it is possible for organizations to use scribes effectively to improve efficiency. <u>Arch Collaborative Guidebook – 3rd Bullet Point</u>			
Set-up	Personalization tools take time to set up. Providers need protected time to set up successful personalization, so just teaching personalization is often not enough. <u>Arch Collaborative Guidebook – 5th Bullet Point</u>			

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Patterns of Success

Of the 46 organizations that have measured EHR satisfaction organization-wide at least twice, 36 have also filled out an executive survey describing what changes they have made as a result of their measurement and what impact these changes are having. 17 of these organizations have achieved statistically significant improvements (increase of at least 8 points) between their two most recent measurements. The most common pathways of success reported by these organizations were identified via a qualitative comparative analysis and are summarized in the graphic below.



Though not as commonly implemented as the above strategies, improving EHR governance actually has one of the biggest positive impacts on EHR satisfaction. Of the 36 organizations that filled out the executive survey, 7 report implementing major changes to their EHR governance, and 4 of these have seen statistically significant satisfaction increases among repeat respondents. More details on this and the other findings noted above can be found in the Expanded Insights section of the report.

Key Takeaways

- No matter what EHR satisfaction is like at your organization today, efforts to improve will likely yield results.
- Improvement is an iterative process—initial satisfaction measurements identify areas for improvement, and repeat measurements can help gauge the efficacy of implemented interventions.
- Going big (e.g., making major changes to EHR governance or retraining a significant portion of clinicians) isn't without risk but will likely be successful and yield the largest rewards.
- Efforts to improve the EHR experience are likely to also improve efficiency and the EHR's effect on quality of care.





Changes in Key Metrics —By Improvement Initiative

(n=# of organizations that have implemented initiative)	Average change in NEES	Average change in efficiency	Average change in quality of care	Average change in trust in organizational support of EHR
Added technology to EHR (n=23)	4.1	0%	1%	-1%
Changed governance (n=7)	9.9	5%	5%	2%
Increased availability of EHR support (n=17)	7.9	1%	0%	1%
Improved individual clinician training experience (n=23)	10.0	3%	3%	2%
Made significant changes to EHR (n=23)	6.7	2%	1%	0%
Made significant changes to training or workflows (n=27)	7.6	2%	1%	-1%
Implemented other change (n=13)	5.4	1%	3%	0%

Note: The Net EHR Experience Score (NEES) is a snapshot of clinicians' overall satisfaction with the EHR environment(s) at their organization. The survey asks respondents to rate factors such as the EHR's efficiency, functionality, impact on care, and so on. The Net EHR Experience Score is calculated by subtracting the percent of negative user feedback from the percent of positive user feedback. Net EHR Experience Scores can range from -100% (all negative feedback) to +100% (all positive feedback).



Average Change in NEES—by Changes in Ratings for Vendor Delivery, Personal Accountability, and Quality of Ongoing Training All repeat respondents



Survey Metrics Most Commonly Associated with High Overall Improvement

Percentage of clinicians reporting improvement; high-improvement clinicians only (n=13,065)



Change in NEES across measurements

When it comes to ongoing training, there is a 101.2-point difference in NEES between clinicians who strongly agree ongoing training is sufficient and those who strongly disagree. This is very close to the gap found in KLAS' 2019 Clinician Training report (102.7 points). The static nature of these results indicates ongoing training remains a key contributor to clinician satisfaction.

Figure 7 Net EHR Experience Score—By Agreement That Ongoing Training Is Sufficient All clinicians (-100 to 100 scale)




OrthoVirginia User Expectations: "Yes" to a Request for Change

Levels of EHR Change at OrthoVirginia







Program Goals

• Develop provider mastery of the EHR across the health system

Organizational Outcomes

• Improve provider Net EHR Experience score (NEES) by 33 points in one year

Collaborative-Verified Best Practices

Focus on enabling clinicians to develop EHR mastery

Advertise the coaching opportunities clearly so that many providers have a chance to participate

Follow up after initial training to allow for clinicians to understand where they may need more education and come back several times to train to enable this to take place

Intermountain[®]

Healthcare

Keys to Success

•Enlist clinical leaders, EHR champions, and division chiefs to promote the coaching

•Emphasize that coaching leads to less time in the EHR as well as improved clinician wellness (i.e., "there is no downside to doing this")

•Highlight that benefiting from coaching is universal, not atypical (using <u>this Atul Gawande article</u> from The New Yorker as a talking point)

•Make the coaching easy to attend:

- User chooses the time and location of the coaching (either in person or virtual)
- Direct sign-up links sent via email
- Screen savers include a QR code for signing up from personal smartphones (no login required)

https://klasresearch.com/archcollaborative/casestud y/next-level-ehr-mastery-coaching/378





WellStar The Science of Motivation

WellStar uses principles found within Daniel Pink's book *Drive* to motivate their employees, effectively increasing collaboration to improve patient care.

Keys to Success

- Providers are motivated to care for their patients; if you can find a way to show that the EMR helps them do this, then they are more likely to master it.
- When working with others, the biggest tension comes from misunderstanding the other party. Find ways to translate so misunderstandings don't grow. Understand that everyone wants the same outcome, which is to have the patient get better.

- 94th percentile for provider EMR satisfaction
- 91st percentile for trust in IT
- 85th percentile for provider efficiency



Salford Royal *Multiple Approaches to Ongoing EMR Education*

Salford Royal built a centralized location where clinicians can go for EMR education, governance meetings, and informal conversations for EMR optimization.

Keys to Success

- Making the room inviting—refreshments help
- Team culture and focus to engage frustrated clinicians and have them exit the room feeling empowered

- 98th percentile for overall provider satisfaction
- 96th percentile for provider trust with IT
- 98th percentile for provider satisfaction with initial training



Memorial Health System A Model for Initial Training

Memorial Health System adapted their initial EMR training to the needs and pace of their clinicians, resulting in highly satisfied clinicians.

Keys to Success

- Success with the EMR is part of the culture. Spread the word whenever new features are released to generate excitement among clinicians.
- Training is always evolving—to learn what works well and what doesn't, embed yourself with the medical staff and seek feedback.
- The way to avoid missteps is to understand your organization's culture. Try not to move too fast for a physician to keep up. This means you may have to adjust a vendor's training best practices when they don't match your culture.

- 99th percentile for initial training
- 99th percentile for trust in IT
- 99th percentile for EMR being easy to learn



Hunterdon Medical Center Training and Support

Hunterdon Medical Center customizes training for the specialty and the clinician, adjusting follow-up EMR education as needed to best support highly impacted specialties.

Keys to Success

- Clinicians are busy, so ensuring that their workflow is only interrupted when a change in the EMR impacts them directly is important.
- Clinical expertise (Doctor, Nurse, MA) and specialties have unique workflows.
 Training customized for combinations of these characteristics ensures the clinicians use the EMR to best facilitate their specific needs.
- Training is best when it is a small group and customized for specialty or department. Generic training for all specialties in a large group is not effective.

- 92nd percentile for provider's initial training
- 99th percentile for ongoing training



Hunterdon Medical Center 5 Minute Films

Hunterdon Medical Center eliminates wait time for access to educational resources regarding EHR usage by deploying 5-minute films to resolve the most common questions.

Keys to Success

- Proactive training.
- Limit the topic and length of each film.
- Keep the library of films searchable and current.
- Be willing to adjust the videos when they don't accurately answer the clinicians' questions.
- Track the questions that the help desk received to determine what common issues are and start with the most prevalent.
- The expert in the organization develops the video.

Outcomes

• 99th percentile for provider's satisfaction with ongoing training



Fairview Health Services How to Handle EMR Updates

Fairview Health Services creates a list of the top 10 most impactful features of the EMR at the time of each EMR update.

Keys to Success

- It is important to have providers talk with providers about the best changes as it eliminates a level of distrust that some clinicians have with EMR vendors.
- When going to discuss the changes with providers, do so in their existing meetings. This allows them to learn of changes without losing time for patient care.
- Try to make the top 10 list an impactful list for all EMR users, whether the features are new or old. Intentionally choose features that will impact the majority of the organization.

- 85th percentile for provider EMR personalization
- 95th percentile for provider use of report views
- 88th percentile for nursing EMR personalization
- 96th percentile for nursing use of report views



Baylor Scott & White Health *Accelerate Program*

Baylor Scott & White Health (BSW Health) created a refresher program that significantly raises EMR satisfaction and personalization levels for those who participate that also counts for CME credit.

Keys to Success

- Using clinicians as educators ensures that the principles being taught are applicable to an ideal clinical workflow.
- Staffing all modules with EMR-proficient, knowledgeable, and credentialed trainers is crucial to facilitate EMR development during the sessions so that providers have the help they need when setting up functionality that will help them as soon as they get back to clinical practice.
- Structuring the training in such a way that it meets CME requirements. That allows providers to utilize their time off to improve EMR efficiency with training and get CME credits, thus killing two birds with one stone.

- 99th percentile for EMR personalization
- 93rd percentile for report views
- Providers who have participated in the Accelerate Program have a statistically significant higher Net EMR Experience Score

Increased Efficiency -> Decreased Burnout for Providers

On average, the percentage of providers reporting at least some degree of burnout dropped by nine percentage points following an optimization sprint. Several factors likely contribute to this reduction in burnout. However, of particular note is that pre-intervention, less than half of participating providers viewed their EHR as a tool that enables efficiency; post-intervention, that number rose to almost two-thirds, with several organizations reporting a dramatic reduction in afterhours charting. Provider perceptions of the efficacy of their ongoing EHR training also saw a significant boost. <u>Other Collaborative data</u> has shown that providers who don't agree that their ongoing training is sufficient are 3.0-4.5 times more likely to report plans to leave their organization within two years.

Pre- and Post-Sprint Burnout and Satisfaction with Ongoing Training







Shared Ownership



Shared Ownership

Clinicians who strongly disagree that their EHR vendor delivers well are much less satisfied with the EHR experience overall than those who strongly agree **a difference in Net EHR Experience Score of 145.7 points.**



Shared Ownership

 Providers and nurses alike see big differences in EHR experience depending on their level of trust: for both providers and nurses, those with high trust have an average NEES that is
 60+ points higher than those with low trust.

Trust in Organization/IT Highly Correlated with EHR Experience

Having a shared sense of EHR ownership is one of the most important pillars of a strong EHR experience—and clinician trust in their organization/IT leadership is an important aspect of that shared ownership. At the individual provider level and at the organization level, trust in organization/IT leadership is correlated with higher EHR satisfaction. Organizations that score in the 50th percentile or above for this metric have an average Net EHR Experience Score (NEES)[†] of 48.8, while those below the 50th percentile have an average score of 21.7.

Net EHR Experience Score—By Collaborative Percentile for Trust in Organization/IT (-100 to 100 scale)

50th percentile and over	(n=195)			48.8	
Below 50th percentile	(n=194)	21.	7		
	0.0	Collaborati	ve average		100.0

Providers who strongly disagree that their organization/IT leadership delivers well are about 85x more likely to report a poor EHR experience than those who strongly agree.

Odds of Reporting Dissatisfaction with the EHR—by Agreement That Organization/IT Delivers Well



Lots of Ways to Build Trust!

Trust-Building Case Studies

Northwestern Medicine: Dyadic leadership Compass Medical: Creating predictability John Muir: Physician empowerment through governance

JPS Health: Physician liaisons NYU Langone Health: Epic Elevate program Edward Elmhurst: Energy of Activation program Kaiser Permanente: Clinician champions program Mayo Clinic: Just-in-time training classes Salford Royal: Experience center Akron Children's: Focus on improved support Northshore University: Pager training program Memorial Health: Informatics lab Benefis Health System: Help desk bypass



A new set of questions was recently added to the EHR Experience Survey that ask about EHR governance. Participating clinicians are asked to rate their agreement with the following statements:

- I am able to get support in a timely manner when I have an EHR issue
- I know how to request a fix to the EHR
- I have a voice in trying to improve the EHR
- EHR fixes are made in a timely manner
- Changes to the ERH are well communicated
- There is someone assigned to help my department with the EHR
- The IT department is actively seeking to improve the EHR for clinicians





How to Create a Strong EHR Governance/Shared Ownership?

- Multi Disciplinary Members of the EHR Governance Board
- Building Relationships with End Users
- Creating a Solid Communication Layer
- Cutting Through Red Tape to Make Changes to the EHR

Nurses May Be Built for Governance

Nurses looking for better delivery from organizational and vendor leaders



• They might be your most valuable partners in shaping the EHR experience



Shared Ownership – Multidisciplinary Governance

Organization NET EHR Experience Score-

By Who Leads EHR Governance Group

Net EHR Experience Scores adjusted for EHR in use (-100 to +100 Scale)

A Administration	TT TT	N Nurse	O Other	P Physician
	(n=3)			38.1
NP	(n=11)			37.5
(A) (T) (P)	(n=5)			34.4
	(n=17)			32.5
T	(n=14)			30.7
$\square \square \bigcirc \square$	(n=5)			29.8
AITNP	(n=4)			25.4
A	(n=5)			24.4
P	(n=57)			22.8
	(n=8)			18.5
AP	(n=4)			16.3
AIINOP	(n=3)			14.8
	-50		0	100

Guidebook: Organizations with broad, multi-disciplinary team engagement in EHR governance see higher EHR satisfaction; governance should be led by a clinician, an IT/informatics leader, and an administrative leader

Shared Ownership – Obstacles to EHR Changes

Organization Net EHR Experience Score

By Minimum Number of Committees an EHR Change Must Pass Through to Get Made

Net EHR Experience Scores adjusted for EHR in use (-100 to +100 scale)



Successful organizations have fast tracks for quick, obvious EHR changes. Efforts to quickly improve do not work if IT analysts are not plugged in to the needs of clinicians. These fast tracks can take several forms:

- Some organizations set aside one day each month (or one day each week) when all analysts make quick needed changes.
- Some organizations have physicians who are trained on making EHR changes (i.e., physician builders) who are given authority to make limited-scope changes.

Shared Ownership – Employed by IT/Informatics

Organization Net EHR Experience Score

By Number of Providers Employed by IT/Informatics Per 1,000 Provider Users

Net EHR Experience Scores adjusted for EHR in use (-100 to +100 scale)



Closing the Communication Loop Through– Rounding

- Rounding allows organizations to build relationships both at the individual level, between the informaticist and the clinician, and at the organization level, between IT and clinical operations.
- It allows <u>clinicians to get immediate answers to questions</u> and <u>allows rounders to identify common issues</u> and the types of education that would benefit a larger audience.

Organization Net EHR Experience Score-

By Frequency of Rounding Visits

Net EHR Experience Scores adjusted for EHR in use (-100 to +100 scale)





Kaiser Permanente Northwest Pyramid of Change

Kaiser Permanente Northwest identified a root cause of EMR frustration and created a way for clinicians to feel empowered by their EMR.

Keys to Success

- It is important for organization leaders to maintain communication with clinical EMR end users, learn end users' workflow needs, and attempt to meet their requests.
- Clinicians need to feel that the EMR is supported by people who understand that the EMR is a clinical aide, not a billing or IT tool.

- 99th percentile for overall provider satisfaction
- 99th percentile for agreement that IT leadership has implemented and supported the EMR well



GHVHS *EHR Enhancement Management*

Greater Hudson Valley Health System, a community hospital with limited resources, created an environment where EHR development tasks are properly prioritized.

Keys to Success

- Because clinicians narrow down the list of priorities, it is important that they are able to access the data. It is essential that analytics tools for EHR operations create reports and information that clinicians can use to make appropriate decisions.
- Sometimes it appears that each clinician has their own preference, which can hinder progress if there is not a culture of teamwork. When there is no consensus, rely on the clinical expert or champion in each specialty.

- 98th percentile for overall clinician satisfaction
- 87th percentile for agreement that leadership has implemented and supported the EHR well
- GHVHS often manages to get changes made to the EHR within 1 to 2 days