

Alberta Health Services 2023 Arch Collaborative Survey Findings



Overview

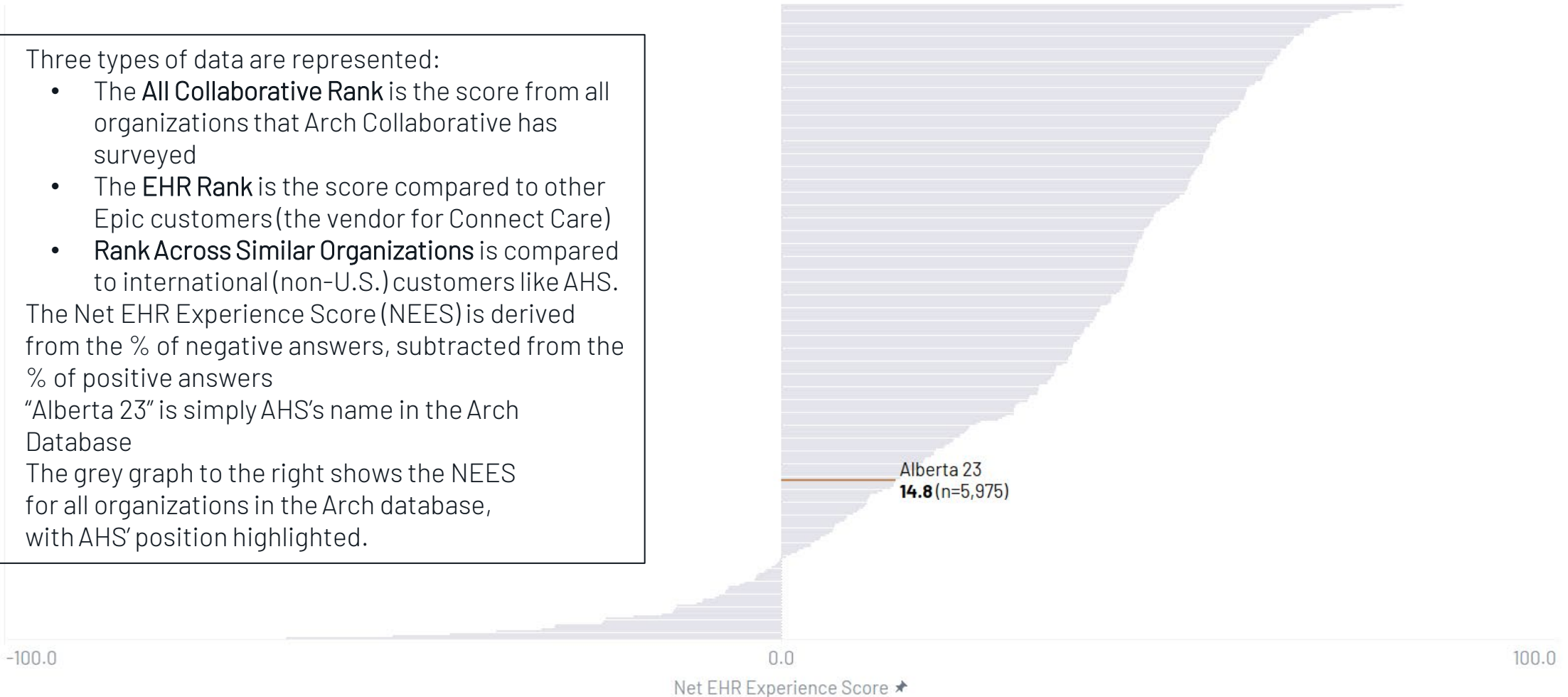
- In early 2023, AHS partnered with the ARCH Collaborative, a global organization that surveys clinicians to evaluate their satisfaction with the efficiency and quality of care enabled by their clinical information systems. A Connect Care user survey was conducted in February to March 2023, with almost 6,000 respondents.
- To date, Arch Collaborative has worked with over 300 organizations and surveyed over 400,000 clinicians in 13 countries. The survey results are summarized as a *Net Electronic Health Record (EHR) Experience Score (NEES)*, which can range from -100 to +100 (worst to best). Based on global data, the NEES tends to be lowest just after implementation, and tends to improve over time as organizations optimize their systems.
- The intent of this survey is to benchmark the AHS Connect Care system against other organizations in the world, to use the data to prioritize areas for improvement, and advocate for the resources to do so.
- Connect Care has been deployed to almost 100,000 users so far, and it is a landmark accomplishment that all of Edmonton, Calgary and Central Zone acute care facilities are now using Connect Care. This represents one of the largest deployments of a single clinical information system in the world, and it was accomplished over a time of challenges including a global pandemic, healthcare staff shortages, and matters of labour relations.
- Using the Arch Collaborative data and working in partnership with clinicians and prescribers, AHS is formulating an action plan to optimize the Connect Care system for improved clinical efficiency, user satisfaction, and patient outcomes. Together, we can make Connect Care the backbone of a better province-wide healthcare system.



Overall Benchmark Net EHR Experience Score Alberta 23
 Included Clinical Backgrounds: **All respondents at 297 Organizations**
 EHR Benchmark: **186 Epic Organizations**
 Similar Organizations: **25 Non-US Health Systems**



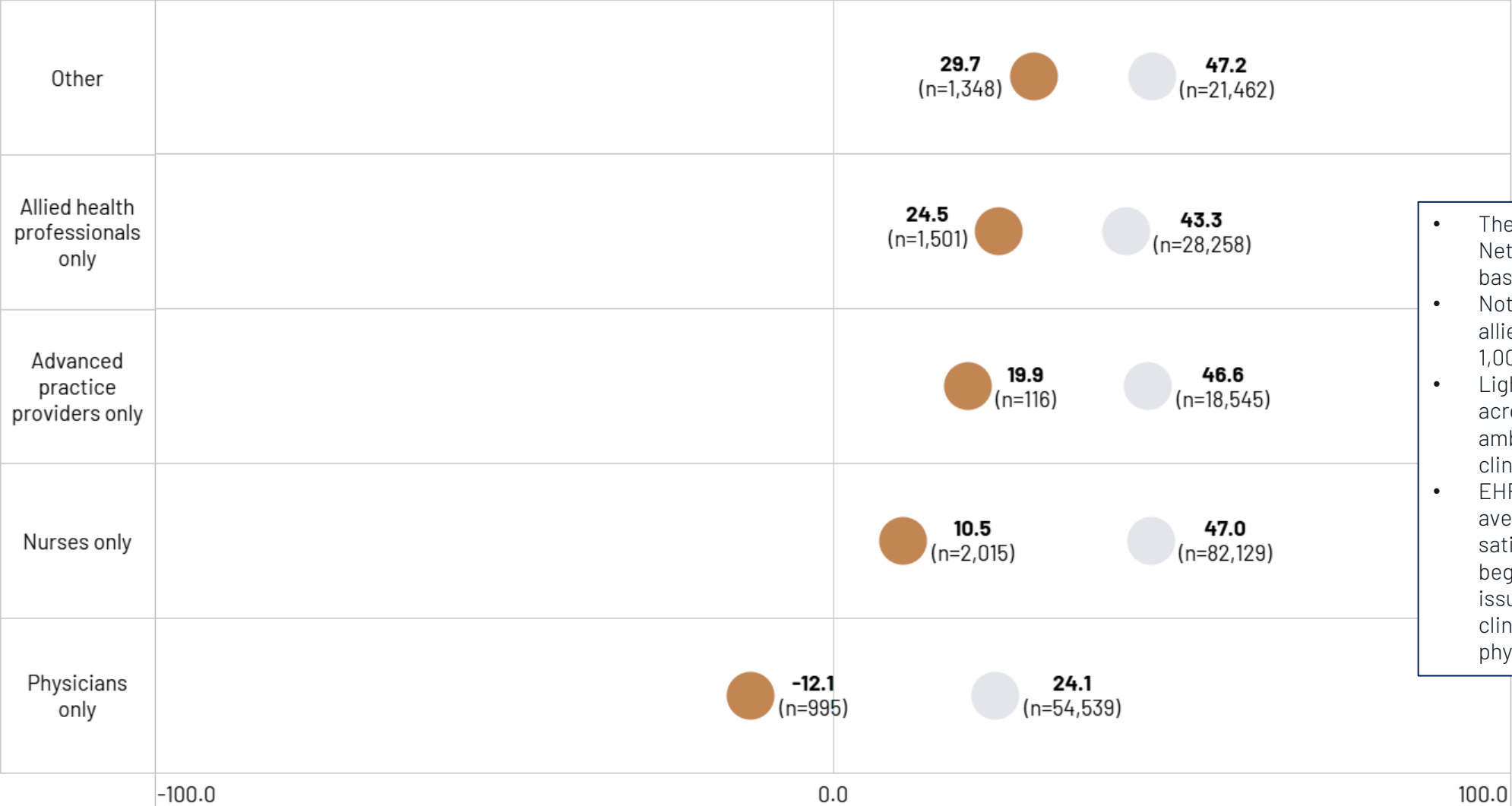
- Three types of data are represented:
 - The **All Collaborative Rank** is the score from all organizations that Arch Collaborative has surveyed
 - The **EHR Rank** is the score compared to other Epic customers (the vendor for Connect Care)
 - **Rank Across Similar Organizations** is compared to international (non-U.S.) customers like AHS.
- The Net EHR Experience Score (NEES) is derived from the % of negative answers, subtracted from the % of positive answers
- "Alberta 23" is simply AHS's name in the Arch Database
- The grey graph to the right shows the NEES for all organizations in the Arch database, with AHS' position highlighted.



Net EHR Experience Score—by Clinical Background Benchmarked

All respondents (n>5)

■ Alberta 23
 ■ Overall Collaborative

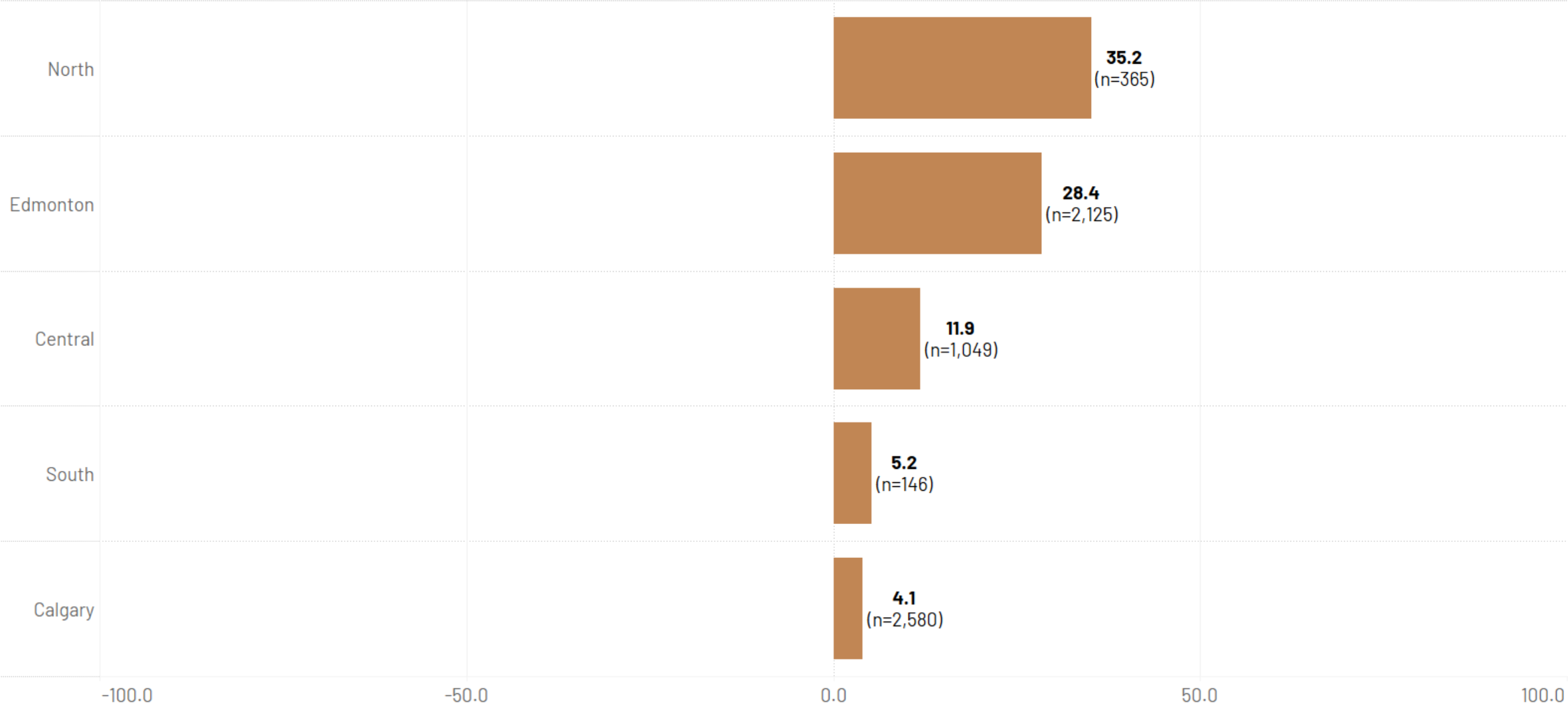


- These results show difference in the Net EHR Experience Score (NEES) based on clinical background
- Note that about 2,000 nurses, 1,500 allied health professionals, and almost 1,000 physicians took the survey
- Light grey dots show the average NEES across the Arch database, and the amber dots show the AHS NEES by clinical background
- EHR software is still in evolution. On average, physicians are the least satisfied group. Software vendors are beginning to more actively address this issue with a focus on efficiency of clinical workflows, particularly for physicians.

- Edmonton Zone have been using the software the longest, some hospitals since 2019
- Longer period of use tends to correlate with higher satisfaction scores
- The global Arch Collaborative data set includes new users as well as long term users that have gone through focused optimization

Net EHR Experience Score—by Zone

Alberta 23; all respondents; multiple responses possible (n>5)



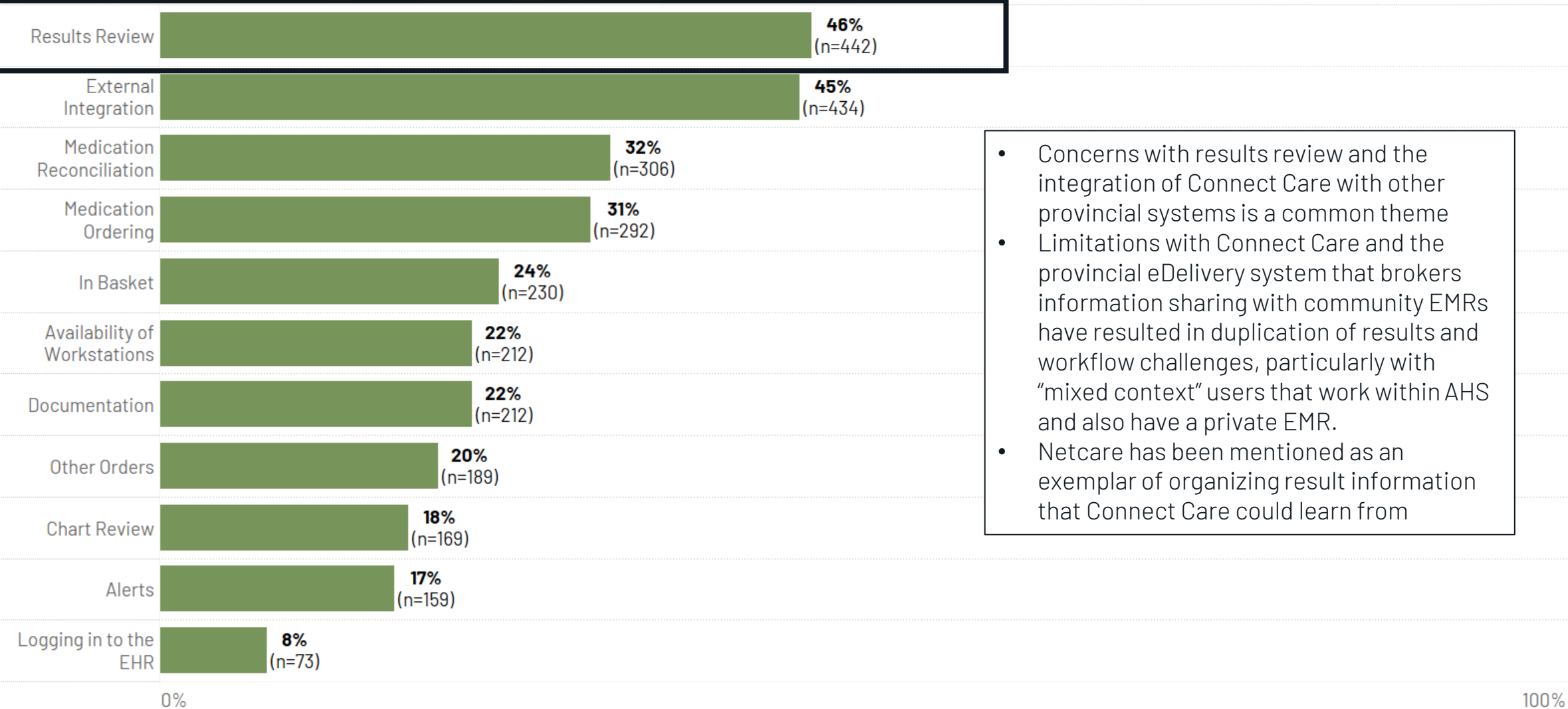
Observation #1

Provider #1 Requested Fix: Data Accessibility

- Results Review
- Reporting and Analytics

Percent Selected As Top 3 Areas That Need Improvement

Alberta 23; providers only



- Concerns with results review and the integration of Connect Care with other provincial systems is a common theme
- Limitations with Connect Care and the provincial eDelivery system that brokers information sharing with community EMRs have resulted in duplication of results and workflow challenges, particularly with “mixed context” users that work within AHS and also have a private EMR.
- Netcare has been mentioned as an exemplar of organizing result information that Connect Care could learn from

Provider commentary on Results Review

"Things I order in my family practice should not show up in my connect care inbox at all, especially not prior to me getting the result in my clinic EMR."

"Stop reporting labs to CC and my office EMR, should only go to EMR that initiated the requisition."

"Duplicate results. I see the same result many times."

"Find a way that I don't have to review results twice as some go to CC and also to my office EMR."

"It sends me duplicates of tons of reports that I also get at the office."

"Make results review like Netcare."

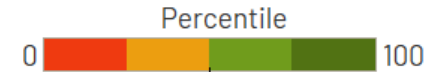
"Better result viewing/more similar to Netcare."

"Make the results tab more like Netcare. I still go to Netcare regularly because it is easier to find things."

"I often go to Netcare to look at lab results - until CC has a better system for lab review, Netcare will be critical."

"Reviewing results is still very 'messy' in CC. I often go to Netcare where it's laid out more comprehensively. In CC I always feel like I might be missing something."

Overall Benchmark Analytics & Access Metrics Alberta 23
 Included Clinical Backgrounds: **Providers only at 297 Organizations**
 EHR Benchmark: **186 Epic Organizations**
 Similar Organizations: **25 Non-US Health Systems**



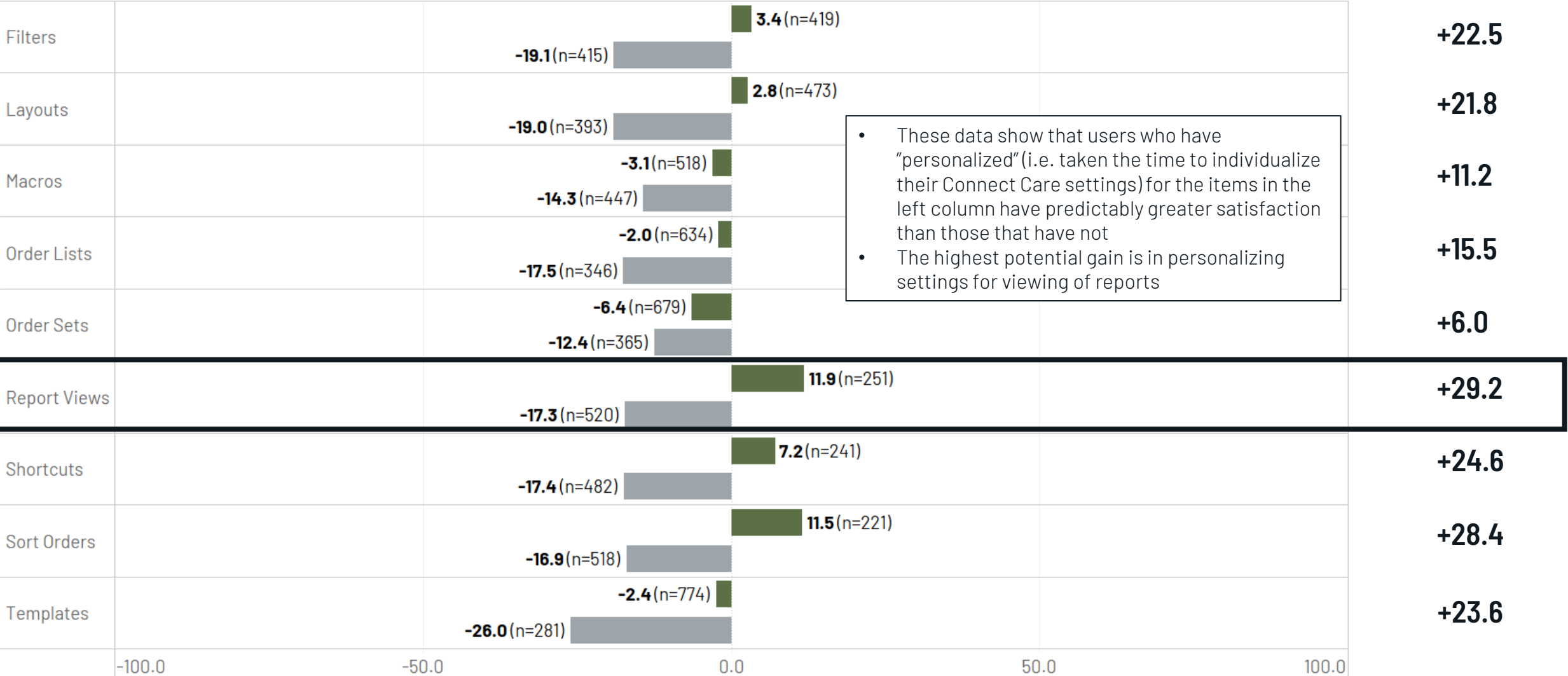
	Percent Agree	Rank: Collaborative	Rank: EHR	Rank: Similar Organizations
Easy To Access Patient Data	39% (n=1,076)	5th Percentile	0th Percentile	15th Percentile
Appropriate Messages Volume	33% (n=1,073)	5th Percentile	0th Percentile	20th Percentile
Has Needed Analytics	12% (n=1,072)	7th Percentile	2nd Percentile	9th Percentile

- These data also reflect the general concern about organization and retrieval of data
- The results were different than other feedback that AHS received suggesting that one of the benefits of Connect Care is the ability to get a more global picture of a patient’s entire health journey through AHS
- Later slides show that users are more satisfied once they have personalized their settings

Net EHR Experience Score—by Use of EHR Personalization Tools

Alberta 23; providers only

■ Using
■ Not using

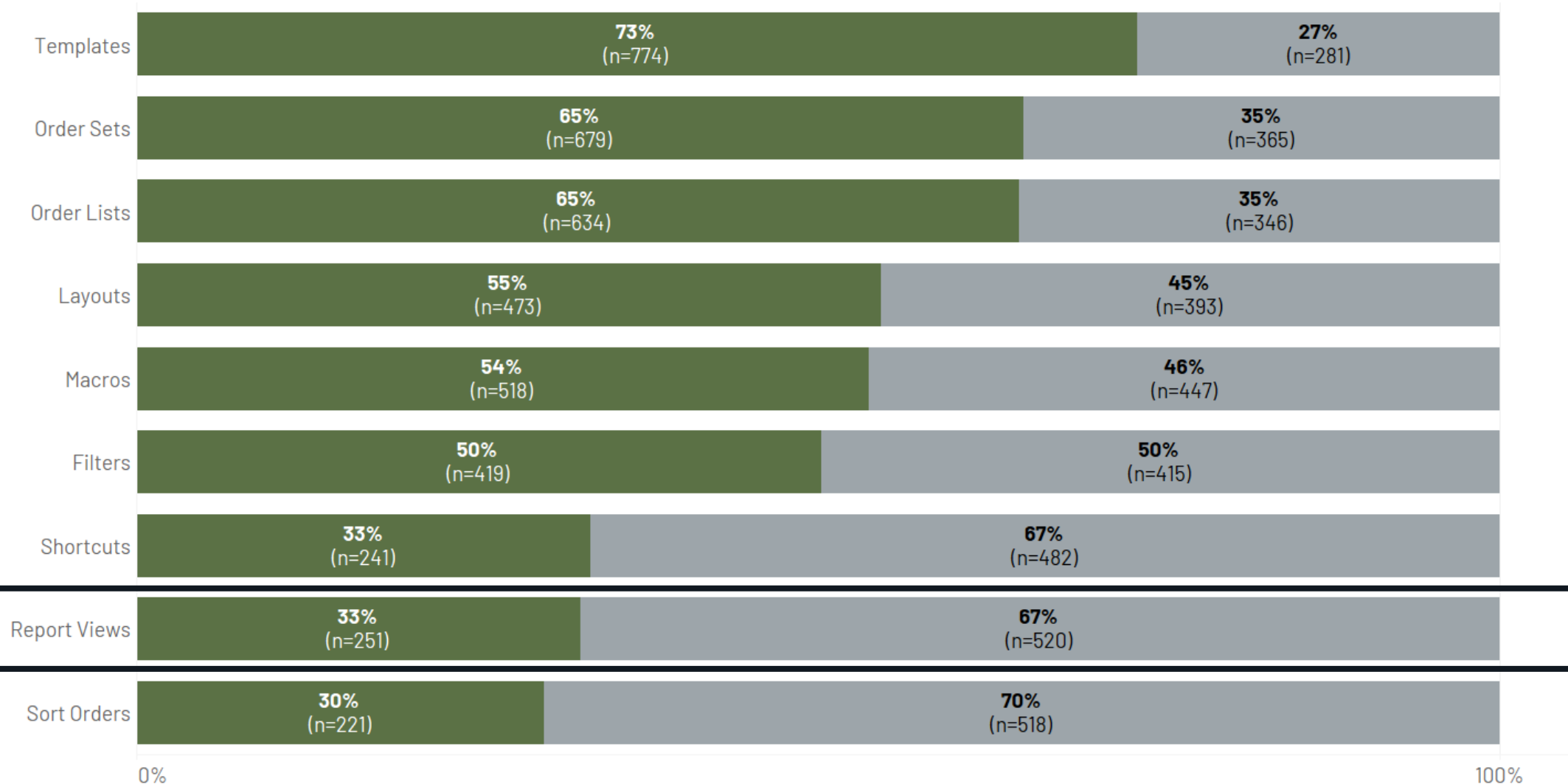


Use of EHR Personalization Tools

Alberta 23; providers only

- This shows the percentage of all users that have modified their personalization settings
- There is an opportunity to focus on increasing the proportion of users who have personalized their settings, such as with report views

■ Using
■ Not using



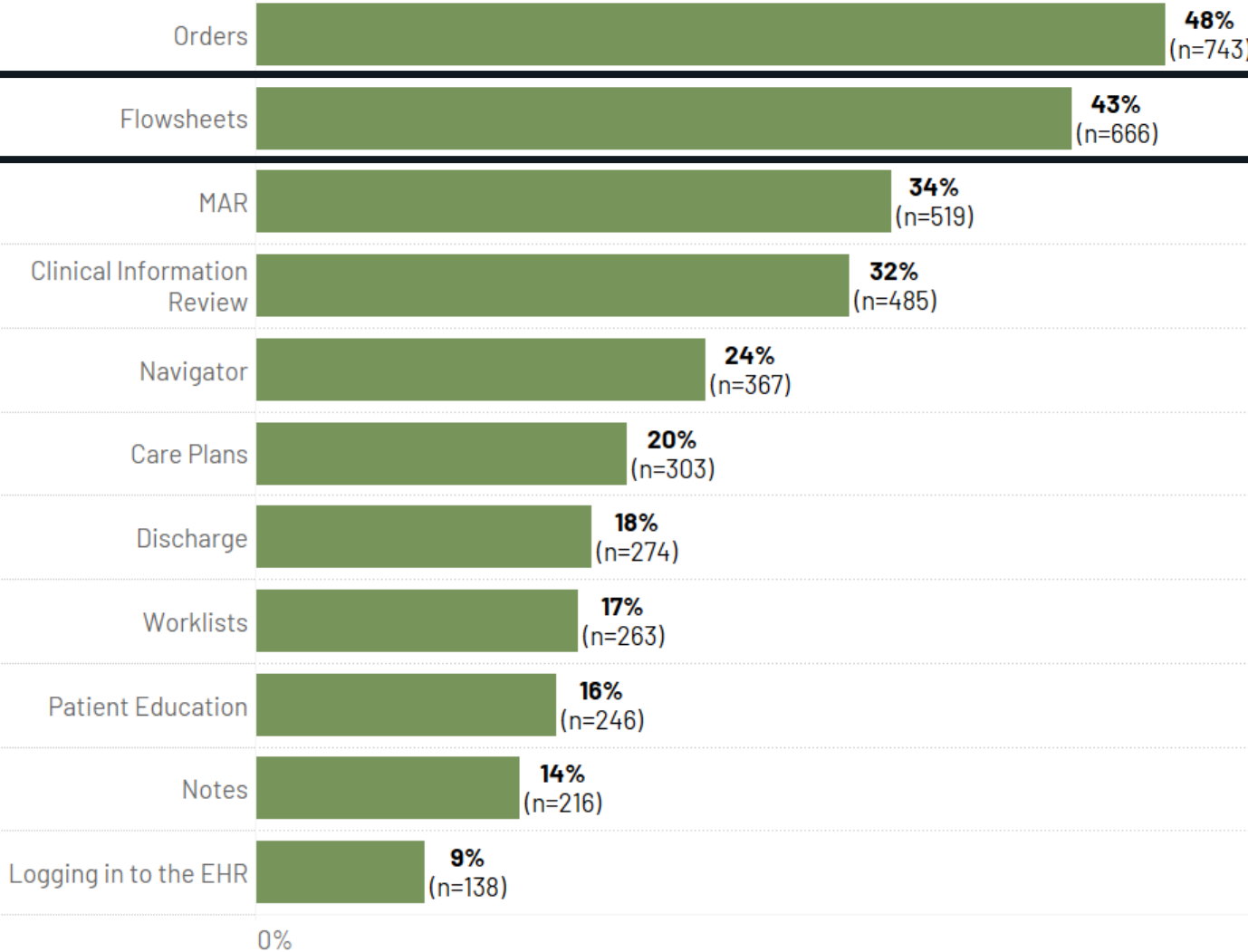
Observation #2

Nurse #1 Fix Request: Decrease Documentation Burden

- Flowsheet bloat
- Excessive/duplicative charting

Percent Selected As Top 3 Areas That Need Improvement

Alberta 23; nurses only



- An important point of feedback from nurses relates to the burden of clinical documentation in flowsheets
- Flowsheets is one of several areas that could be simplified, standardized and optimized to improve nurse efficiency and satisfaction

Nurse commentary on documentation burden

"Arrange flowsheet to not be a list of 500,000 items."

"Decrease the amount of options/buttons in charting on flowsheets, etc. Make it more condensed so it's not so overwhelming and timely to look through."

"Decrease the redundancy of the options on the flowsheets, and make more applicable to our specialty area."

"Double charting on flowsheets."

"Flowsheet documentation takes a long time - there are SO many flowsheets."

"Flowsheets - so many, duplicate charting it feels like."

"Flowsheets (too many options)."

"Flowsheets and the duplicating information in different spots."

"Flowsheets are too wordy, too many columns/spaces irrelevant to my workplace. Difficult to backtrack what was charted/done and when. I.e., when the last time patient was mobilized)."

"Flowsheets-WAY too busy-information can be streamlined to be where it is needed/pre treatment/treatment/post treatment."

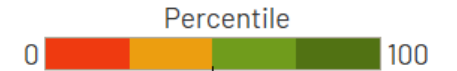
"Improve flowsheets for more efficient charting."

"Improvement of flowsheet. Too much duplicate charting."

Observation #3

Training

Overall Benchmark Training Metrics Alberta 23
 Included Clinical Backgrounds: **All respondents at 297 Organizations**
 EHR Benchmark: **186 Epic Organizations**
 Similar Organizations: **25 Non-US Health Systems**



	Percent Agree	Rank: Collaborative	Rank: EHR	Rank: Similar Organizations
Initial Training Was Sufficient	27% (n=5,943)	1st Percentile	2nd Percentile	13th Percentile
Ongoing Training Is Sufficient	39% (n=5,739)	7th Percentile	4th Percentile	29th Percentile
Workflow Training Met My Needs	40% (n=5,911)	1st Percentile	0th Percentile	11th Percentile
Virtual Training Met My Needs	21% (n=5,541)	5th Percentile	3rd Percentile	14th Percentile
Tip Sheets and Online Training are Effective	44% (n=5,778)	11th Percentile	10th Percentile	25th Percentile
In-Person Training is Helpful and Effective	63% (n=5,811)	2nd Percentile	0th Percentile	11th Percentile

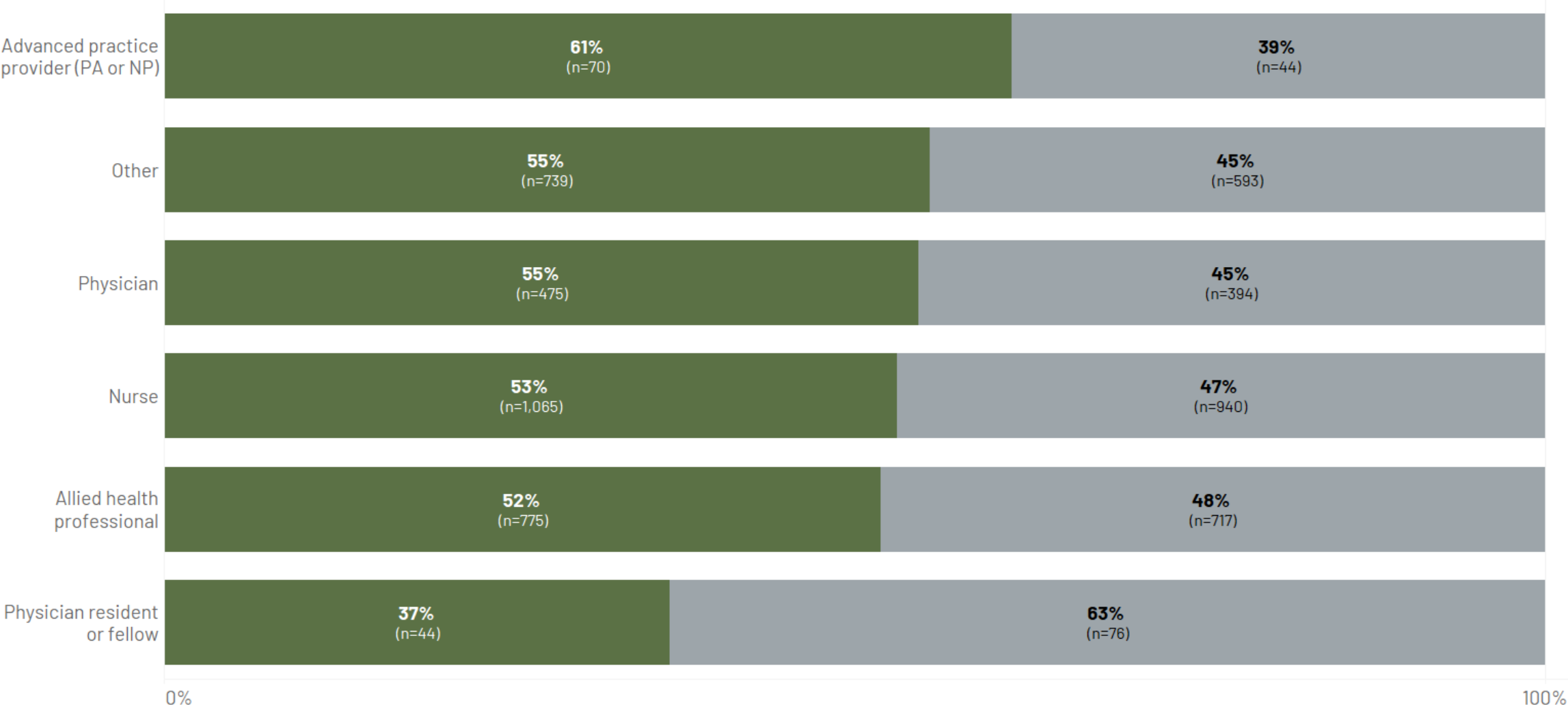
- Results reflect that the Connect Care initiative has to modify its training approach
- The number of hours of training is roughly the same as other organizations, but it is not perceived to be meeting end user needs
- Now that Connect Care is widely deployed, it is clear that AHS needs to develop an improved program for ongoing education of current users, as well as improvement of training for new staff and prescribers

Would You Like More EHR Education?

Alberta 23

- A significant percentage of Connect Care users want more training, representing an opportunity to improve satisfaction and efficiency with ongoing education programs

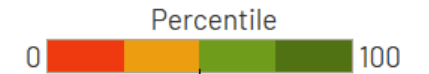
■ Want more training
■ Had enough training



Observation #4

Support

Overall Benchmark Shared Ownership Metrics Alberta 23
 Included Clinical Backgrounds: **All respondents at 297 Organizations**
 EHR Benchmark: **186 Epic Organizations**
 Similar Organizations: **25 Non-US Health Systems**



	Percent Agree	Rank: Collaborative	Rank: EHR	Rank: Similar Organizations
Vendor Delivers Well	42% (n=5,458)	29th Percentile	4th Percentile	35th Percentile
Organization Delivers Well	33% (n=5,469)	9th Percentile	4th Percentile	25th Percentile
Personal Accountability	65% (n=5,470)	37th Percentile	26th Percentile	50th Percentile

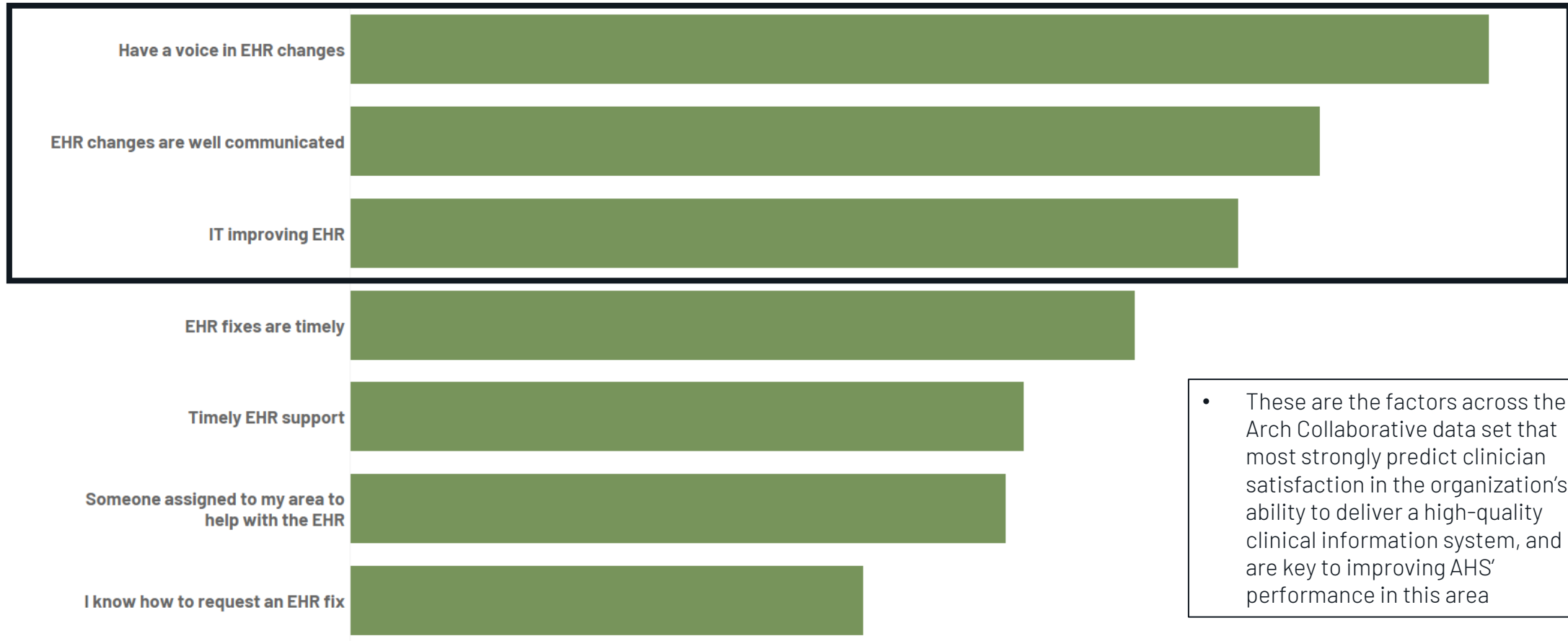
These three survey questions, in order, reflect:

- Users' perception of the software vendor's ability (i.e. Epic) to provide a high-quality clinical information system (**Vendor Delivers Well**)
- Users' perception of the organization's ability (i.e. AHS) to deliver a high-quality clinical information system (**Organization Delivers Well**)
- Users' assessment of their own commitment and effort in learning to use the system tools (**Personal Accountability**)

Upgrade Metrics Most Predictive of Strong Organizational Delivery

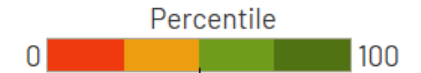
Agreement That Organization/IT Delivers Well Variable Importance

Epic respondents from Sept 2022–March 2023 only (n=37,302)



• These are the factors across the Arch Collaborative data set that most strongly predict clinician satisfaction in the organization's ability to deliver a high-quality clinical information system, and are key to improving AHS' performance in this area

Overall Benchmark EHR Support Metrics Alberta 23
 Included Clinical Backgrounds: **All respondents at 297 Organizations**
 EHR Benchmark: **186 Epic Organizations**
 Similar Organizations: **25 Non-US Health Systems**



	Percent Agree	Rank: Collaborative	Rank: EHR	Rank: Similar Organizations
Timely EHR Support	45% (n=5,471)	5th Percentile	6th Percentile	22nd Percentile
Can Request Fixes	61% (n=5,461)	36th Percentile	36th Percentile	67th Percentile
Have a Voice	22% (n=5,459)	8th Percentile	9th Percentile	11th Percentile
Fixes are Timely	22% (n=5,456)	8th Percentile	8th Percentile	22nd Percentile
Changes Well Communicated	32% (n=5,455)	2nd Percentile	0th Percentile	0th Percentile
Someone Assigned to My Area	40% (n=5,446)	21st Percentile	23rd Percentile	50th Percentile
IT Improving EHR	25% (n=5,432)	2nd Percentile	4th Percentile	11th Percentile

These scores reflect that clinicians and prescribers using Connect Care:

- Do not feel sufficiently heard or engaged in how the system is used and improved.
- Do not think that communication of system updates/changes is effective.
- Perceive that not enough work is being undertaken to improve Connect Care, and that current build is based IT considerations instead of clinical needs.

Lack of input from end users

“Changes are made to the EHR without the frontline people being involved.” —Nurse, community health system

“I want more of a voice in changes and updates.” —Nurse, large health system

“Updates seem to have little clinical input from users.” —Nurse, academic health system

“I have never seen any information about how we can give suggestions before upgrades or changes.” —Allied health professional, large health system

“Modifications and updates are not user-focused and are for the benefit of IT.” —Physician, large health system

Case Studies

- A benefit to being a member of the Arch Collaborative is access to numerous case studies from organizations that have high Net EHR Experience Scores, and/or have gone through rounds of optimization that have been successful in improving their scores
- Samples of case studies pertaining to improving organizational delivery of a high-quality clinical information system are on the following slides



HARRISHEALTH
SYSTEM

Leveraging Informatics and IT Teams to Increase Feelings of EHR Support

February 2023

Harris Health System

Leveraging Informatics and IT Teams to Increase Feelings of EHR Support

Harris Health' System's Informatics and IT departments work together with end users to understand and resolve issues, creating a robust EHR support for providers.

Program Goals

- Better understand the needs of end users through frequent engagements with the informatics and IT teams

Collaborative-Verified Best Practices

- Clinician Relationships and Communication
- Shared Ownership and Governance

Keys to Success

- IT/informatics teams' efforts are focused on making changes for clinicians instead of imposing changes on them
- Use EHR rounding to interact frequently with clinicians
- A fast track for quick, obvious changes
- Requests are submitted following a consistent process

Outcomes

- 84th percentile for provider agreement that the organization/IT department delivers well
- 81st percentile for provider agreement that they receive timely EHR support
- 84th percentile for provider agreement that they have a voice in EHR changes
- 99th percentile for agreement that EHR fixes are timely
- 80th percentile for provider agreement that the IT department is improving the EHR for clinicians

Clinical Informatics Improvement



Cottage Health partnered with Chartis to restructure their clinical informatics team and processes to align with organizational priorities, decrease unnecessary variability in care, help drive improvements in care effectiveness and efficiencies, and reduce burnout potential. Leveraging this new clinical informatics structure, Cottage Health has also increased organizational trust in IT and informatics.

Cottage Health & Chartis: Clinical Informatics Improvement

Cottage Health partnered up with Chartis to restructure their clinical informatics team and processes, resulting in increased trust in the organization and IT efforts.

November 2022

Keys to Success

- Remember that successful teamwork happens when IT/informatics efforts are focused on making changes for clinicians instead of imposing changes on them
- Use EHR rounding to interact frequently with clinicians
- Build teamwork and alignment by encouraging clinical leaders and IT/informatics groups to share their goals with each other

Outcomes

- 15% increase in repeat respondent agreement that their organization/IT team delivers well.
- 86th percentile for agreement that clinicians have a voice in EHR changes.

- Monthly scorecard
- Single page
- Easy to read and digest
- Clear communication tool
- Celebrate our wins – Quick and Big
- Accountability and Transparency

Monthly Update – December 2021
Clinical Informatics

RECIPIENTS Sheri Ribeiro CIO Christophe LeRenard CMIO Griff Sahlin Director Clinical Informatics and Care Delivery Applications		INFORMATICISTS Kelli Jackson, MSN, RN Sr. Clinical Informaticist Josephine Kelly BSN, RN, CNOR Clinical Informaticist	
SUMMARY Josephine completed Epic CLN 102: Epic for the Clinical Informaticist and earned Certification. Kelli returned from LOA. Both Informaticists and the Informatics Manager assisted with employee COVID booster clinics.			
Month	Total CI Tickets 43	Tickets Opened by CI 31	Tickets with CI Consulted 12
Cumulative	2021 Total CI Tickets 234	% of Tickets Closed (212/234) 90.5%	Average Time to Closure (CI initiated tickets n=168) 13.17 days
INPATIENT DEPARTMENTS VISITED	SBCH Inpatient: 58bath, 1 Compton, 1RT, 1WC, 2 Compton, MICU, SICU, 3RT, 3WC, Birth Center, NBN, Peds, NICU, Hemodialysis, CRH, Palliative Care	SBCH Procedural: Endoscopy, Electrophysiology Lab, Interventional Radiology, Cath Lab, PPSU, PACU, Surgery	GVCH: Pre-Op, PACU, Surgery, Med Surg, Case Management, ED, Admitting
INPATIENT HIGHLIGHTS	Time spent observing Anesthesia CottageOne workflows: Drs. Miller, Atkinson, Lipman		
AMBULATORY DEPARTMENTS VISITED	Grotenhuis Pediatric Clinic, Ridley Tree Wound Center, SBCH & GVCH Infusion Suites, GVCH Therapy Services, Radiology Breast Imaging, SBCH OPS		
AMBULATORY HIGHLIGHTS	Teamwork w/Tricia & Kaycie re: MOB Outside Results Workflow Met Denise Higgins. Discussed vision and some of Kelli's observations from 1:1 sessions w/the MDs		
quick WINS	<ul style="list-style-type: none"> Assisted Drs. Sanchez & Sues w/Maas360 Optimized Secure Chat settings for Dr. Yim Provided C. Izu (Physical Therapist) M**Modal tips Assisted PPSU RNs w/ Compass & CPR program Found missing sidebar for Dr. Tsai EPCS enrollments 	BIG WINS	<ul style="list-style-type: none"> Provided clarification and education to Dr. Brown re: IP/ASAP Suicide Precaution orders – Prevented further confusing email threads for ASAP, Orders, & ClinDoc Clarified post-assessment note creation workflow A. Lebolt (LCSW) – Prevented ClinDoc from unnecessary research
Gemba Hours	CI Development Hours		Personalization Sessions
30.5	30		4
WHAT WE'RE HEARING			

Bellin Health

Planning Consistent and Tailored Communication

Bellin Health built communication planning into their governance process and utilized leadership and superusers to help facilitate the communication for changes to the EHR.

Program Goals

- Effectively communicate EHR changes and other important information to clinicians

Collaborative - Verified Best Practices

- Clinician Efficiency and Personalization
- Shared Ownership and Governance

Keys to Success

- Push communication in many different ways and adapt communication methods to the type of message and audience
- Build communication strategies into the governance process
- Be consistent with delivery methods and formatting for regular communication
- Communication should come from a trusted source, such as a leader, educator, or superuser, rather than IT people

Outcomes

- Providers 99th percentile for communication satisfaction
- Nurses 94th percentile for communication satisfaction



bellinhealth

Planning Consistent and Tailored Communication

March 2023

Summary

- Arch Collaborative has provided a detailed summary of the Connect Care Net EHR Experience Score, allowing us to benchmark against other organizations
- Survey results indicate there are several areas requiring focus for improvement
- According to the Arch Collaborative, it is not uncommon for the Net EHR Experience Score to be lower in the periods just after launch. However, AHS is taking these results seriously and is committed to undertaking the following actions to address clinician and prescriber needs:
 - A province-wide Town Hall to discuss these findings with prescribers (Sep 2023)
 - Meetings with AHS clinical staff to discuss their needs and design solutions
 - A jointly developed action plan, a draft of which is on the following slide / linked [here](#)
 - Repeat administration of the Arch Collaborative survey to measure progress in improvement of Connect Care



Connect Care Enhancements Underway or Proposed

- Custom software development with the Connect Care vendor (Epic) to further address document and result routing concerns, including:
 - Singular routing to either In Basket or office EMR's (but not both)
 - Delivery to locations specific to the community clinic at which a patient receives care (rather than a single default location per provider)
 - Ability for physicians to select from a choice of routing options that match their practice needs.
→ The first routing improvements are targeted to be live by November 2023.
- An initiative to improve nursing admission, daily care and discharge documentation.
- A multi-pronged strategy to optimize prescriber workflow, reduce administrative burden and improve satisfaction, including:
 - Enabling community clinic medical office assistant access to Connect Care Provider Portal to manage clinical documents and communications (subject to government and privacy regulatory review and approval)
 - Interprofessional AHS task force with AMA representation to examine and improve efficiency of community-based ordering of treatment at AHS facilities (e.g., Day Medicine)
 - Increased resources for analysis and reduction of in basket messages and improvement of Connect Care results review functionality
 - Further supports and education to increase use of Connect Care personalization tools, as these have been shown to improve physician efficiency and satisfaction
 - Enhancements to Connect Care support and education, via clinically-experienced support team members and improved on-demand curriculum
- Strengthening clinical leadership and the clinical voice in designing, prioritizing and implementing improvements in Connect Care.

