Results from the Physician Health Information Technology Survey

HIT Data Sharing Meeting
November 21, 2019

Outline

- Background
- Methods
- Sampling of results
- Dissemination and action
- Your thoughts

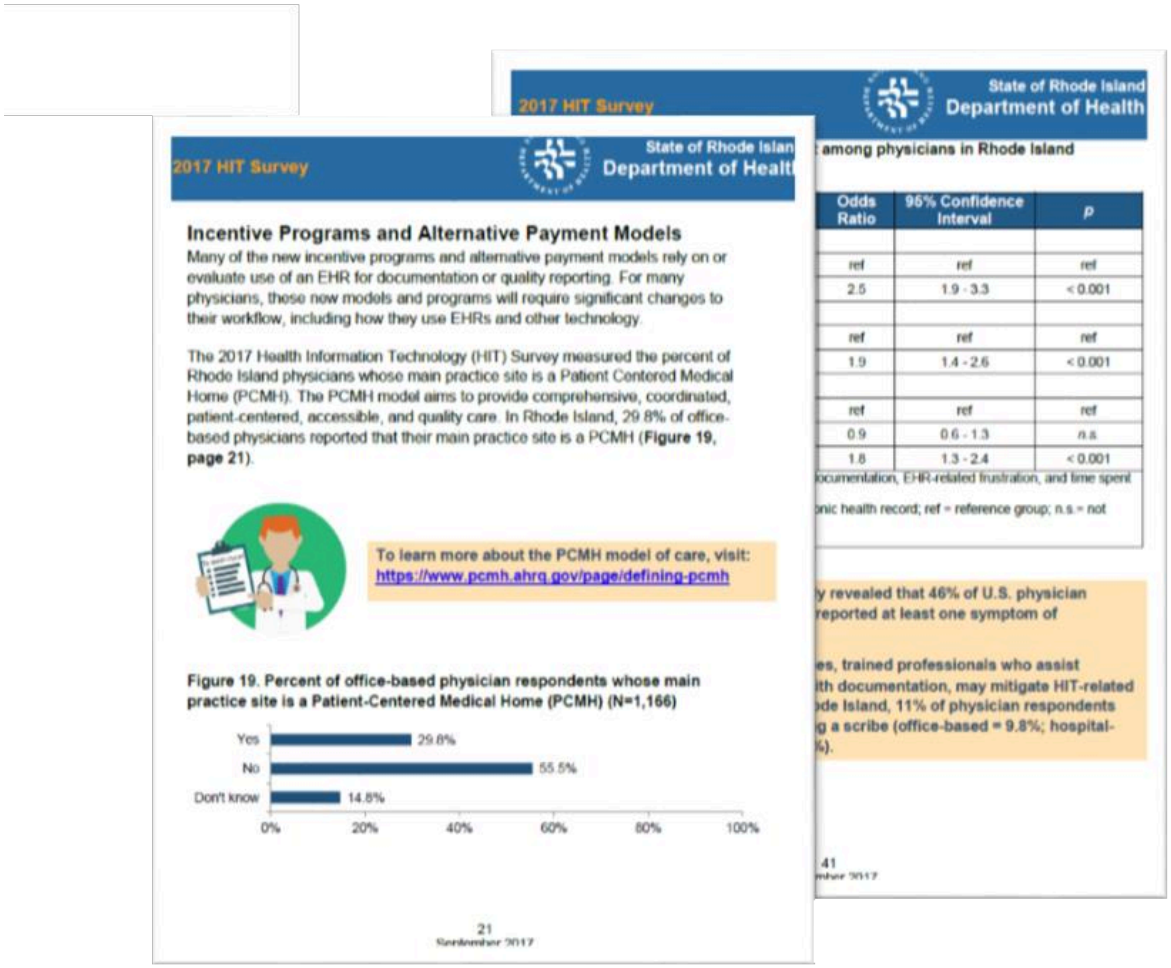
Background

Mission

To promote quality in the state's healthcare system by developing a healthcare quality performance measures and reporting program to guide quality improvement initiatives.

Reporting Process

Aggregate Report



2017 HIT Survey

State of Rhode Island Department of Health

among physicians in Rhode Island

Odds Ratio	95% Confidence Interval	p
ref	ref	ref
2.5	1.9 - 3.3	< 0.001
ref	ref	ref
1.9	1.4 - 2.6	< 0.001
ref	ref	ref
0.9	0.6 - 1.3	n.s.
1.8	1.3 - 2.4	< 0.001

ocumentation, EHR-related frustration, and time spent

nic health record; ref = reference group; n.s. = not

y revealed that 46% of U.S. physician reported at least one symptom of

es, trained professionals who assist th documentation, may mitigate HIT-related de Island, 11% of physician respondents g a scribe (office-based = 9.8%; hospital- %).

41

2017 HIT Survey

State of Rhode Island Department of Health

Incentive Programs and Alternative Payment Models

Many of the new incentive programs and alternative payment models rely on or evaluate use of an EHR for documentation or quality reporting. For many physicians, these new models and programs will require significant changes to their workflow, including how they use EHRs and other technology.

The 2017 Health Information Technology (HIT) Survey measured the percent of Rhode Island physicians whose main practice site is a Patient Centered Medical Home (PCMH). The PCMH model aims to provide comprehensive, coordinated, patient-centered, accessible, and quality care. In Rhode Island, 29.8% of office-based physicians reported that their main practice site is a PCMH (**Figure 19, page 21**).

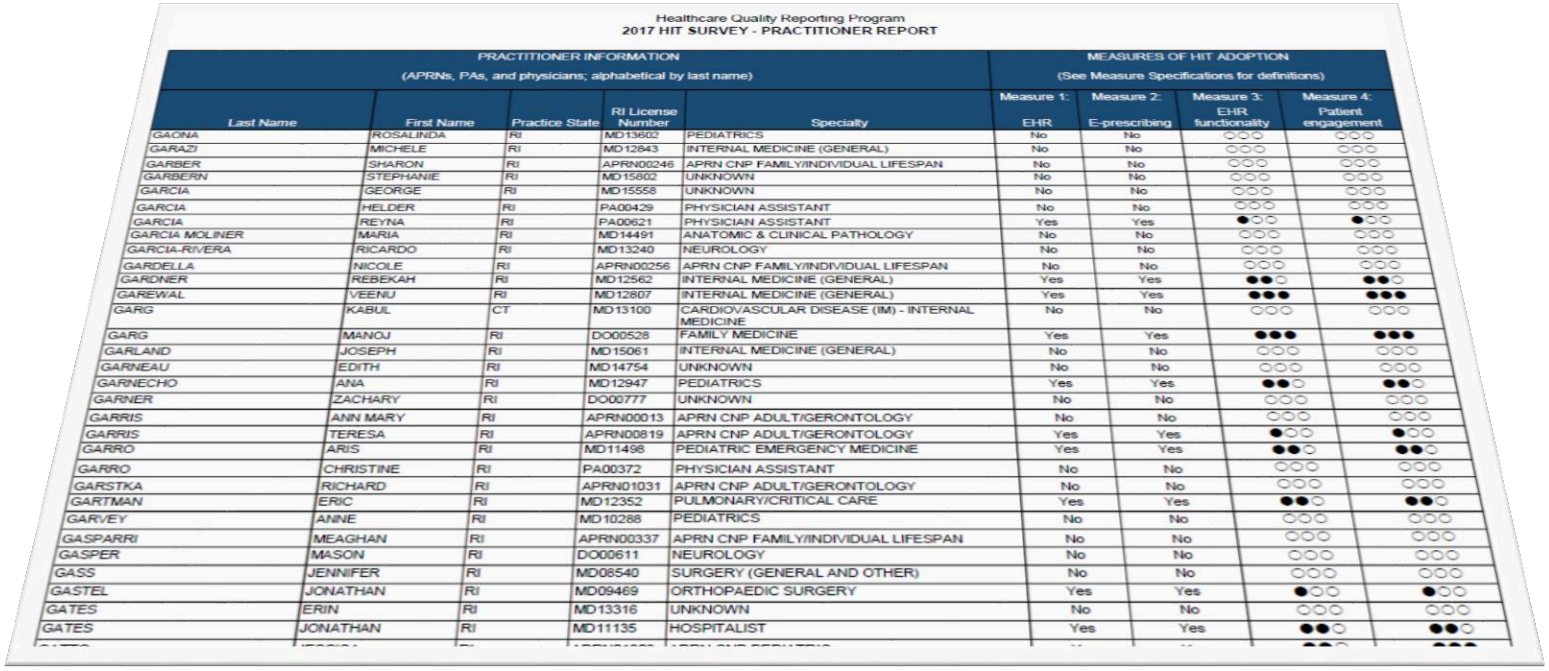
To learn more about the PCMH model of care, visit: https://www.pcmh.ahrq.gov/page/defining-pcmh

Figure 19. Percent of office-based physician respondents whose main practice site is a Patient-Centered Medical Home (PCMH) (N=1,166)

21

Reporting Process

Individual Practitioner-Level Report



Healthcare Quality Reporting Program
2017 HIT SURVEY - PRACTITIONER REPORT

PRACTITIONER INFORMATION (APRNs, PAs, and physicians; alphabetical by last name)					MEASURES OF HIT ADOPTION (See Measure Specifications for definitions)			
Last Name	First Name	Practice State	RI License Number	Specialty	Measure 1: EHR	Measure 2: E-prescribing	Measure 3: EHR functionality	Measure 4: Patient engagement
GAONA	ROSALINDA	RI	MD13602	PEDIATRICS	No	No	○○○	○○○
GARAZI	MICHELE	RI	MD12843	INTERNAL MEDICINE (GENERAL)	No	No	○○○	○○○
GARBER	SHARON	RI	APRN00246	APRN CNP FAMILY/INDIVIDUAL LIFESPAN	No	No	○○○	○○○
GARBERN	STEPHANIE	RI	MD15802	UNKNOWN	No	No	○○○	○○○
GARCIA	GEORGE	RI	MD15558	UNKNOWN	No	No	○○○	○○○
GARCIA	HELDER	RI	PA00429	PHYSICIAN ASSISTANT	No	No	○○○	○○○
GARCIA	REYNA	RI	PA00621	PHYSICIAN ASSISTANT	Yes	Yes	●○○	●○○
GARCIA MOLINER	MARIA	RI	MD14491	ANATOMIC & CLINICAL PATHOLOGY	No	No	○○○	○○○
GARCIA-RIVERA	RICARDO	RI	MD13240	NEUROLOGY	No	No	○○○	○○○
GARDELLA	NICOLE	RI	APRN00256	APRN CNP FAMILY/INDIVIDUAL LIFESPAN	No	No	○○○	○○○
GARDNER	REBEKAH	RI	MD12562	INTERNAL MEDICINE (GENERAL)	Yes	Yes	●●○	●●○
GAREWAL	VEENU	RI	MD12807	INTERNAL MEDICINE (GENERAL)	Yes	Yes	●●●	●●●
GARG	KABUL	CT	MD13100	CARDIOVASCULAR DISEASE (IM) - INTERNAL MEDICINE	No	No	○○○	○○○
GARG	MANOJ	RI	DO00528	FAMILY MEDICINE	Yes	Yes	●●●	●●●
GARLAND	JOSEPH	RI	MD15061	INTERNAL MEDICINE (GENERAL)	No	No	○○○	○○○
GARNEAU	EDITH	RI	MD14754	UNKNOWN	No	No	○○○	○○○
GARNECHO	ANA	RI	MD12947	PEDIATRICS	Yes	Yes	●●○	●●○
GARNER	ZACHARY	RI	DO00777	UNKNOWN	No	No	○○○	○○○
GARRIS	ANN MARY	RI	APRN00013	APRN CNP ADULT/GERONTOLOGY	No	No	○○○	○○○
GARRIS	TERESA	RI	APRN00819	APRN CNP ADULT/GERONTOLOGY	Yes	Yes	●○○	●○○
GARRO	ARIS	RI	MD11498	PEDIATRIC EMERGENCY MEDICINE	Yes	Yes	●●○	●●○
GARRO	CHRISTINE	RI	PA00372	PHYSICIAN ASSISTANT	No	No	○○○	○○○
GARSTKA	RICHARD	RI	APRN01031	APRN CNP ADULT/GERONTOLOGY	No	No	○○○	○○○
GARTMAN	ERIC	RI	MD12352	PULMONARY/CRITICAL CARE	Yes	Yes	●●○	●●○
GARVEY	ANNE	RI	MD10288	PEDIATRICS	No	No	○○○	○○○
GASPARRI	MEAGHAN	RI	APRN00337	APRN CNP FAMILY/INDIVIDUAL LIFESPAN	No	No	○○○	○○○
GASPER	MASON	RI	DO00611	NEUROLOGY	No	No	○○○	○○○
GASS	JENNIFER	RI	MD08540	SURGERY (GENERAL AND OTHER)	No	No	○○○	○○○
GASTEL	JONATHAN	RI	MD09469	ORTHOPAEDIC SURGERY	Yes	Yes	●○○	●○○
GATES	ERIN	RI	MD13316	UNKNOWN	No	No	○○○	○○○
GATES	JONATHAN	RI	MD11135	HOSPITALIST	Yes	Yes	●●○	●●○

Methods

2019 administration

- Via Survey Monkey in May 2019
- Hard copy mailing with survey link, email if possible
- All clinicians with RI licenses
- In active practice, providing direct patient care
- 4,539 physicians & 1,977 advanced practice providers

Sampling of Results

Characteristics of Respondents

Characteristics of respondents

Total respondents
2,468

Response rate
39.4%

Non-respondents generally similar

Characteristics of physician respondents

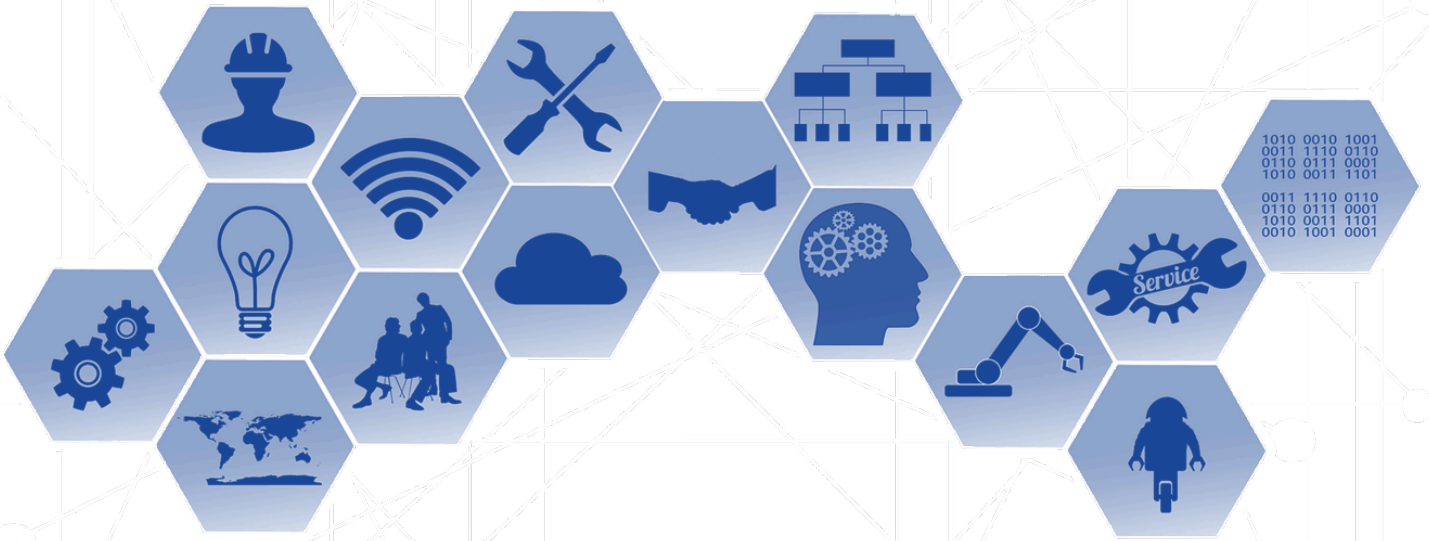
Total respondents
1,835

Response rate
43.0%

Non-respondents generally similar

Characteristics	n (%)
Age	
29-50	775 (42.4)
51-64	699 (38.1)
65-92	361 (19.7)
Female	686 (37.5)
Office/outpatient	1,234 (67.2)
Primary care physician	571 (31.1)
Practice size	
1-3 clinicians	451 (24.6)
4-15 clinicians	728 (39.7)
16 or more clinicians	648 (35.3)
MD degree	1,698 (92.5)

Main Summary Measures



Main results, by setting

	Setting	
Measure	Office (N=1,216)	Hospital (N=619)
Physicians with EHRs, %	90.1%	97.1%

Main results, by setting

Measure	Setting	
	Office (N=1,216)	Hospital (N=619)
Physicians with EHRs, %	90.1%	97.1%
Physicians who e-prescribe, %	87.0%	76.0%*

Main results, by setting

Measure	Setting	
	Office (N=1,216)	Hospital (N=619)
Physicians with EHRs, %	90.1%	97.1%
Physicians who e-prescribe, %	87.0%	76.0%
Physicians who e-prescribe controlled substances, %	42.8%	35.9%

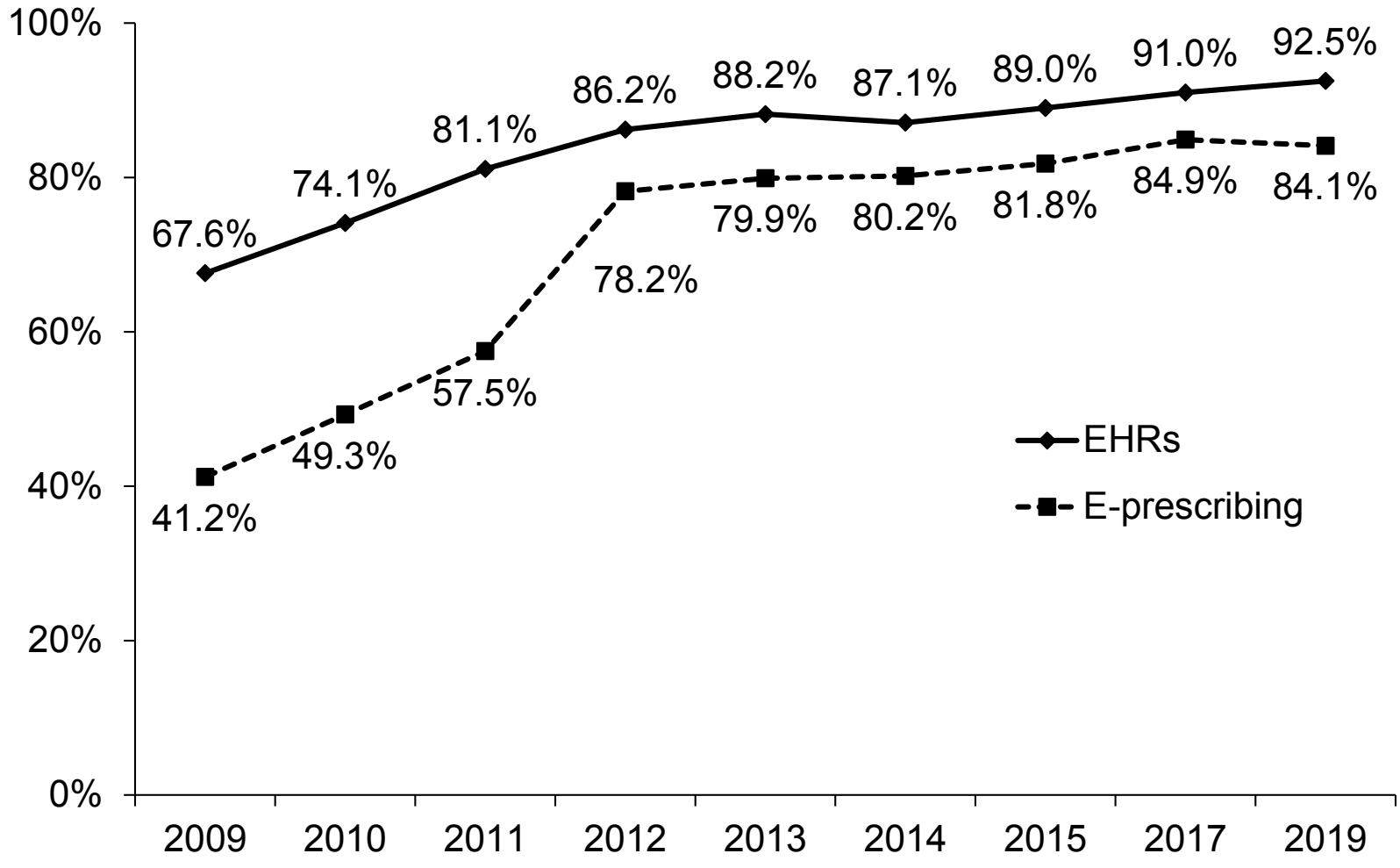
Main results, by setting

Measure	Setting	
	Office (N=1,216)	Hospital (N=619)
Physicians with EHRs, %	90.1%	97.1%
Physicians who e-prescribe, %	87.0%	76.0%
Physicians who e-prescribe controlled substances, %	42.8%	35.9%
Physicians experiencing HIT-related stress, %	84.6%	74.3%

Main results, by specialty

Measure	Office (N=1,216)	Office-based specialty: PCP (N=496)	Office-based specialty: Non-PCP (N=707)
Physicians with EHRs, %	90.1%	93.8%	87.6%
Physicians who e-prescribe, %	87.0%	92.9%	83.9%
Physicians who e-prescribe controlled substances, %	42.8%	48.9%	37.3%
Physicians experiencing HIT-related stress, %	84.6%	86.5%	83.3%

EHR and e-prescribing trends



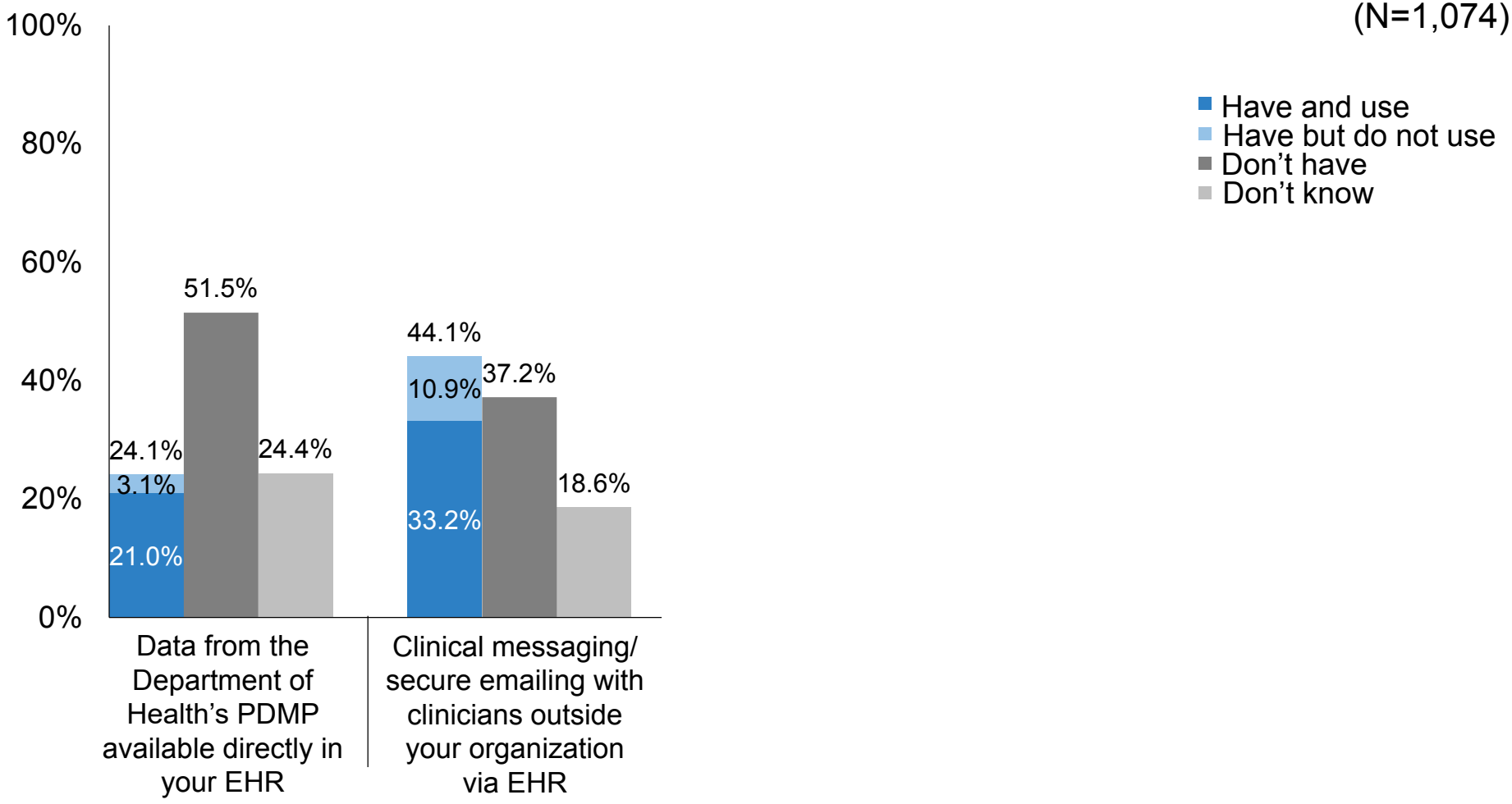
EHR Functionalities & EHR Vendors

EHR Interoperability, office-based

(N=1,074)

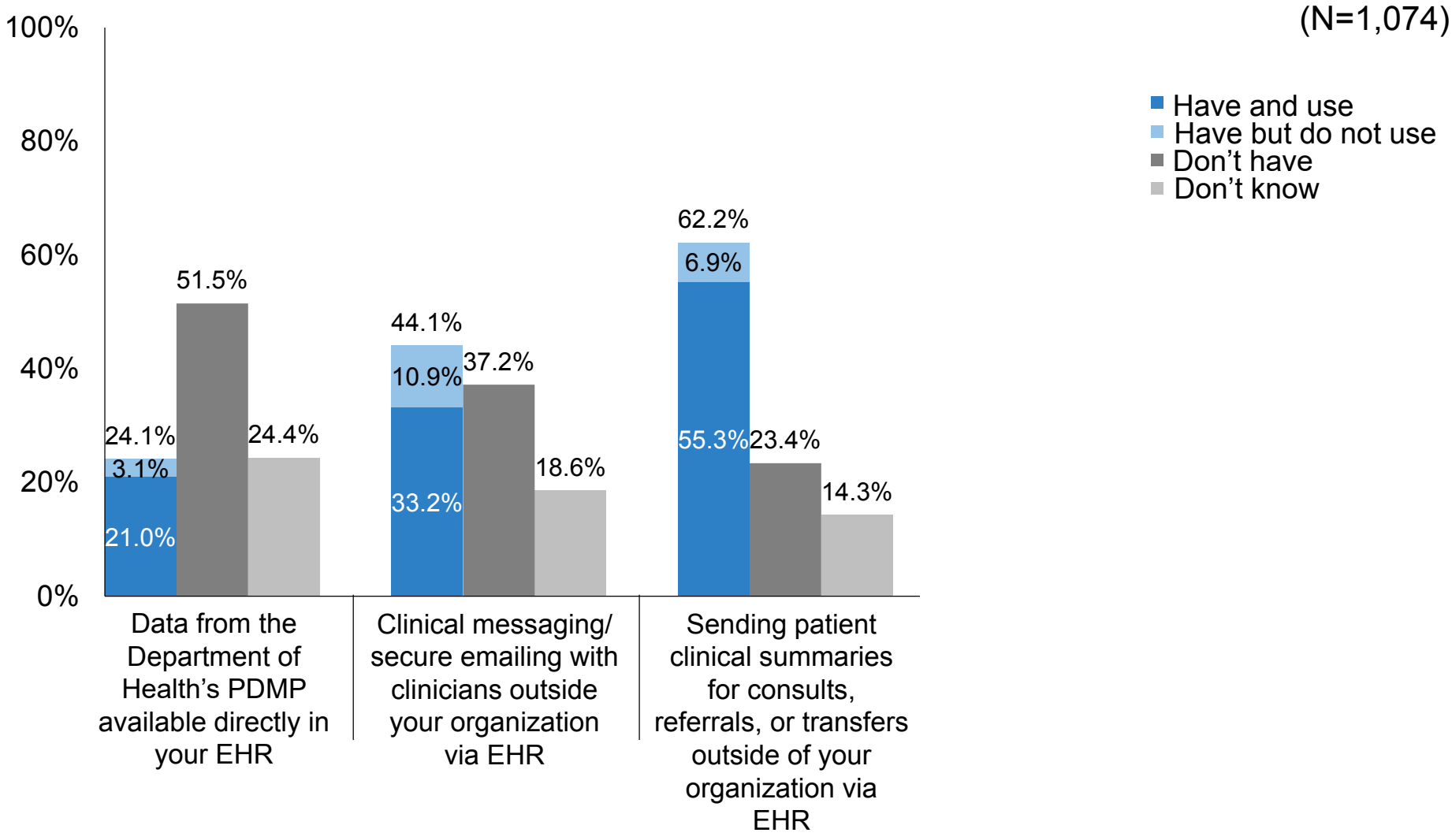
EHR Interoperability, office-based

(N=1,074)

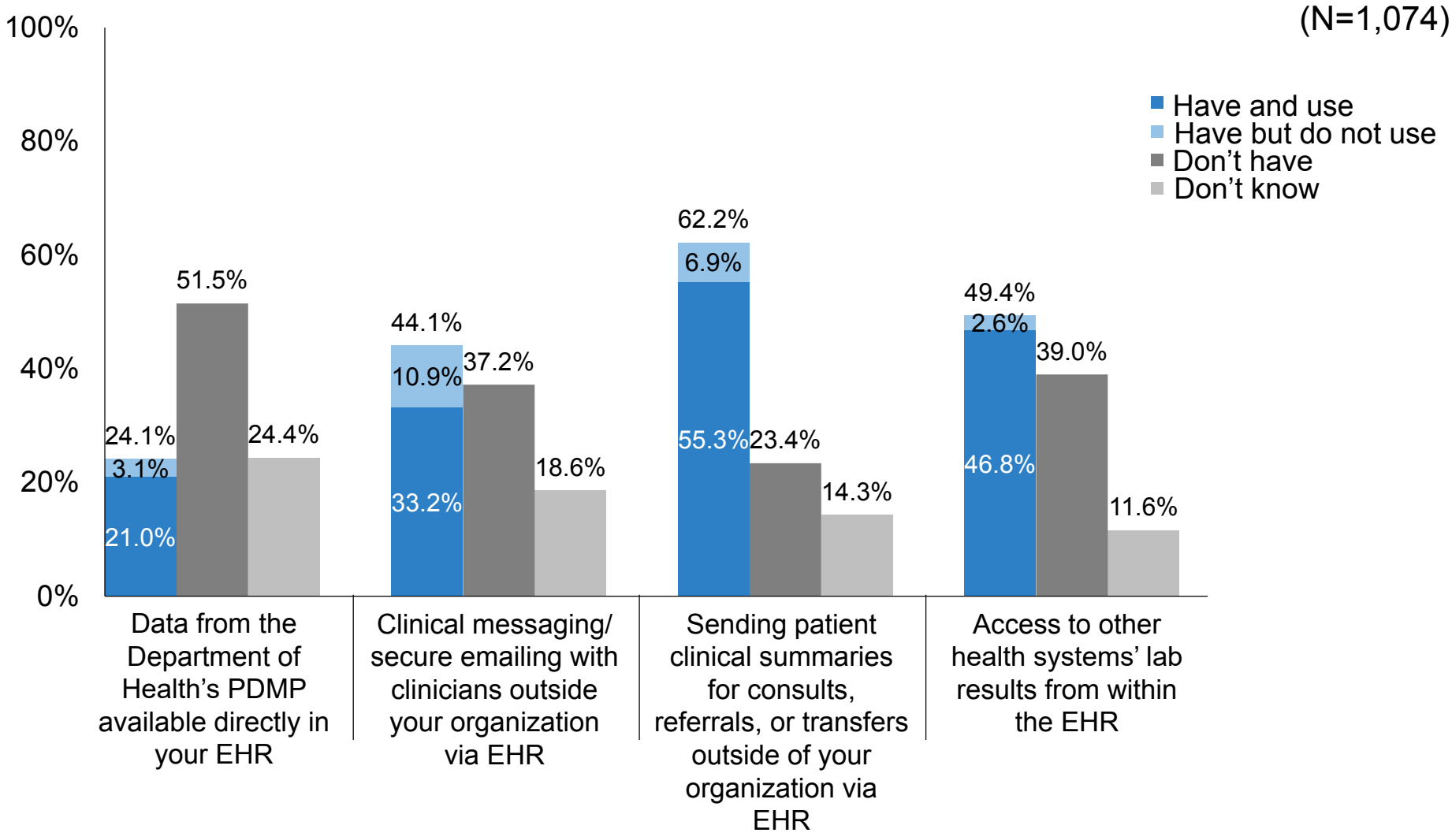


EHR Interoperability, office-based

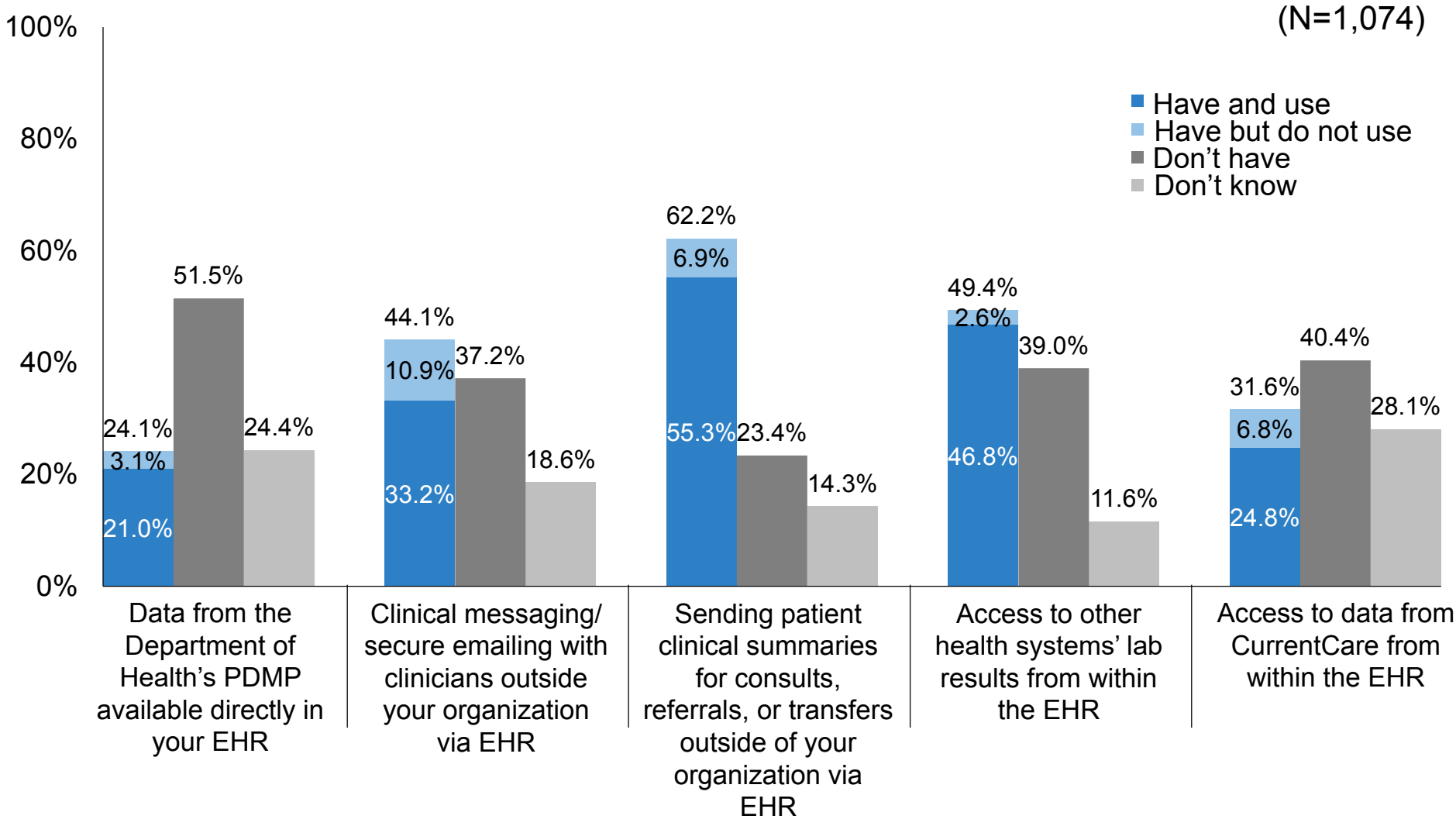
(N=1,074)



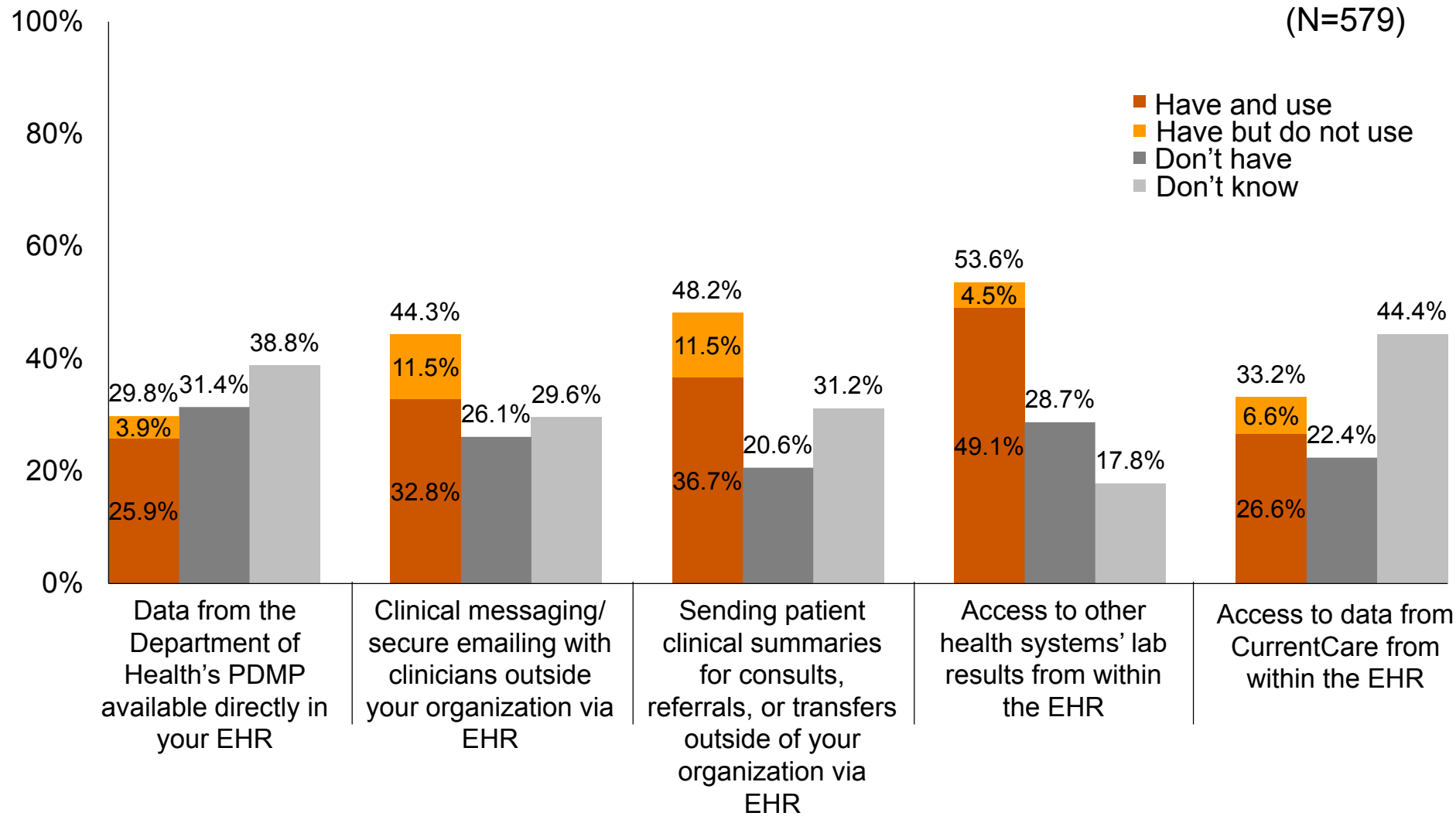
EHR Interoperability, office-based



EHR Interoperability, office-based

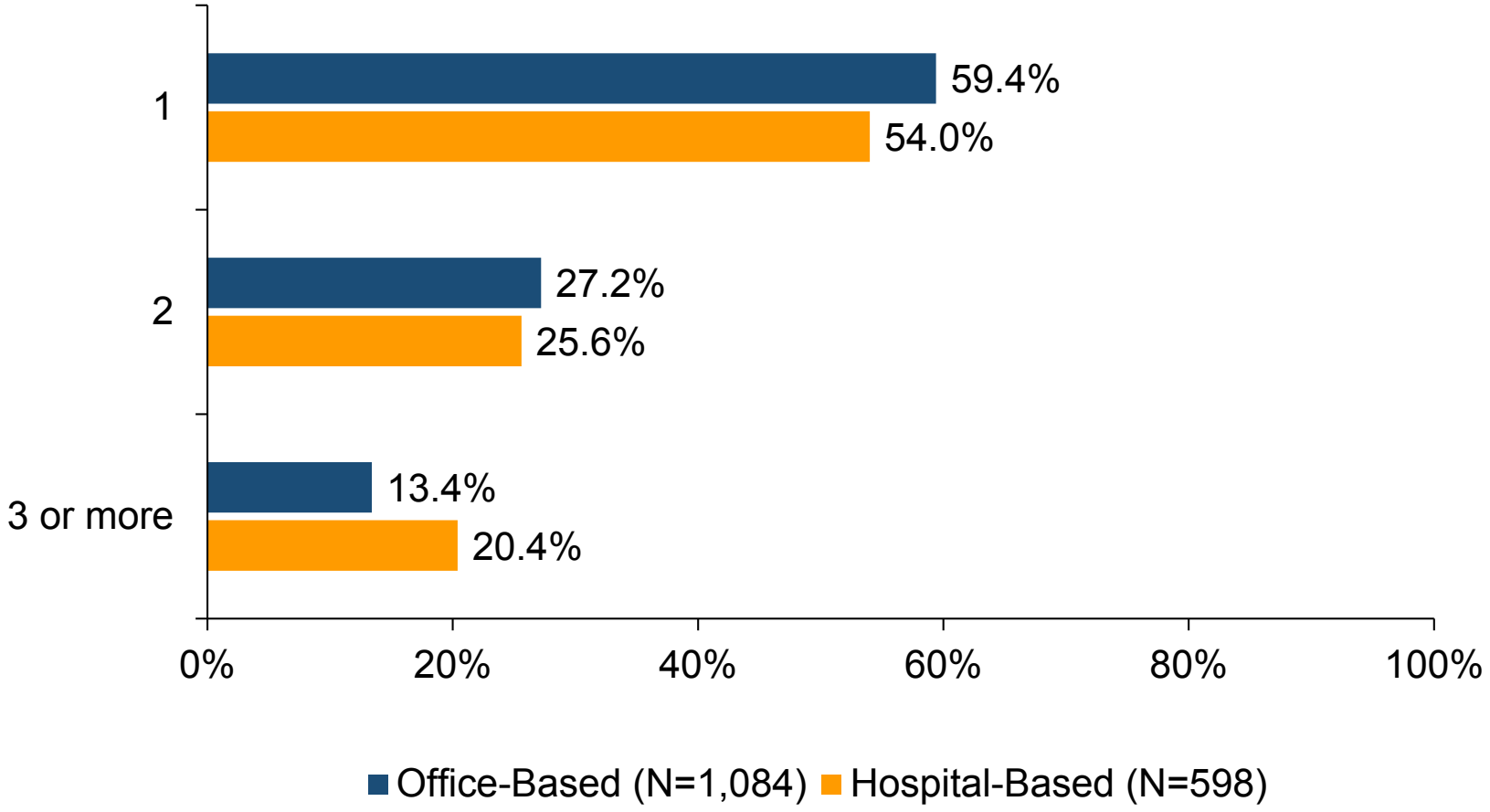


EHR Interoperability, hospital-based



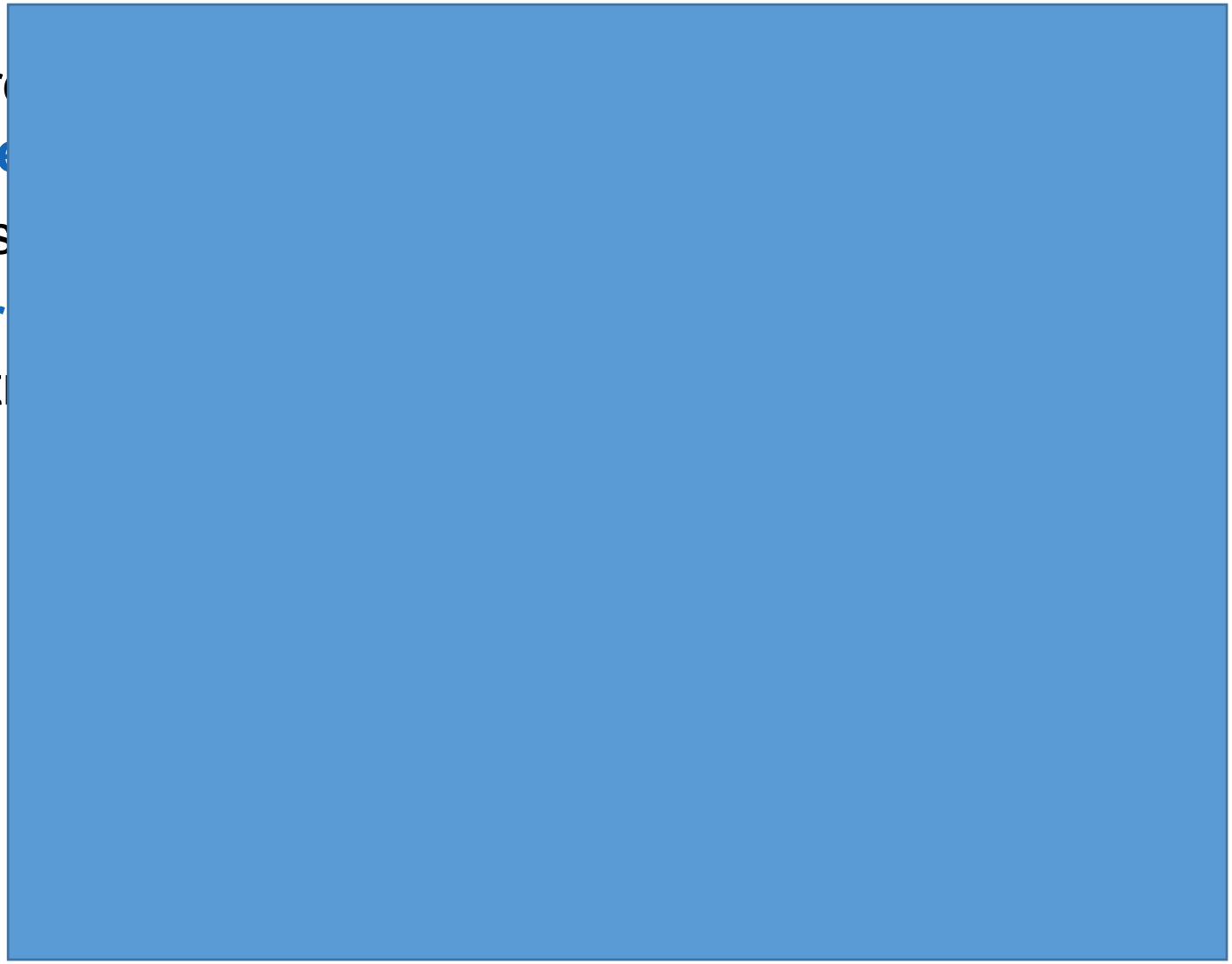
Number of EHR vendors

Among physicians with EHRs, the number of EHRs systems/vendors used across practice sites



Key findings

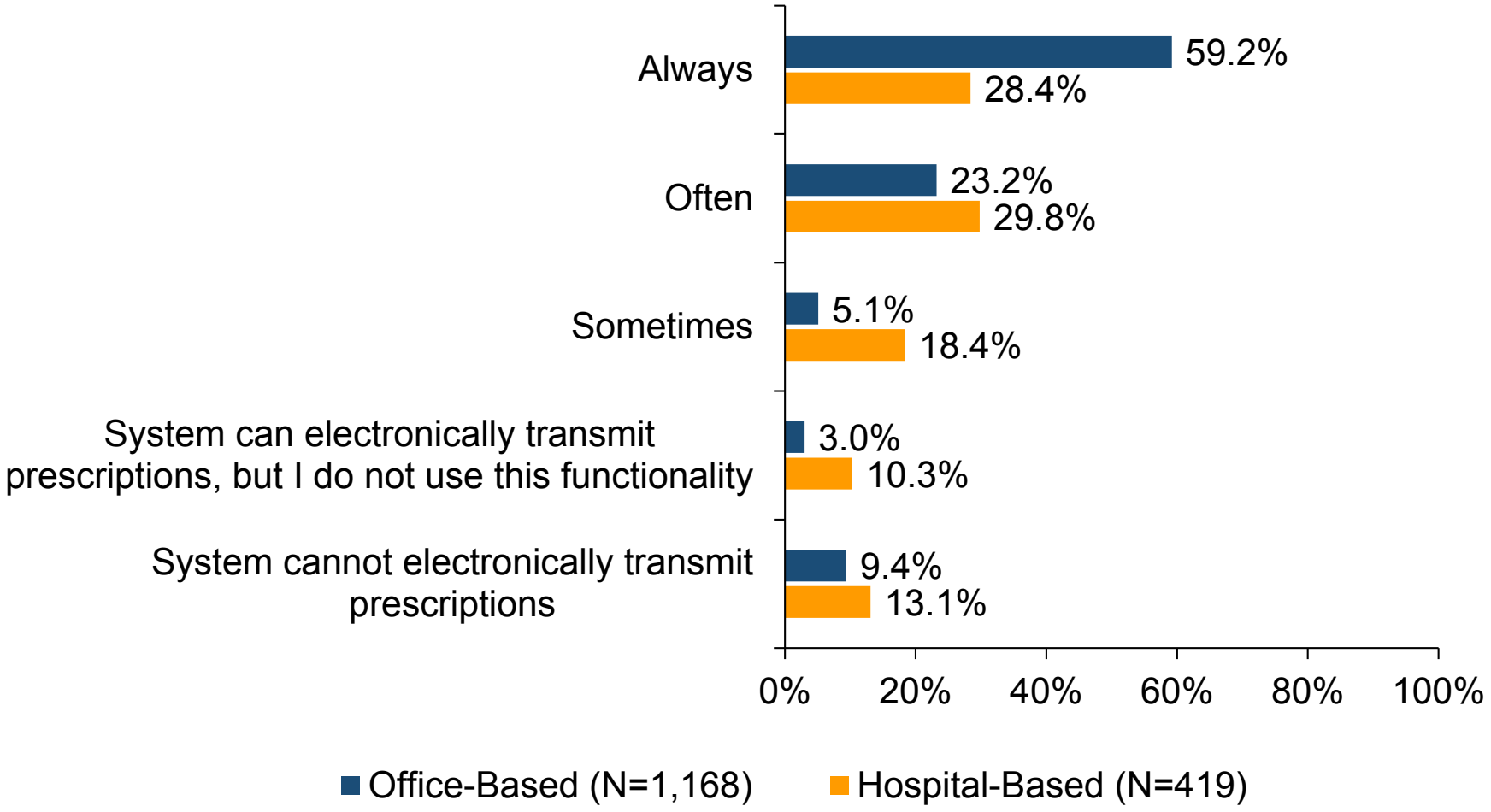
- E-pr
  plate
- Less
- **Wor**
  cont



E-Prescribing Practices & Use of the PDMP

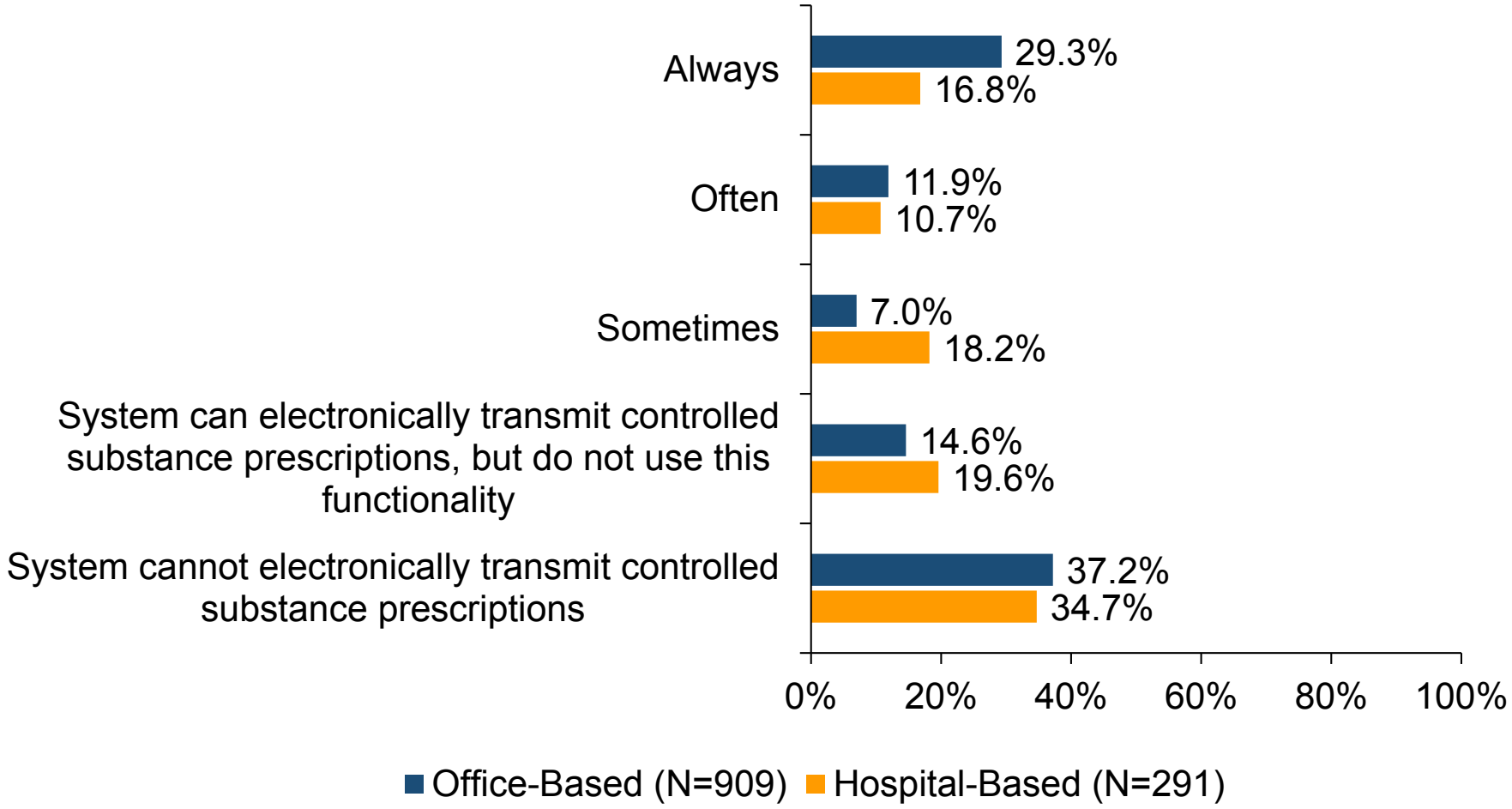
e-Prescribing

Among physician respondents who prescribe medications, the percent who transmit prescriptions electronically to the pharmacy



e-Prescribing controlled substances

Among the physicians who e-prescribe medications and prescribe controlled substances, the respondents who e-prescribe controlled substances



New law for controlled substances

59% of physicians who prescribe controlled substances *are not* transmitting them electronically

Physicians must transmit all controlled substance prescriptions electronically by **January 2, 2020**

http://webserver.rilin.state.ri.us/BillText17/SenateText17/S0546.pdf

Barriers to e-prescribing controlled substances

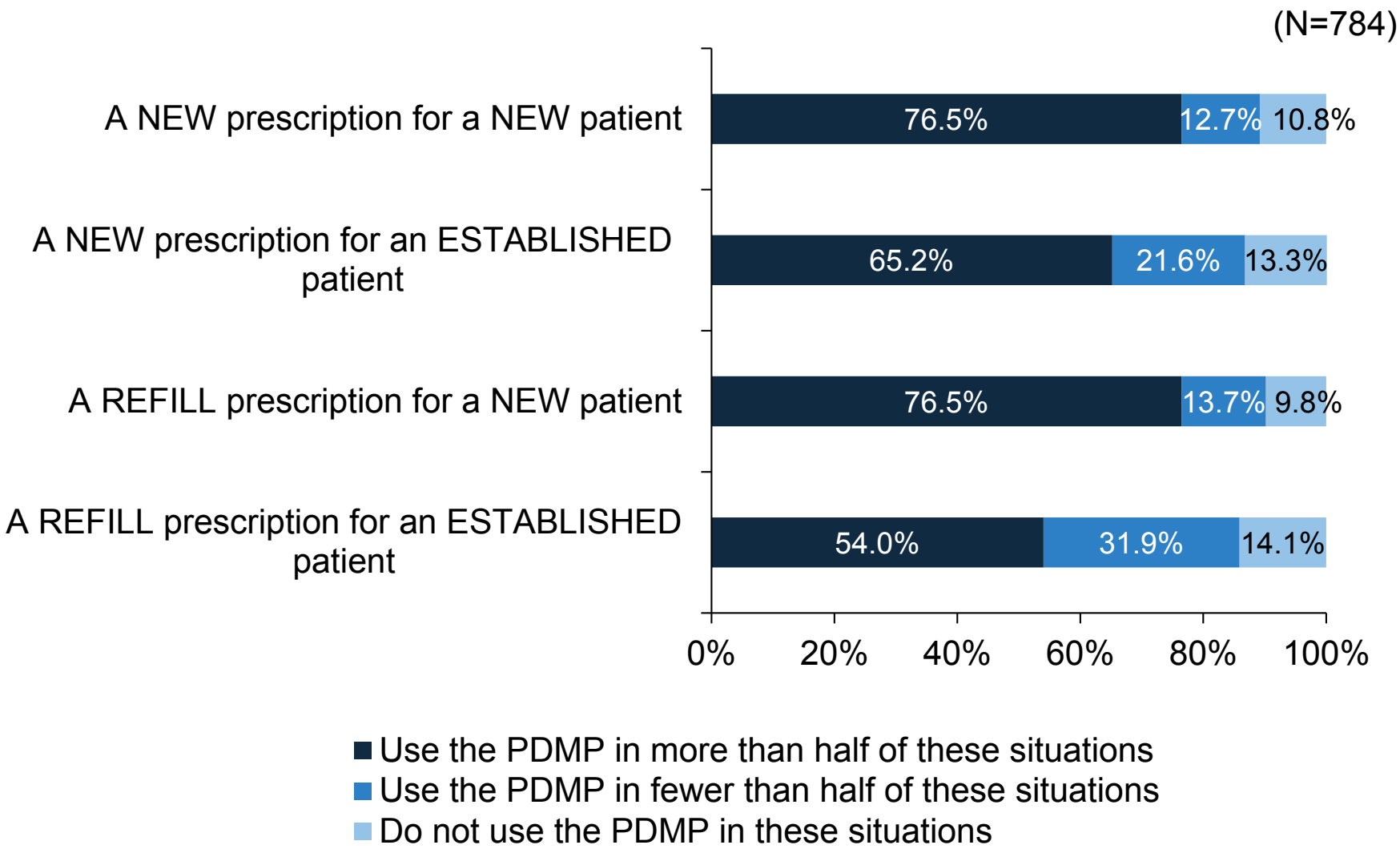
Frequency of responses

- Computer system not capable
- Prefer paper prescriptions
- Pharmacy requires paper prescriptions
- Did not know it was legal in RI
- Too few of these prescriptions
- System too expensive
- System too complicated

Key findings

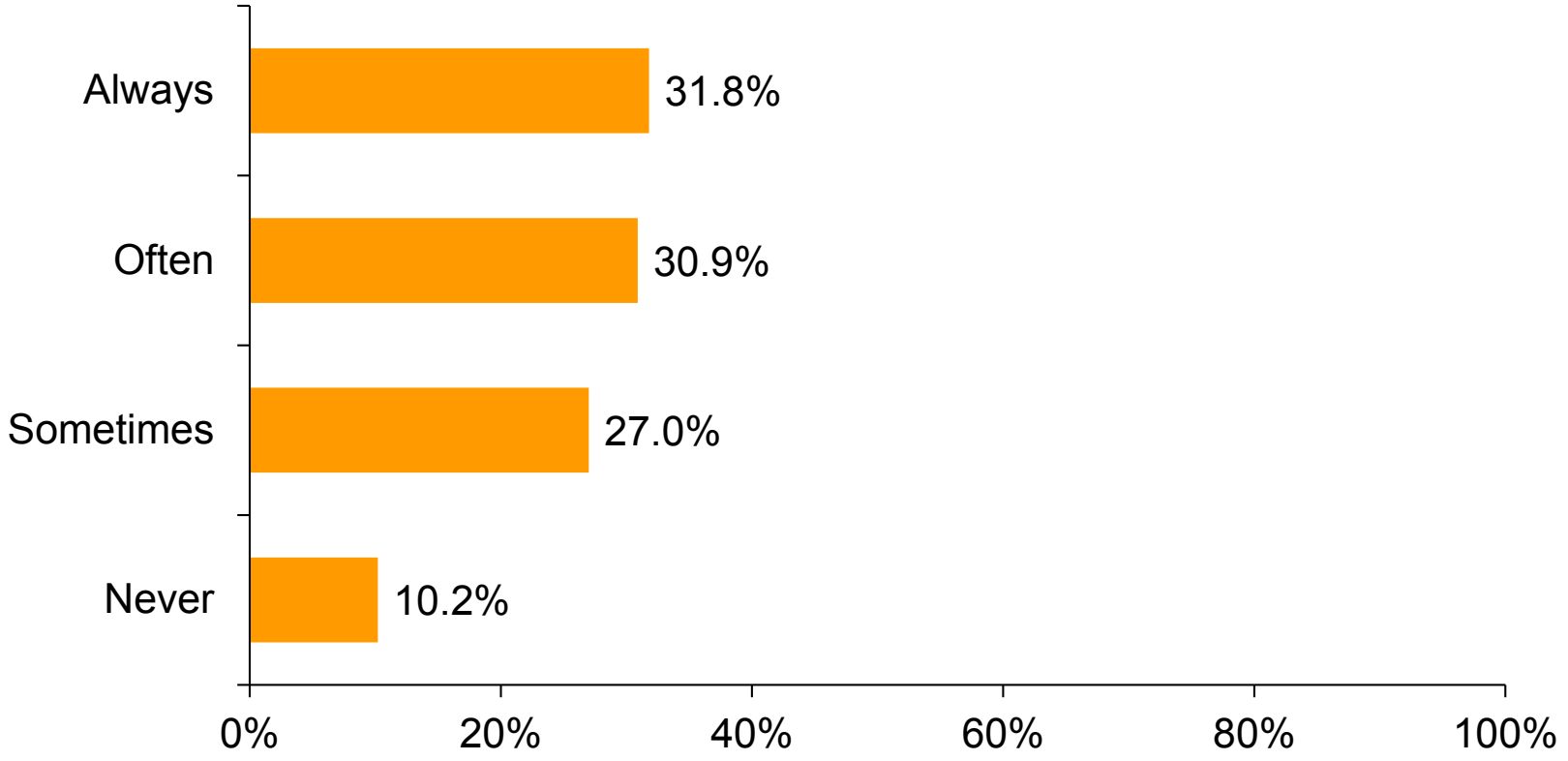
- E-prescribing **high overall** in Rhode Island, but has **plateaued** in recent years
- Less consistent use among hospital physicians
- **Work to be done** for universal e-prescribing of controlled substances by 2020

PDMP use in the office



PDMP use in the hospital

(N=333)



Barriers to PDMP use

Frequency of responses

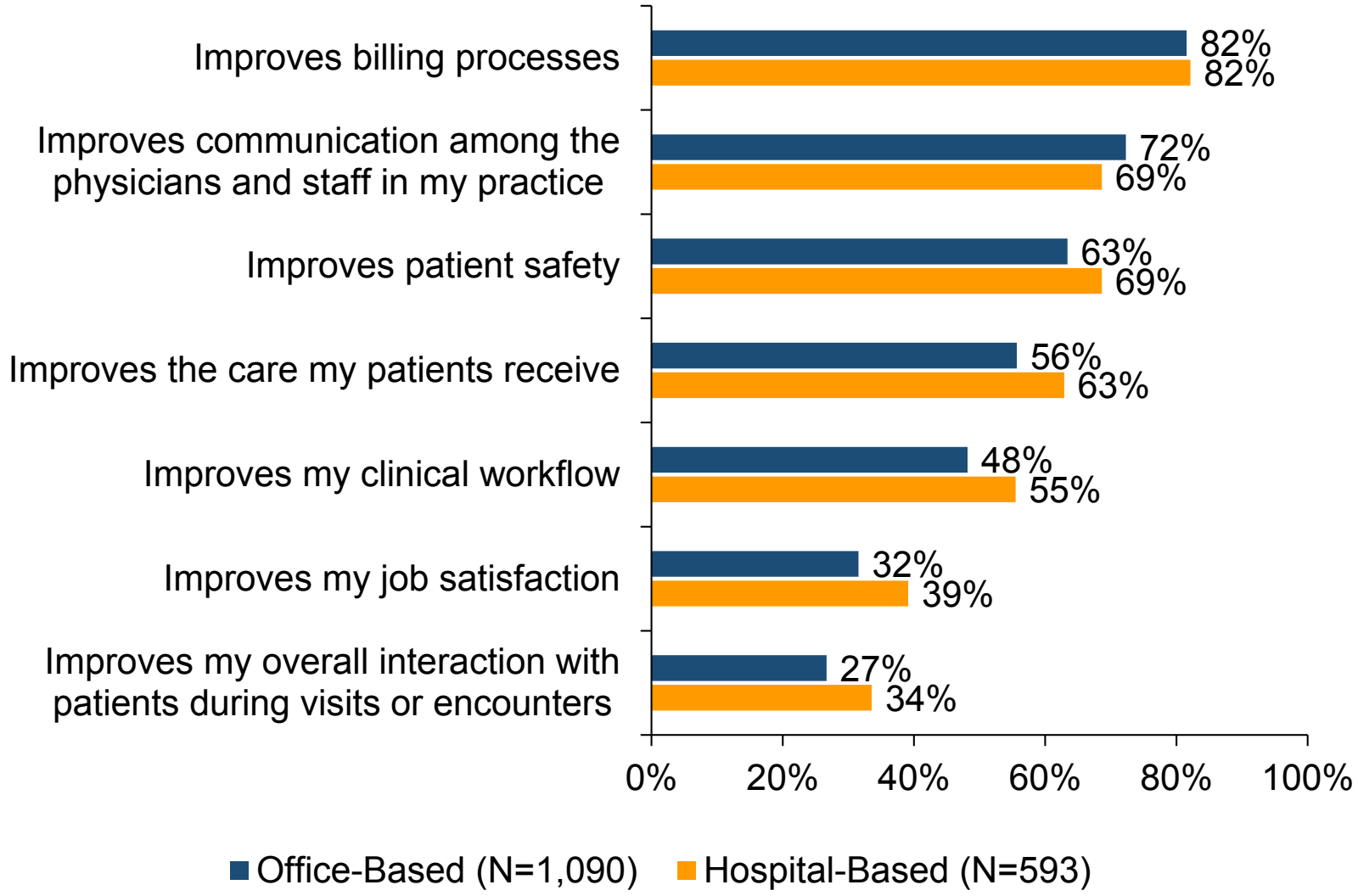
- Separate login
- Time consuming/slow
- Interrupts workflow
- Rarely prescribe these
- Remembering/frequently-changing password
- Complex process
- Practice in other states (e.g., use MA version)

Key findings

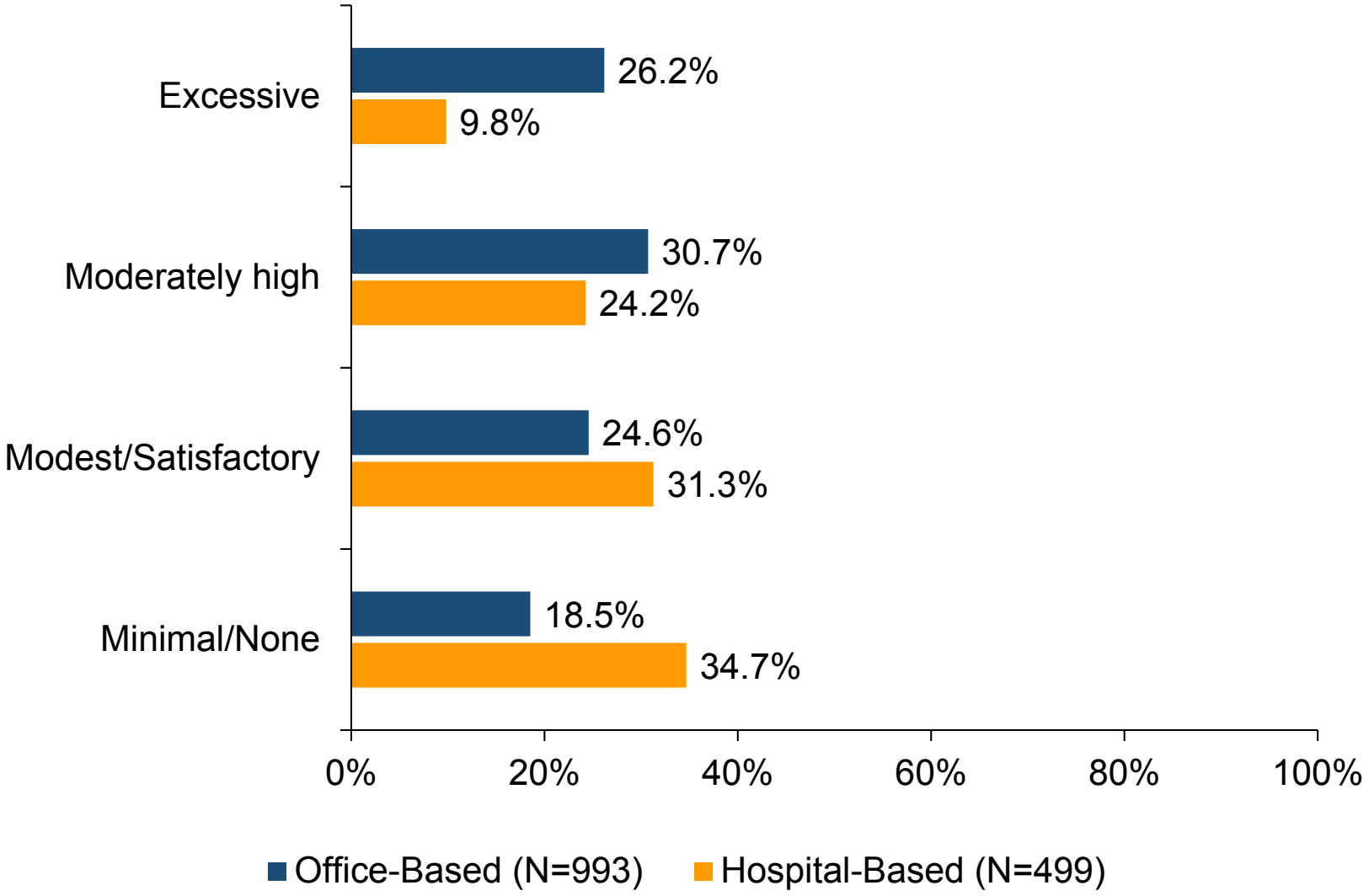
- PDMP **use varies** by setting, specialty, scenario
- PDMP use **higher than 2017** across both settings
- Most common PDMP barriers relate to perception of system as **cumbersome**

Impact of EHRs on Physicians

Do EHRs help?


Improves billing processes
82%
82%
Improves communication among the physicians and staff in my practice
72%
69%
Improves patient safety
63%
69%
Improves the care my patients receive
56%
63%
Improves my clinical workflow
48%
55%
Improves my job satisfaction
32%
39%
Improves my overall interaction with patients during visits or encounters
27%
34%
0%
20%
40%
60%
80%
100%
Office-Based (N=1,090)
Hospital-Based (N=593)

Time Spent on the EHR at Home



Circumstances when use EHR remotely

Response	Office-based (n=810)	Hospital-based (n=265)	Overall (N=1,075)
Unable complete work during regular office or clinical hours	70.0%	52.1%	67.4%

Circumstances when use EHR remotely

Response	Office-based (n=810)	Hospital-based (n=265)	Overall (N=1,075)
Unable complete work during regular office or clinical hours	70.0%	52.1%	67.4%
On call	68.3%	57.6%	60.0%

Circumstances when use EHR remotely

Response	Office-based (n=810)	Hospital-based (n=265)	Overall (N=1,075)
Unable complete work during regular office or clinical hours	70.0%	52.1%	67.4%
On call	68.3%	57.6%	60.0%
To prepare for patient visits or encounters in advance	39.7%	33.2%	37.2%

Circumstances when use EHR remotely

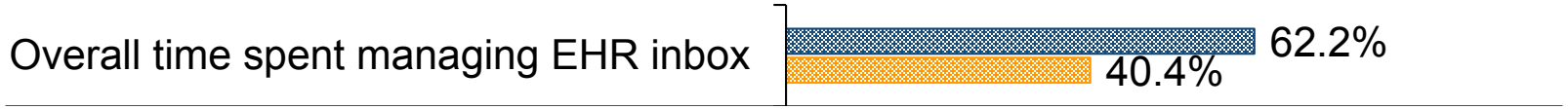
Response	Office-based (n=810)	Hospital-based (n=265)	Overall (N=1,075)
Unable complete work during regular office or clinical hours	70.0%	52.1%	67.4%
On call	68.3%	57.6%	60.0%
To prepare for patient visits or encounters in advance	39.7%	33.2%	37.2%
When I have the opportunity to work at home instead of the office or hospital (i.e., to adjust my work/life balance)	35.2%	25.8%	29.9%

Circumstances when use EHR remotely

Response	Office-based (n=810)	Hospital-based (n=265)	Overall (N=1,075)
Unable complete work during regular office or clinical hours	70.0%	52.1%	67.4%
On call	68.3%	57.6%	60.0%
To prepare for patient visits or encounters in advance	39.7%	33.2%	37.2%
When I have the opportunity to work at home instead of the office or hospital (i.e., to adjust my work/life balance)	35.2%	25.8%	29.9%
Away on vacation	32.1%	16.6%	27.7%

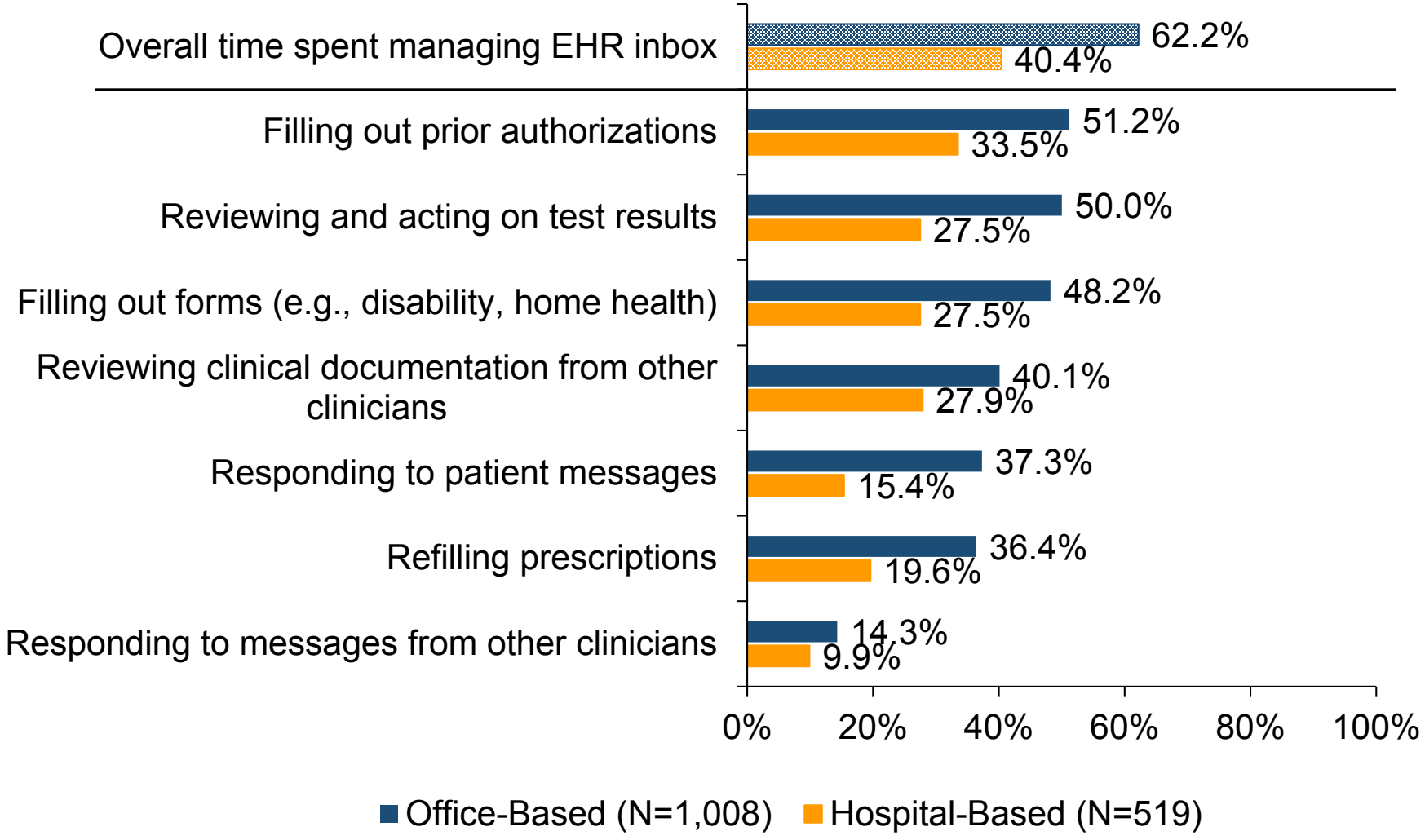
Time Spent on Inbox Tasks

Physicians who spend a moderately high or excessive amount of time on inbox tasks

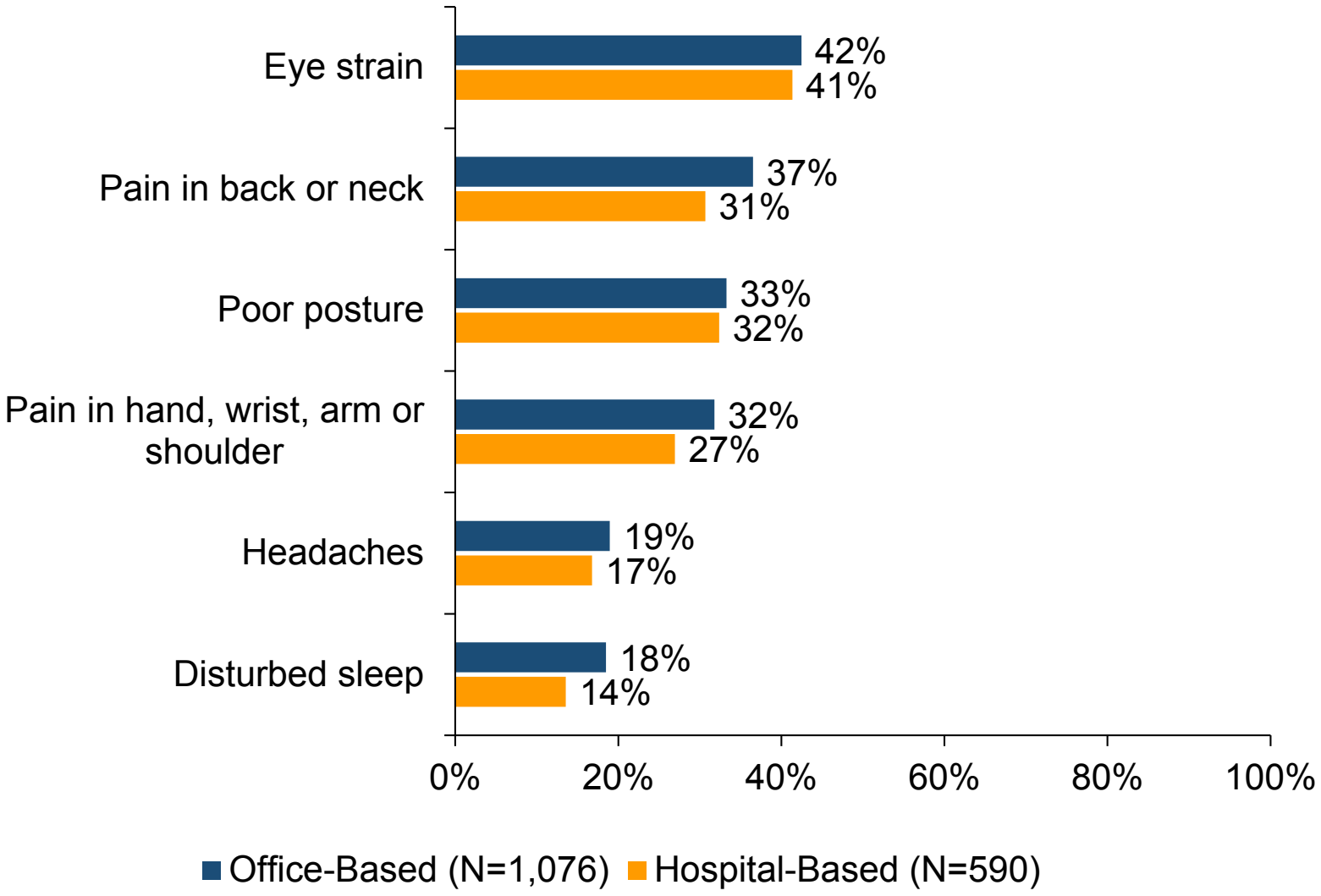


Time Spent on Inbox Tasks

Physicians who spend a moderately high or excessive amount of time on inbox tasks



Physical challenges due to using HIT



Key findings

- Perception that **EHRs do improve some** physician work: billing, communication among staff, safety
- EHRs do NOT improve **job satisfaction**
- Remote EHR use because not able to **complete their work** at work
- Office-based physicians spend a large amount of time on **inbox tasks**
- Perception that HIT use linked with **physical challenges**

Physician Burnout & HIT Related Stress

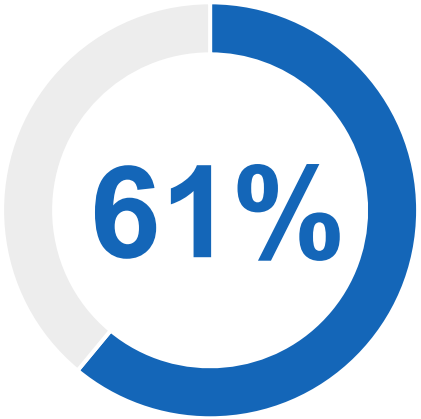
HIT-related stress measures

Three questions:

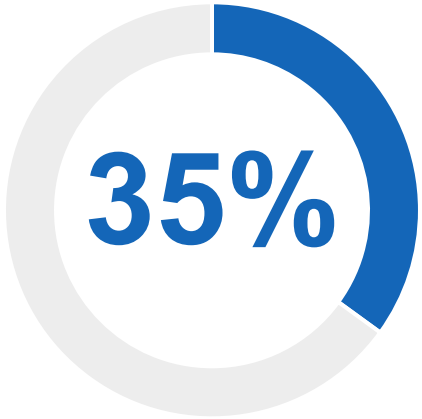
- The EHR adds to the frustration of my day
- Amount of time I spend on the EHR at home
- Sufficiency of time for documentation

Burnout and HIT-related stress questions were borrowed from the validated Mini z

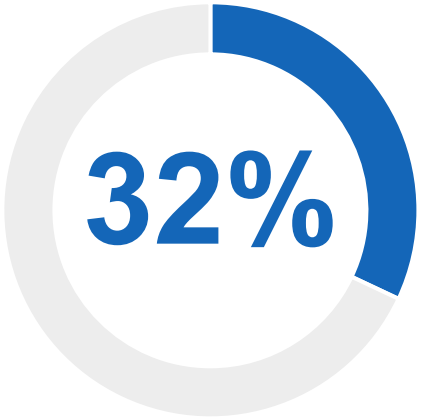
Physicians with EHRs



EHR adds to frustration of my day

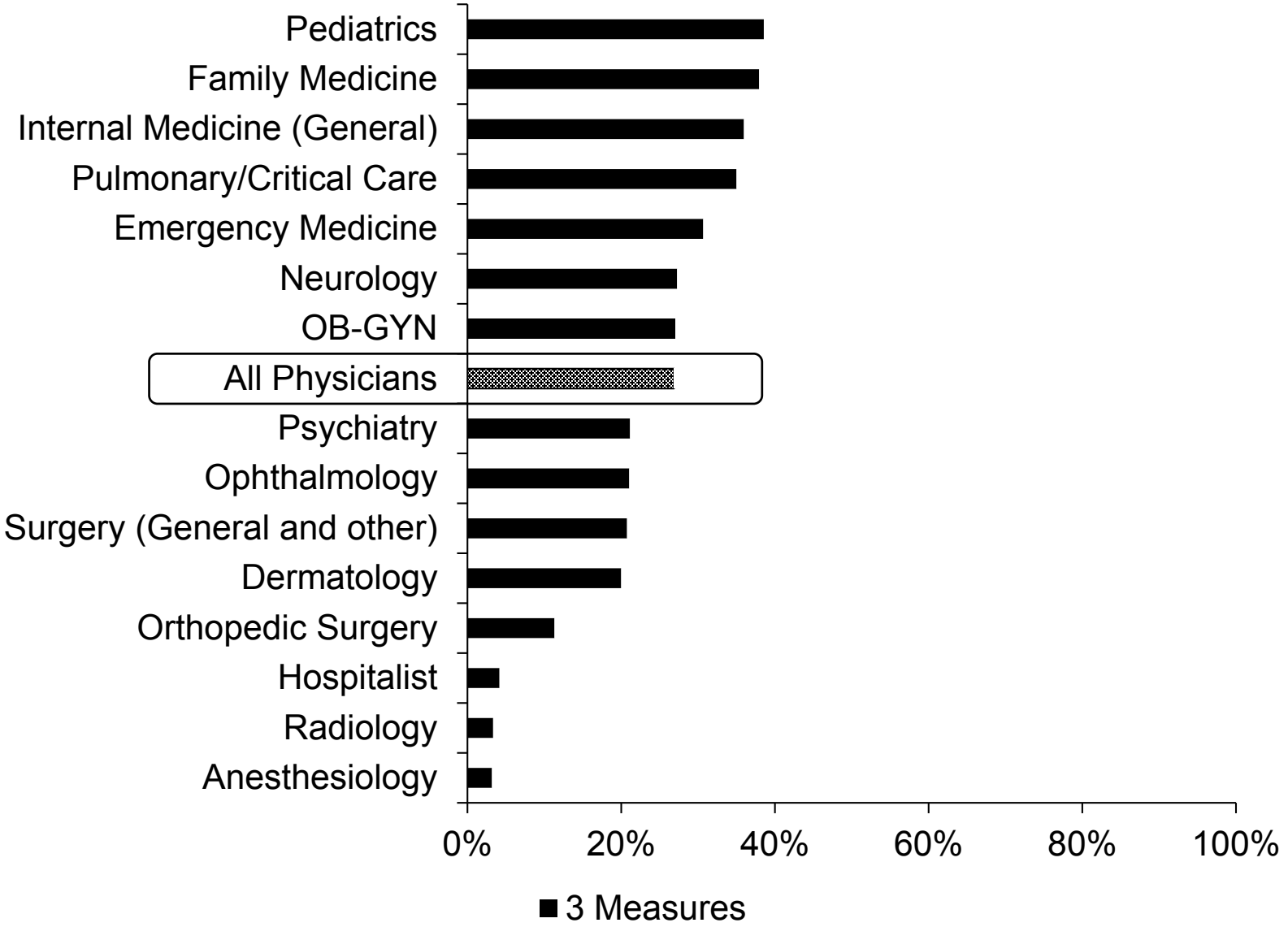


Moderately high or excessive EHR at home

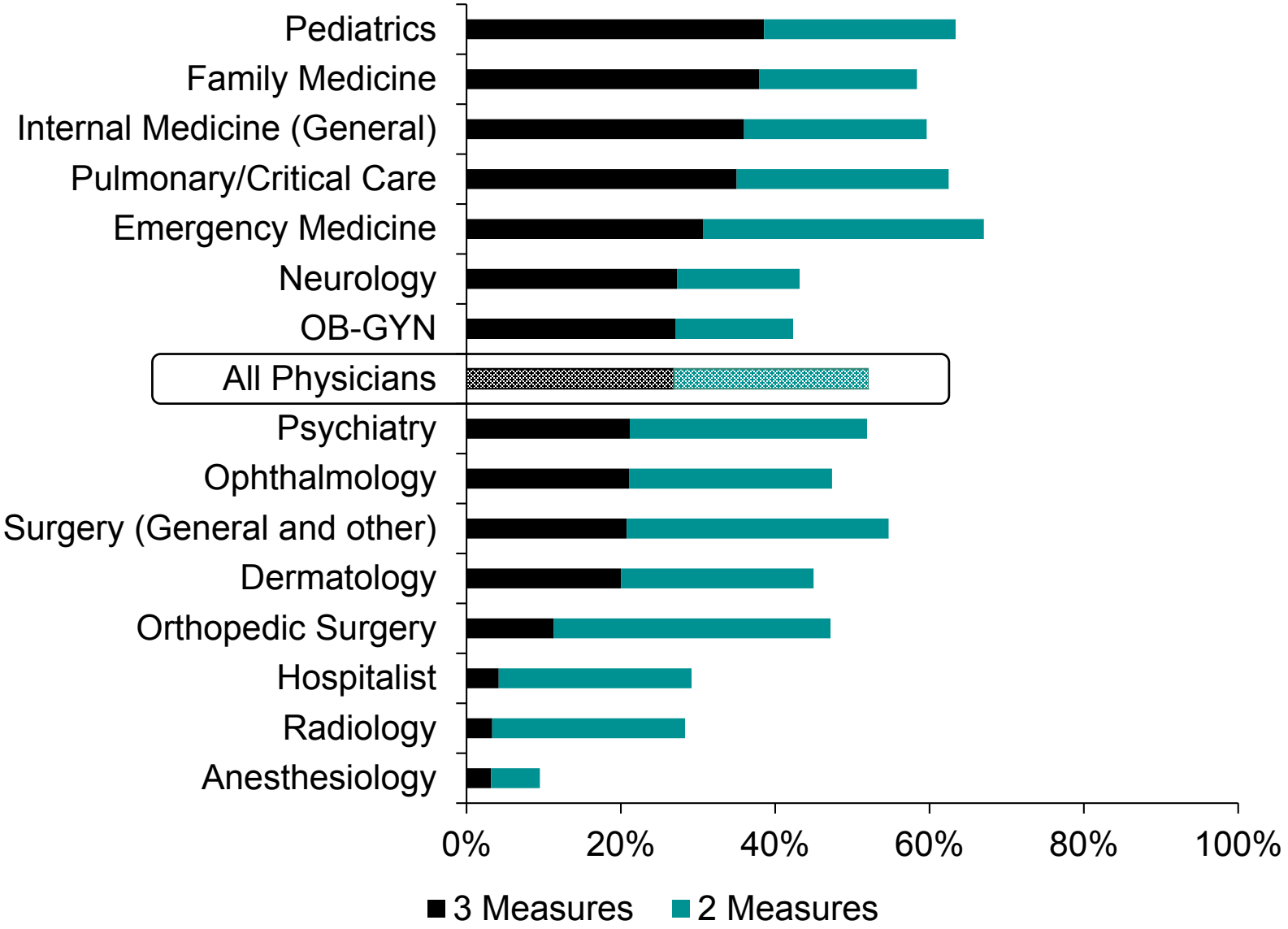


Insufficient time for documentation

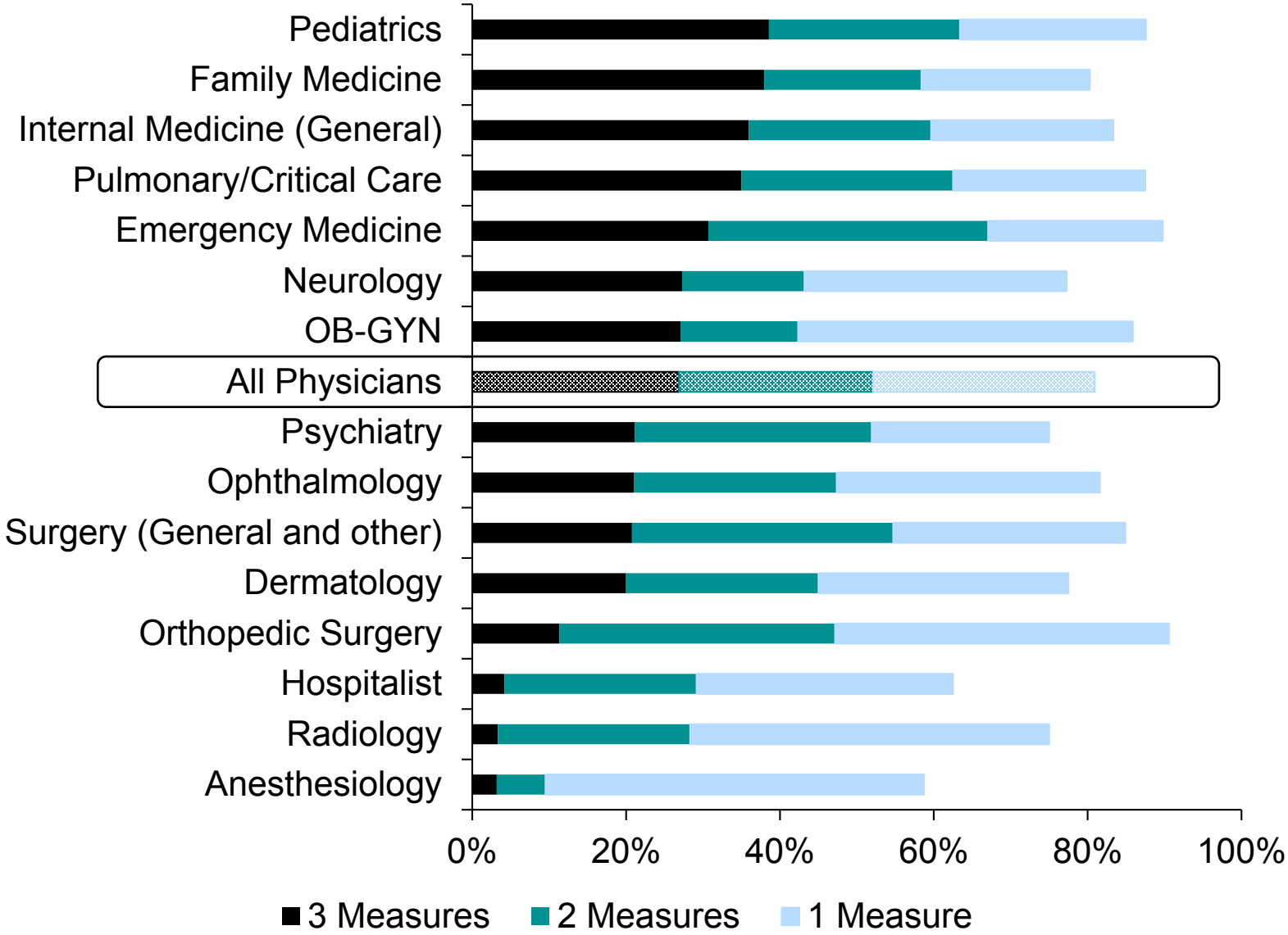
HIT-related stress by specialty



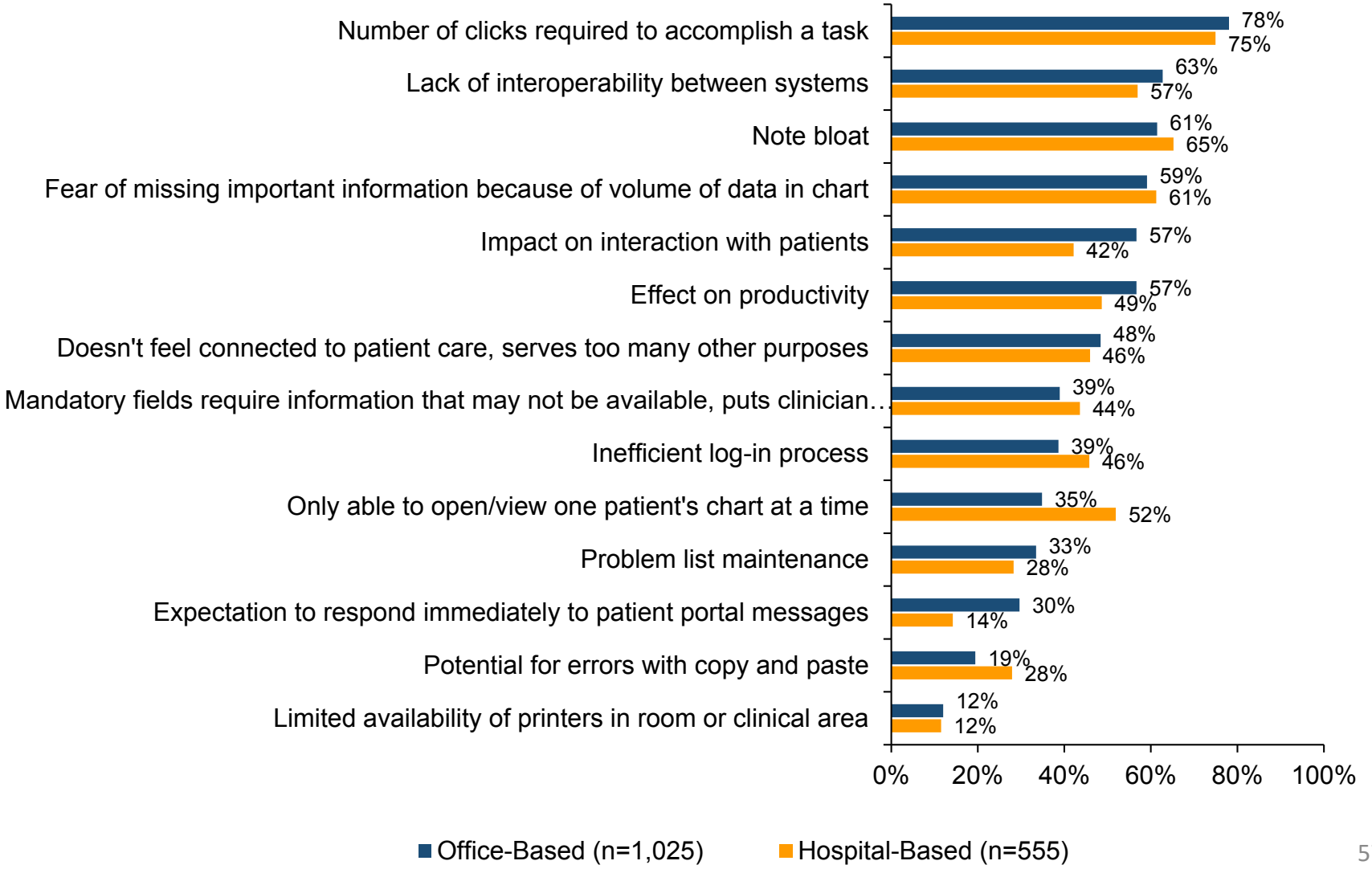
HIT-related stress by specialty



HIT-related stress by specialty



Stressful features of HIT

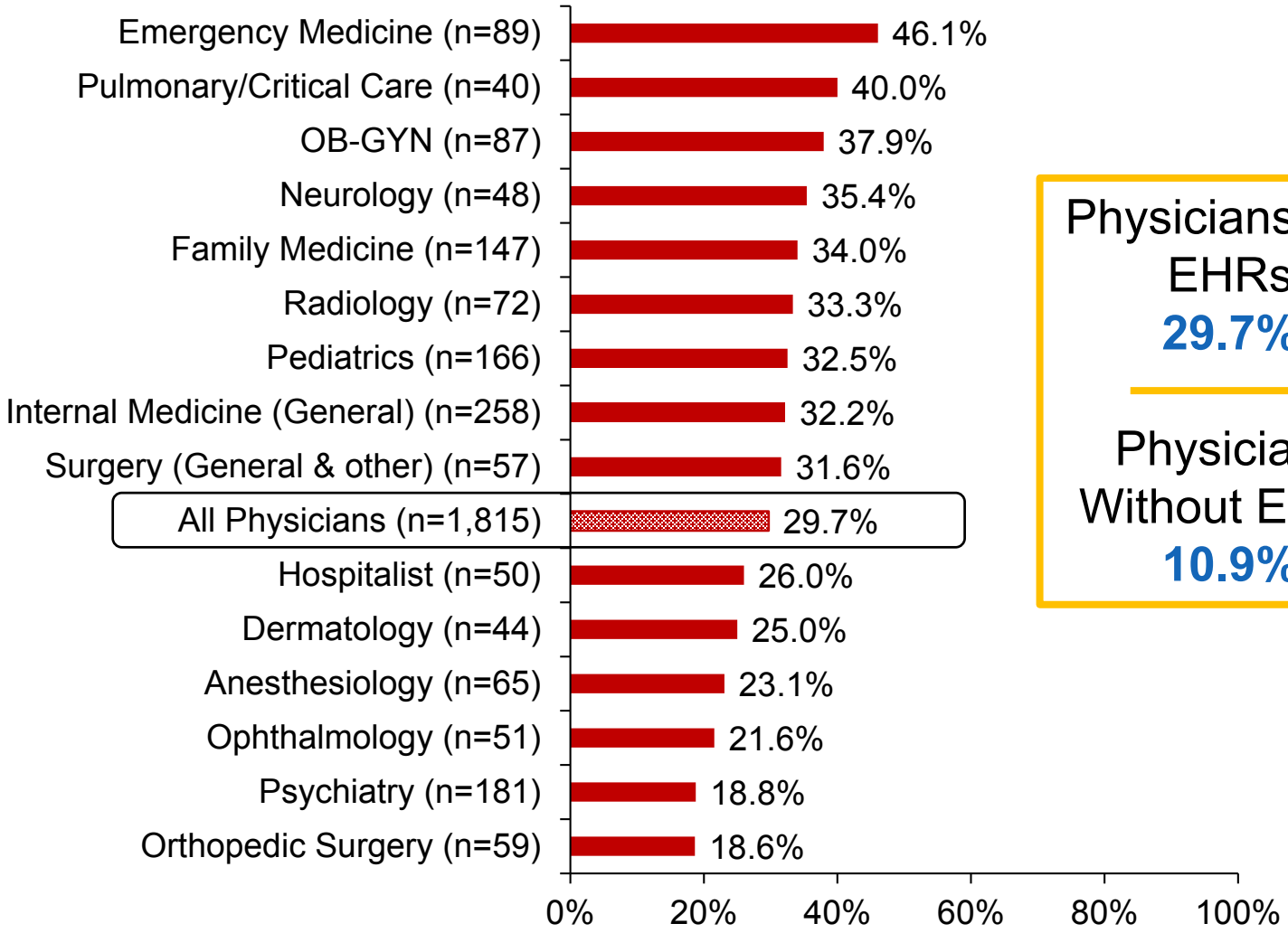


Stressful features of HIT

Frequency of responses

- Number of clicks to accomplish a task
- Lack of interoperability between systems
- Note bloat
- Fear of missing information due to volume of information in note
- Impact on interaction with patient
- Effect on productivity

Burnout symptoms by specialty



Physicians with EHRs
29.7%

Physicians Without EHRs
10.9%

Adjusted Odds of Burnout

Measure	Odds Ratio	95% Confidence Interval	*p*
Sufficiency of Time for Documentation			
Sufficient	ref	ref	ref
Insufficient	3.7	2.8-4.7	<0.001
EHR Adds to Daily Frustration			
No	ref	ref	ref
Yes	2.3	1.7-3.1	<0.001
Time Spent on the EHR at Home			
Minimal/None	ref	ref	ref
Modest/Satisfactory	1.1	0.8-1.5	*n.s.*
Moderately High/Excessive	1.2	0.9-1.5	*n.s.*

Key findings

- HIT-related stress is **measurable and common**
- Prevalence = **81%** among physicians with EHRs
- There are many features of HIT that physicians find stressful, especially the **number of clicks**
- Presence of any of HIT-related stress measures independently **predicts burnout**
- EHRs important but **not entirely to blame**
- Organizations should **measure** HIT-related stress and burnout among workforce

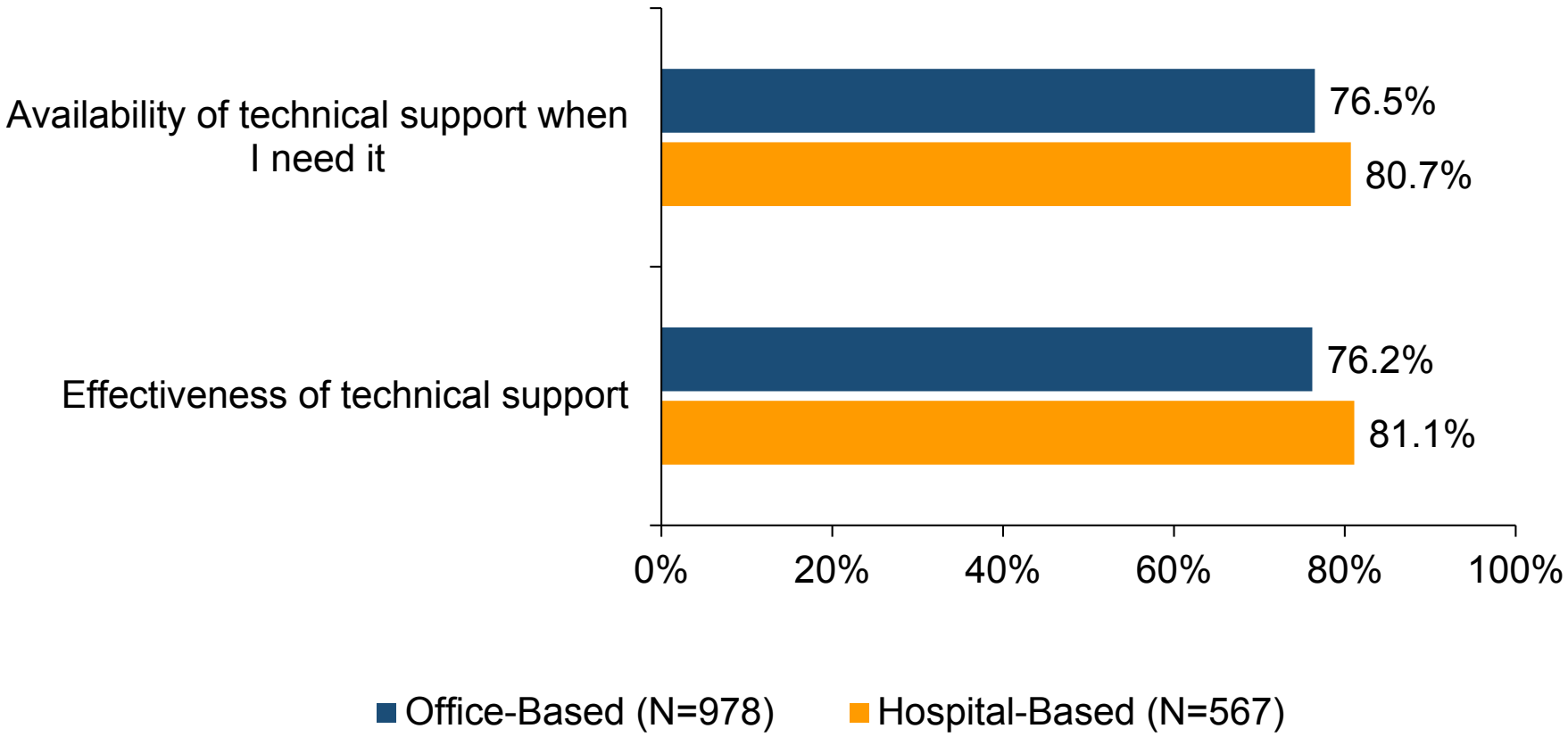
Specialty matters

HIT-related stress is most prevalent in primary care oriented specialties

Lowest in hospital medicine and anesthesia

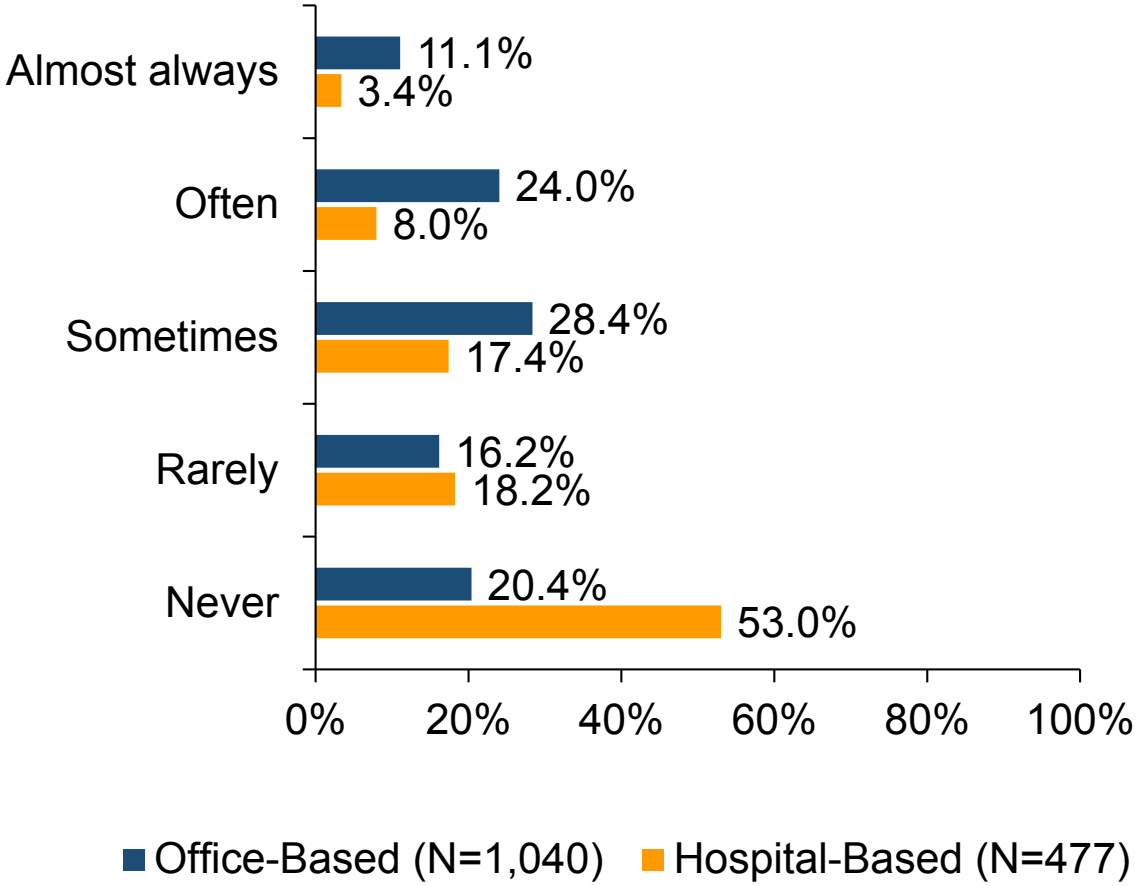
Strategies & Support for Reducing HIT-Related Stress

Technical Support



Support with Inbox Tasks

How often physician respondents receive assistance from someone in their practice in managing their inbox tasks



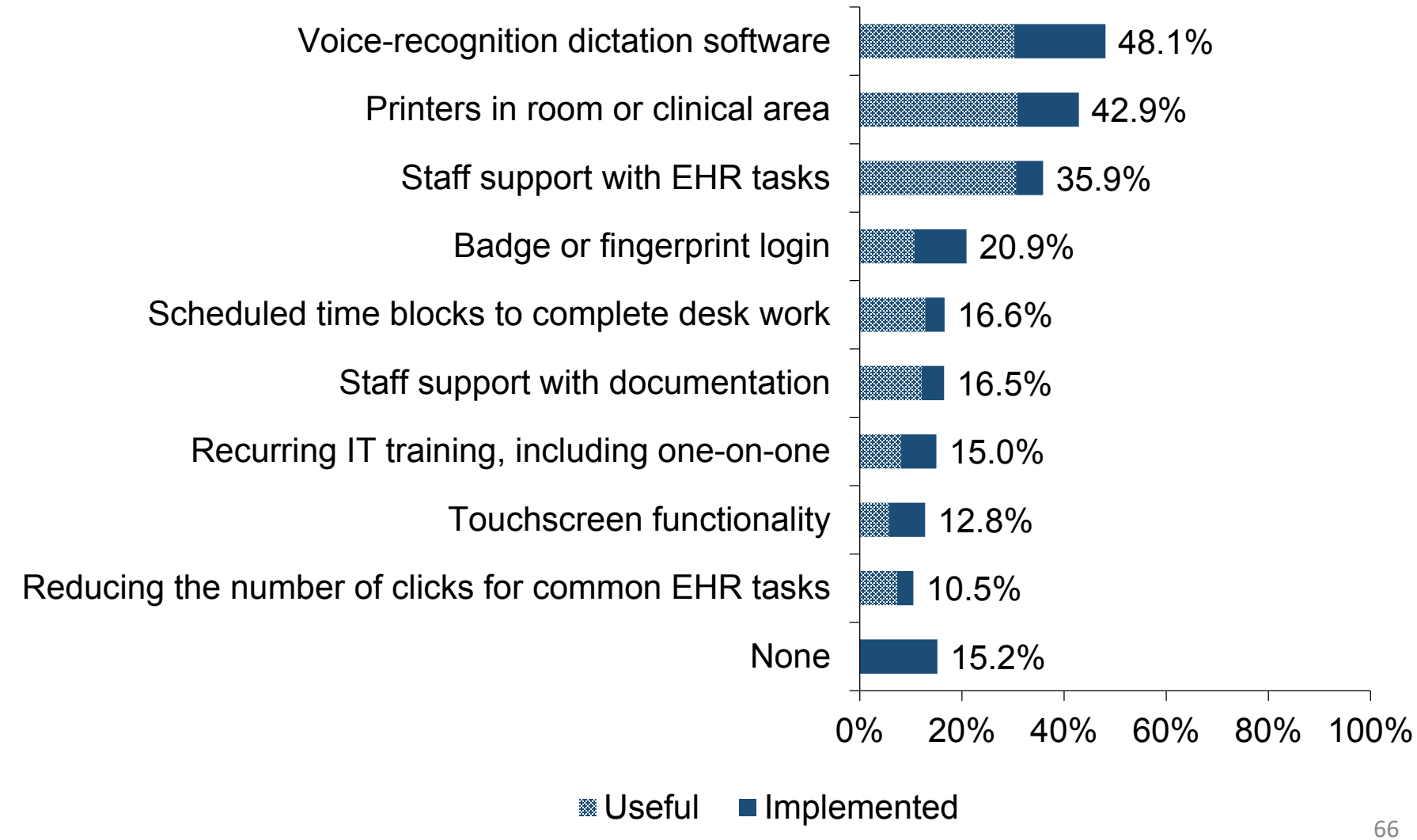
Moderately high or excessive time on inbox tasks:

Office-based
62.2%

Hospital-based
40.4%

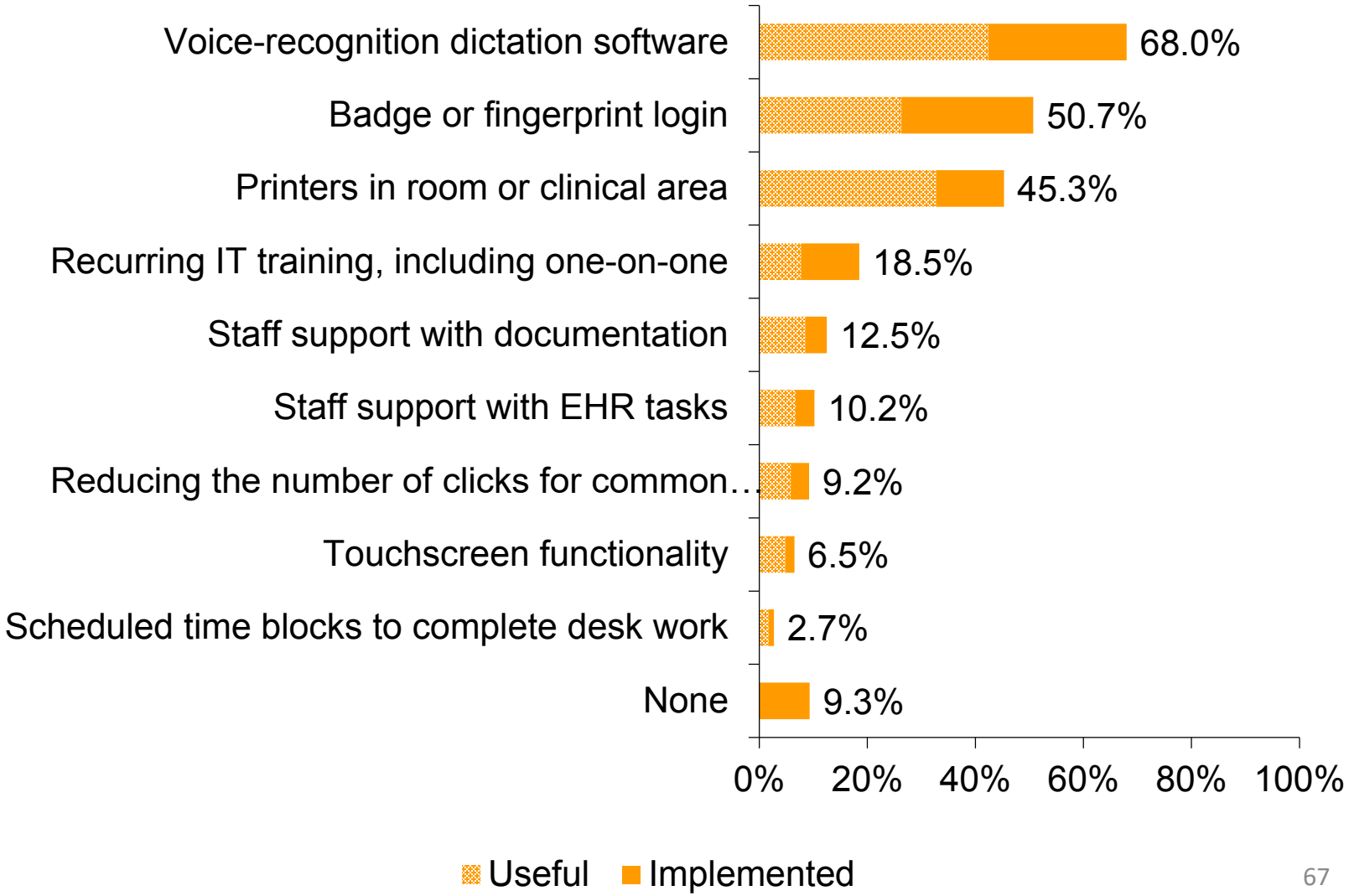
Practice changes to improve experience

Office-Based



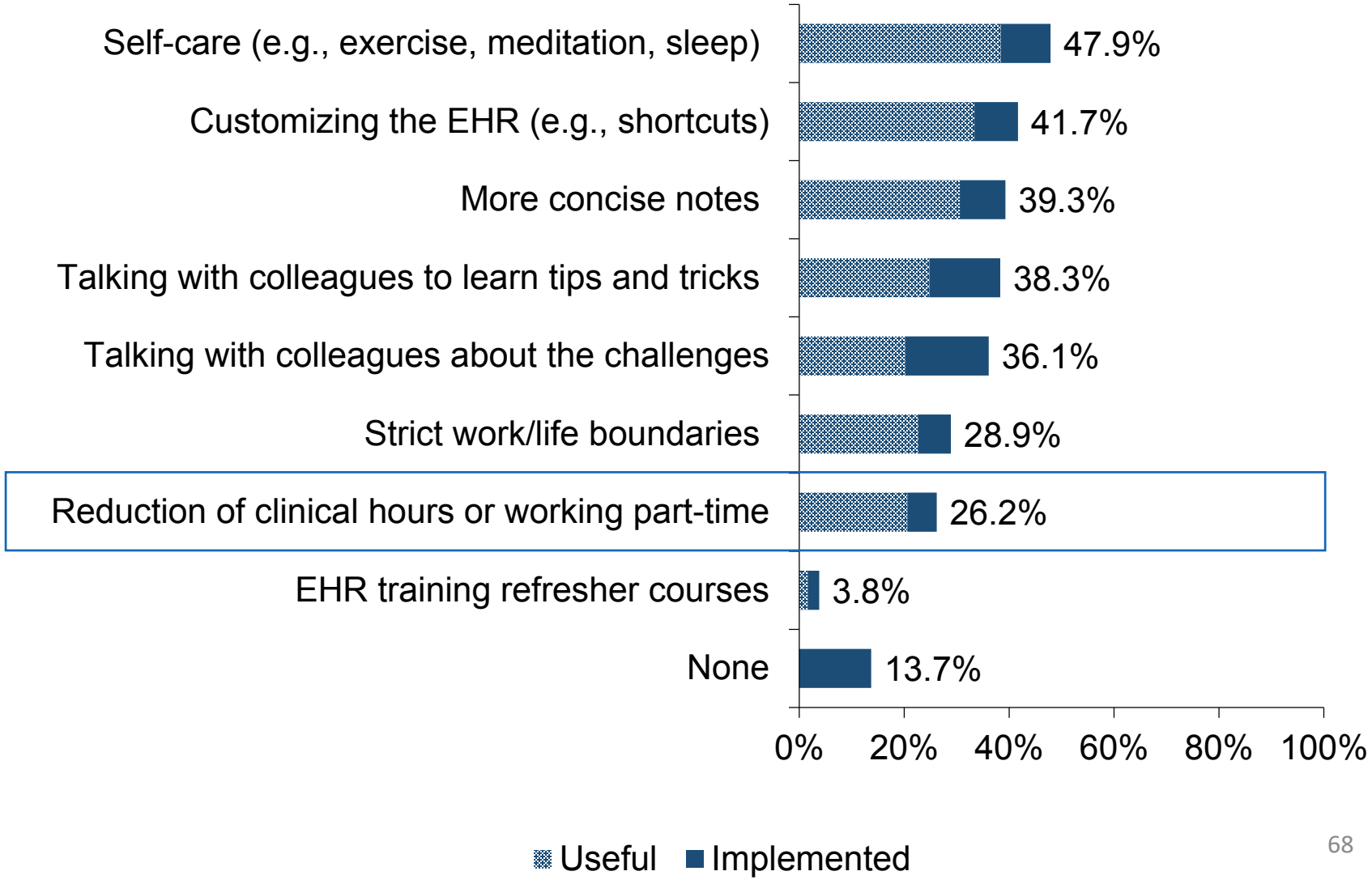
Practice changes to improve experience

Hospital-Based



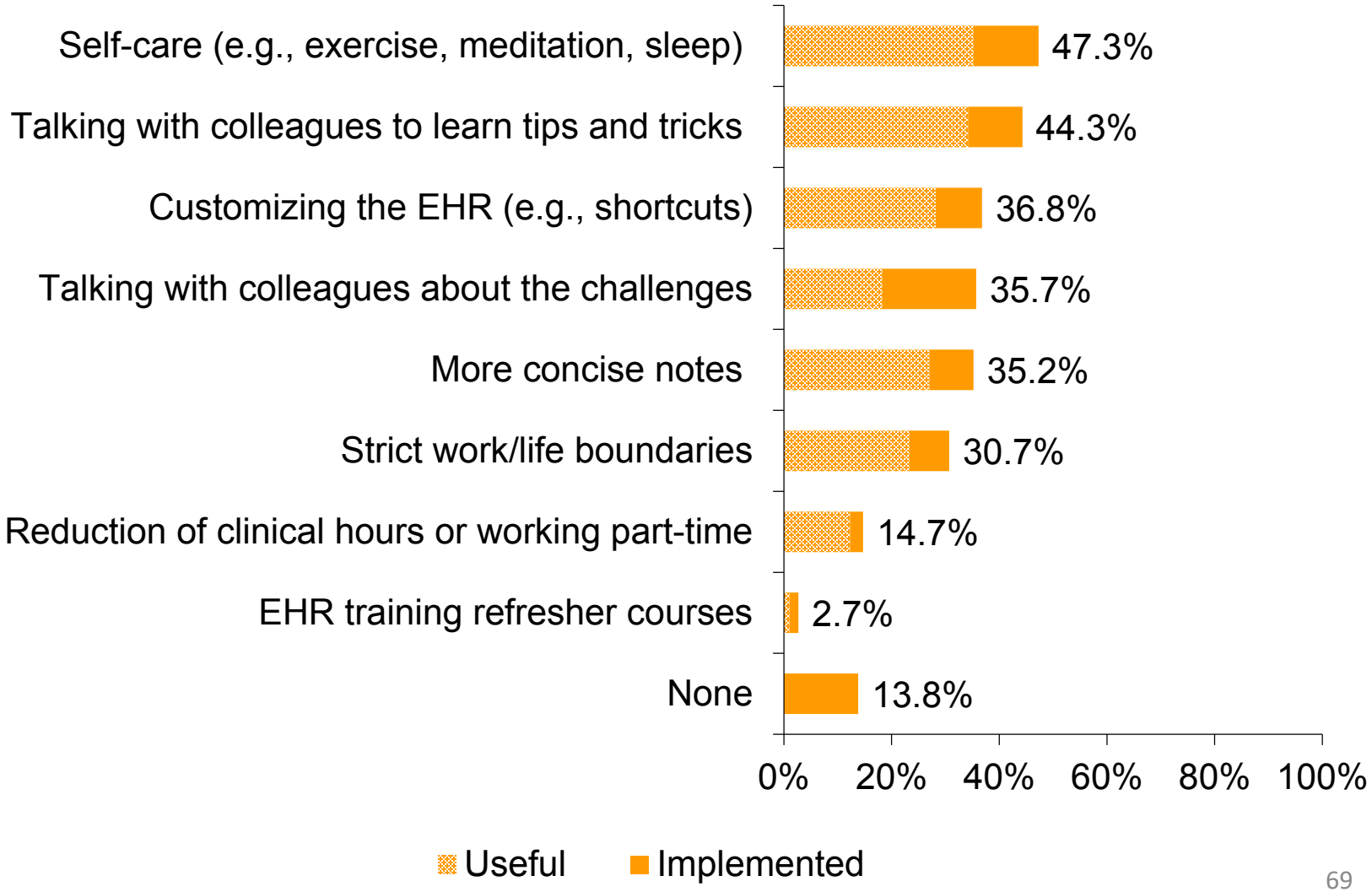
Personal changes to improve experience

Office-Based



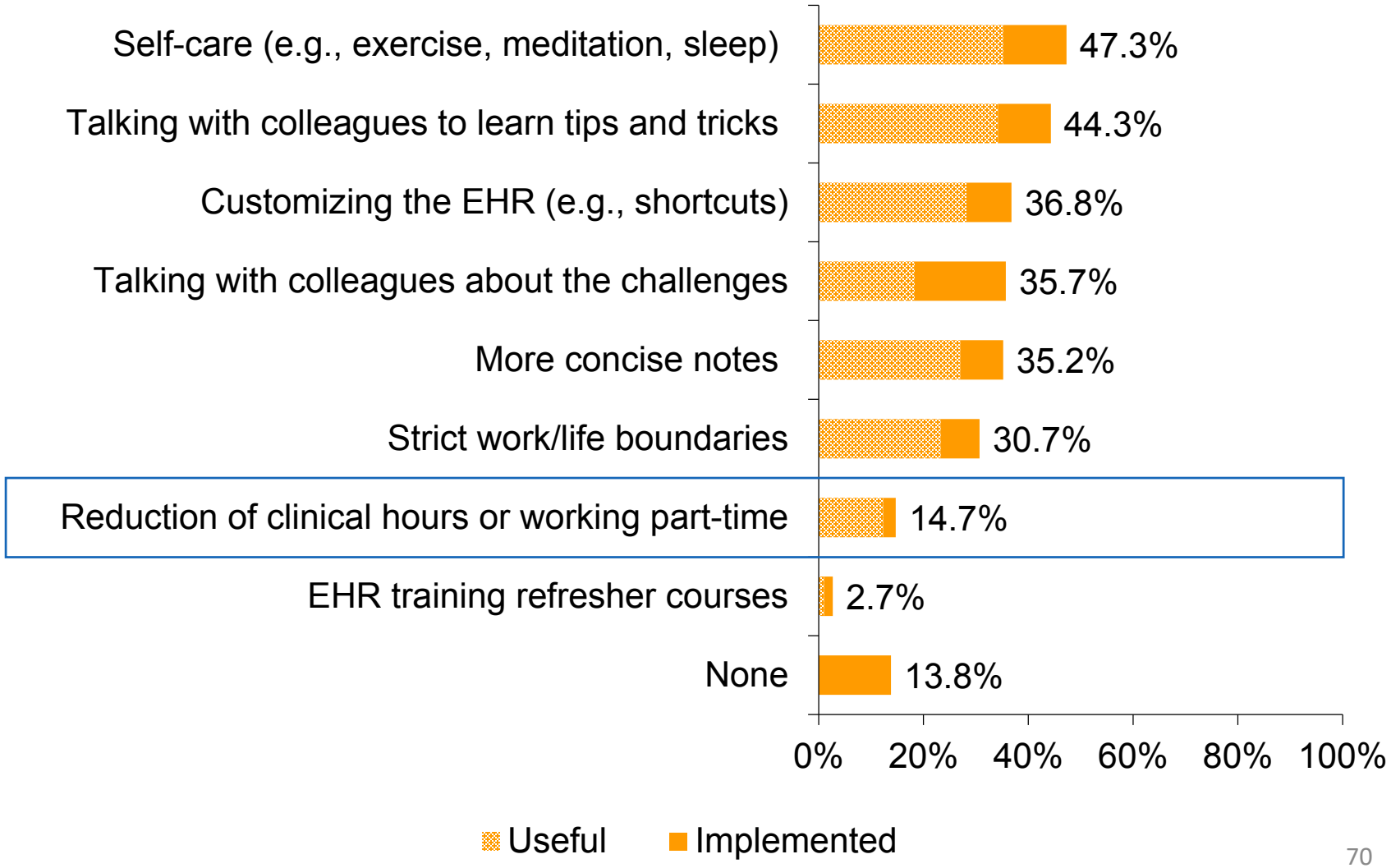
Personal changes to improve experience

Hospital-Based



Personal changes to improve experience

Hospital-Based



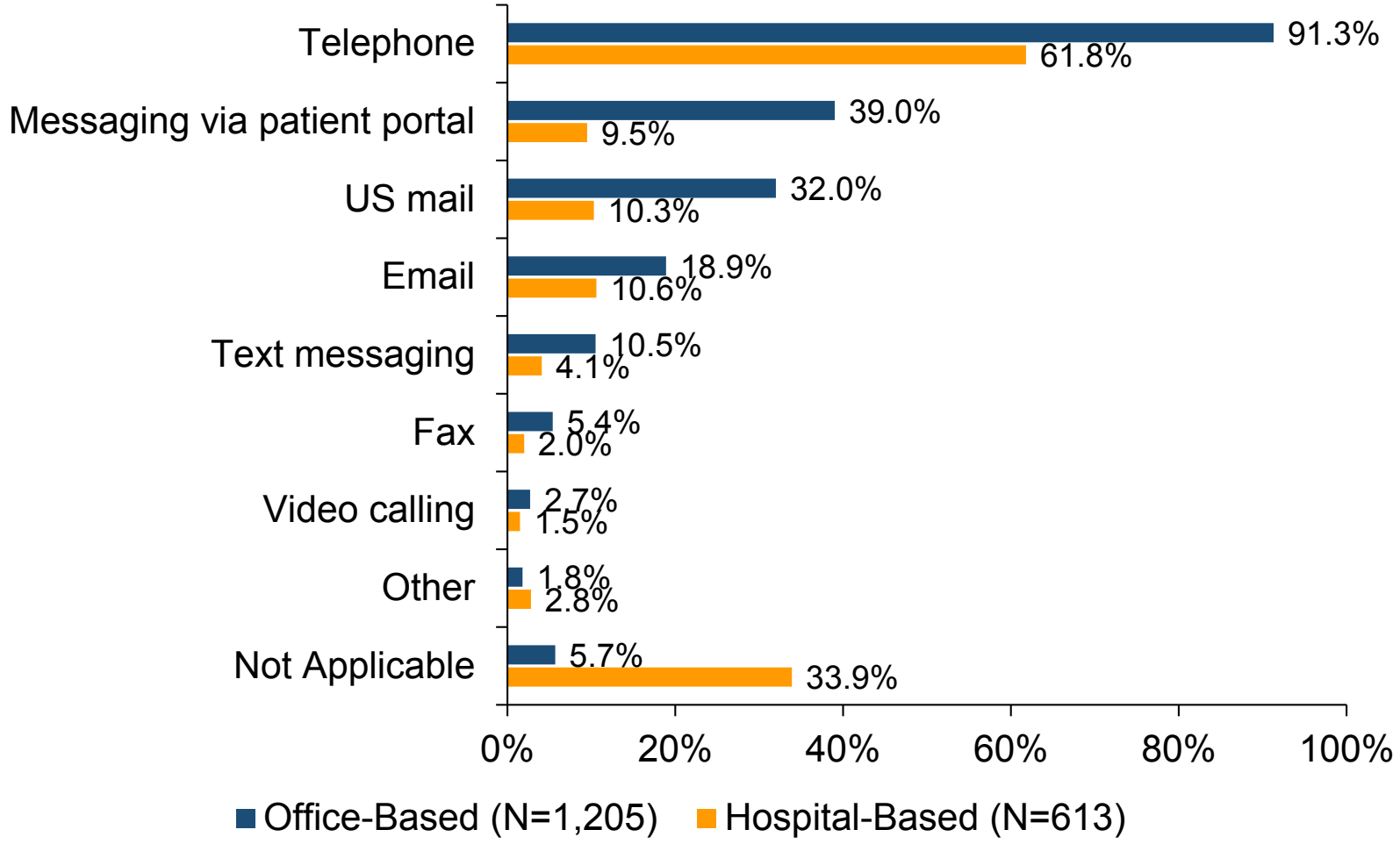
Key findings

- Office-based physicians found **staff support** with EHR tasks & documentation and **scheduled time blocks** to complete desk work useful in improving HIT experience
- Hospital-based physicians found **talking to colleagues about EHR tips** to be useful in improving experience
- Physicians found **customizing** the EHR, writing more **concise notes**, strict **work/life boundaries**, and **reducing clinical hours** improved experience

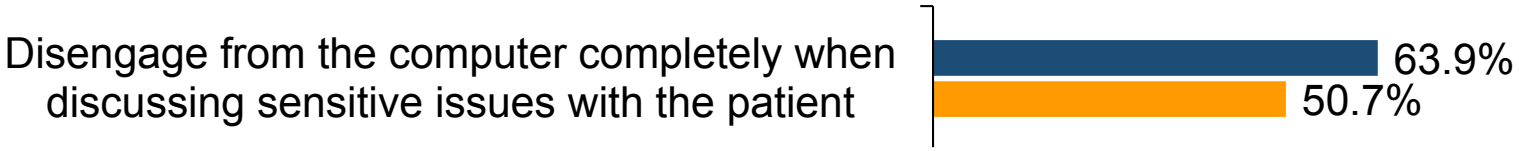
HIT for Patient Engagement

Communicating with patients

Percent of physician respondents who personally (i.e., not their office staff) communicate with patients using each modality, outside of a face-to-face encounter

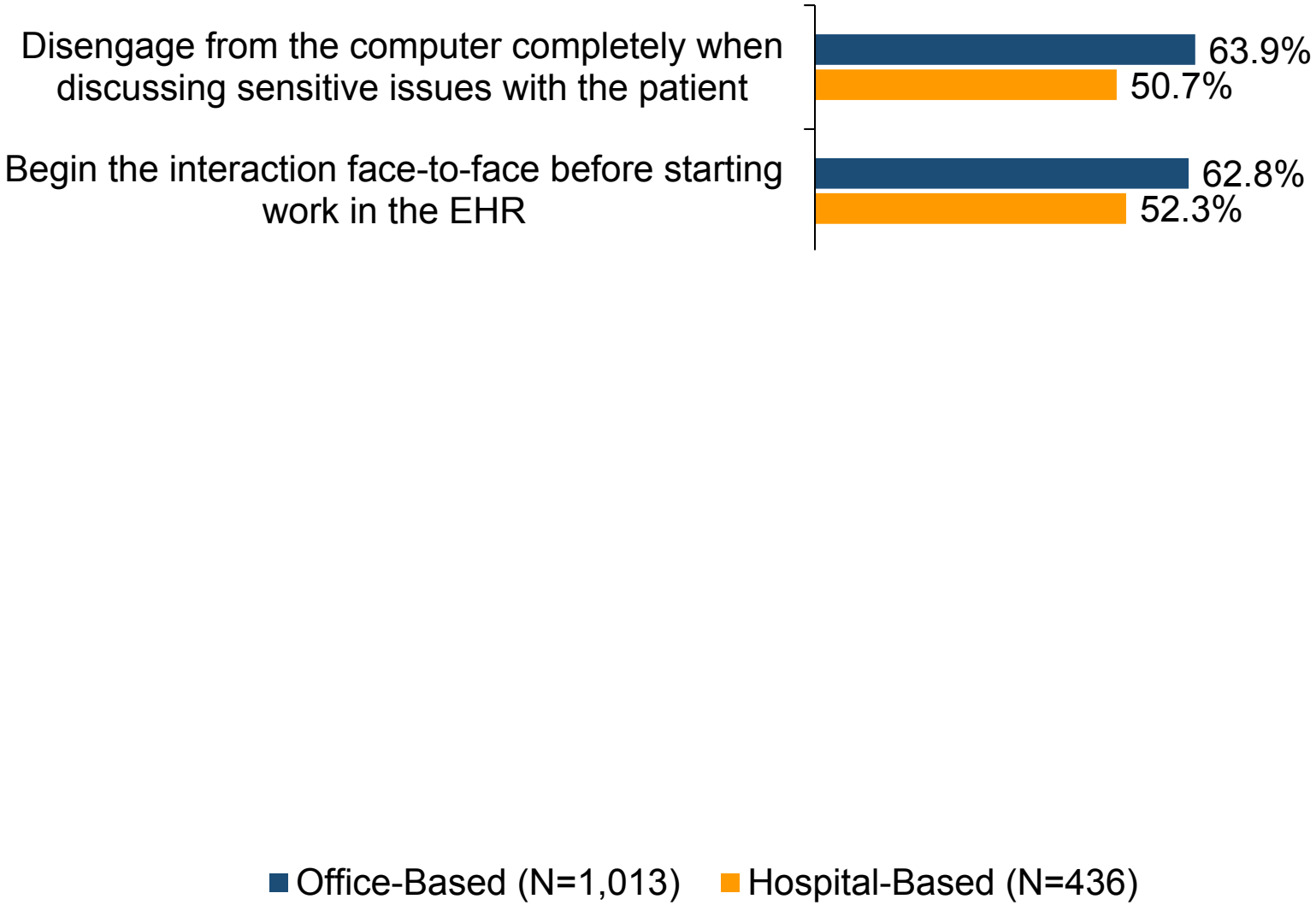


Useful communication strategies

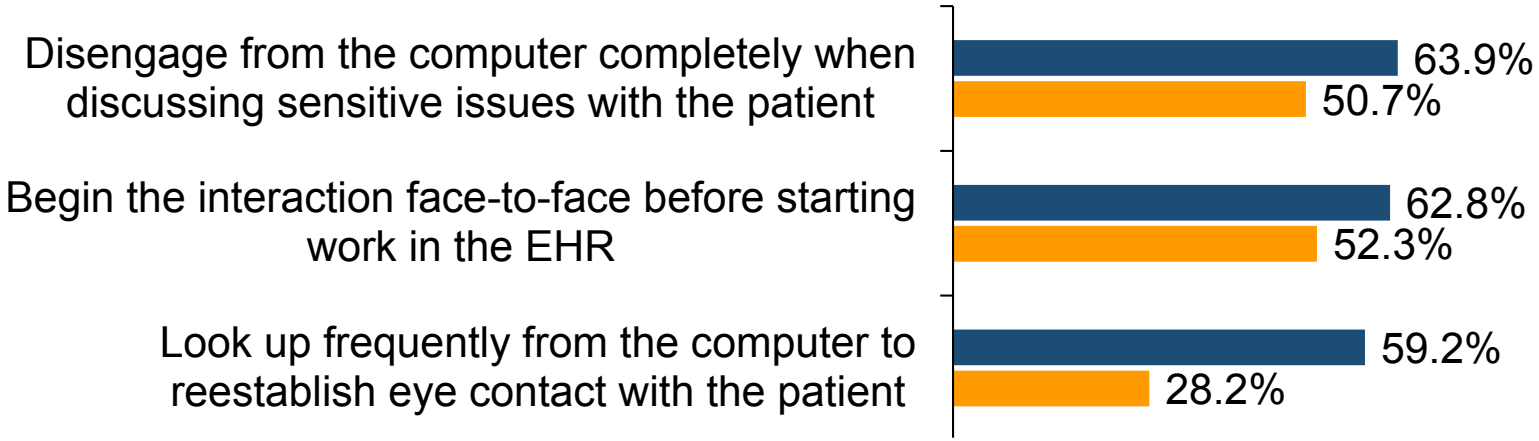


Office-Based (N=1,013) Hospital-Based (N=436)

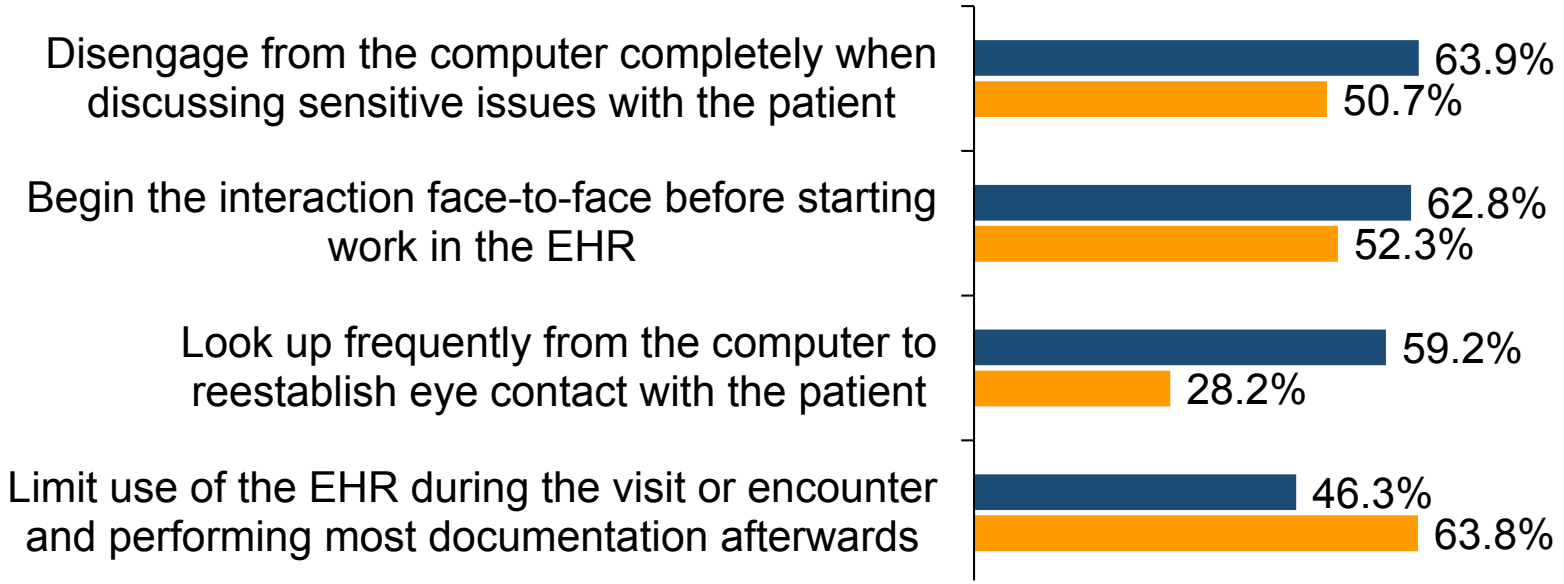
Useful communication strategies



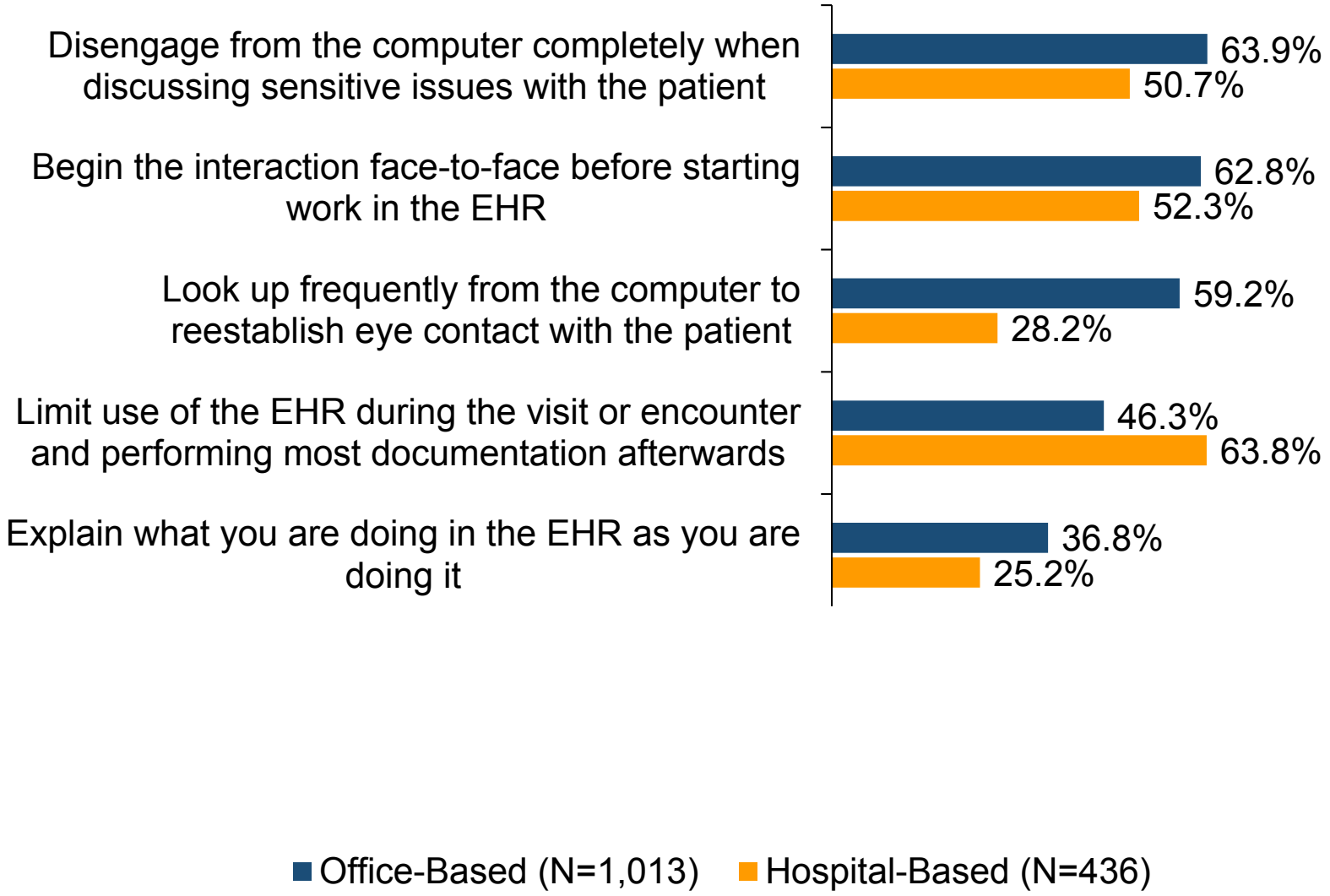
Useful communication strategies



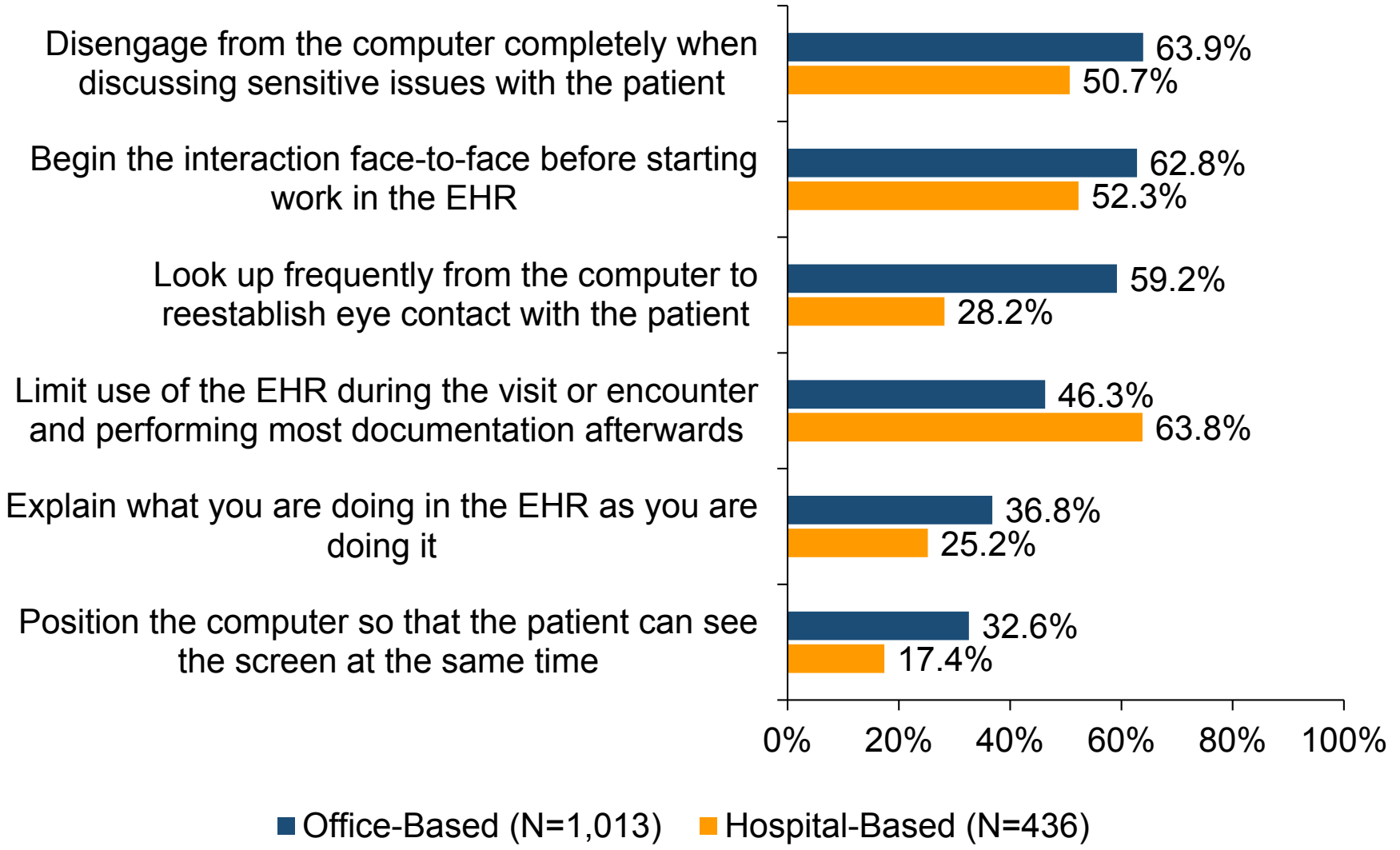
Useful communication strategies



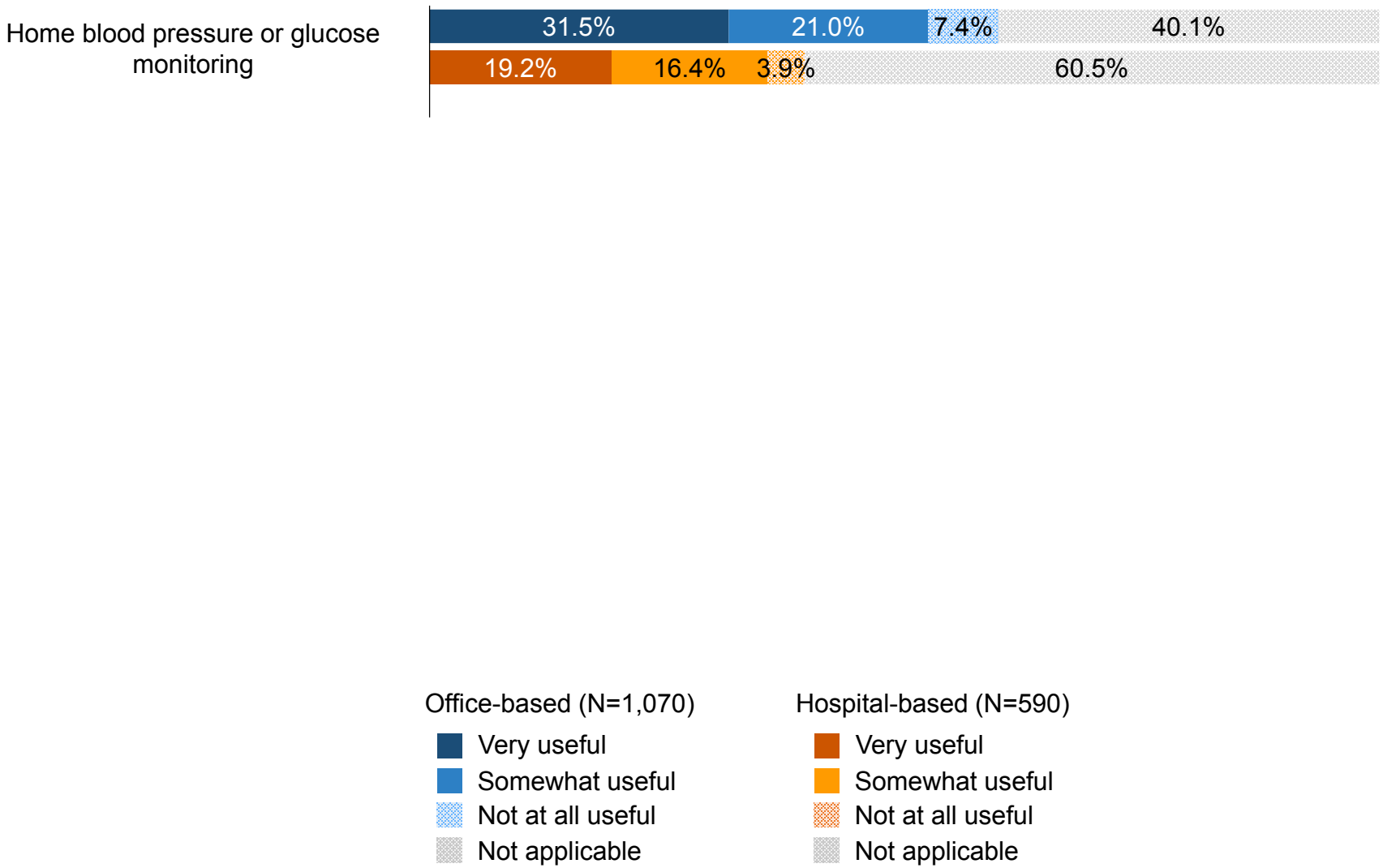
Useful communication strategies



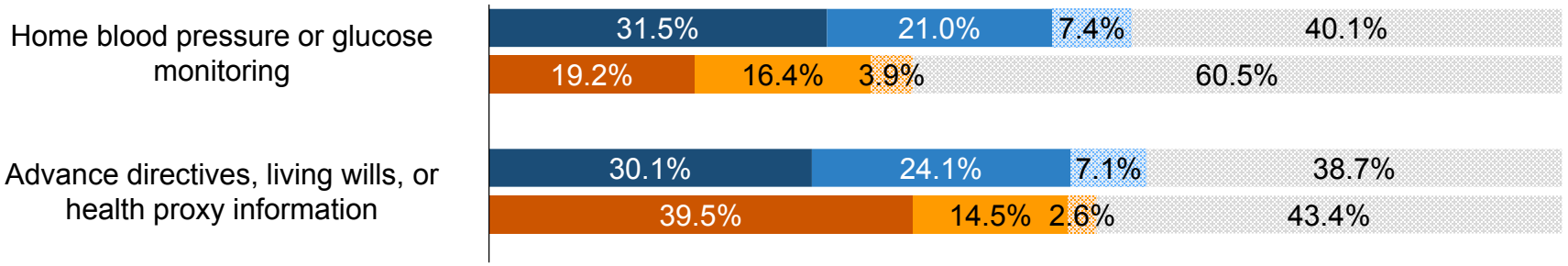
Useful communication strategies



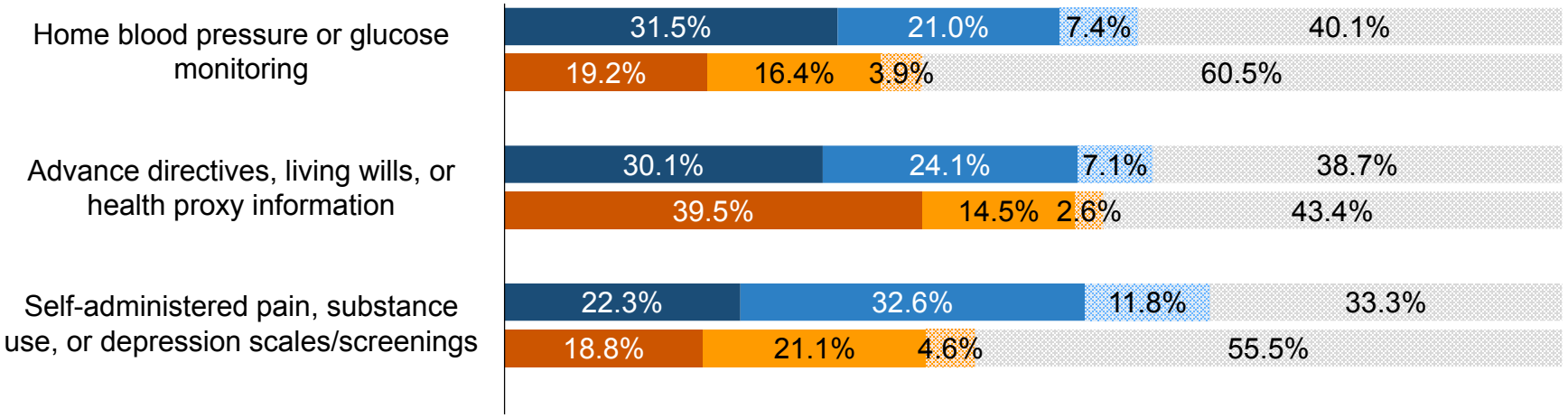
Patient generated health data



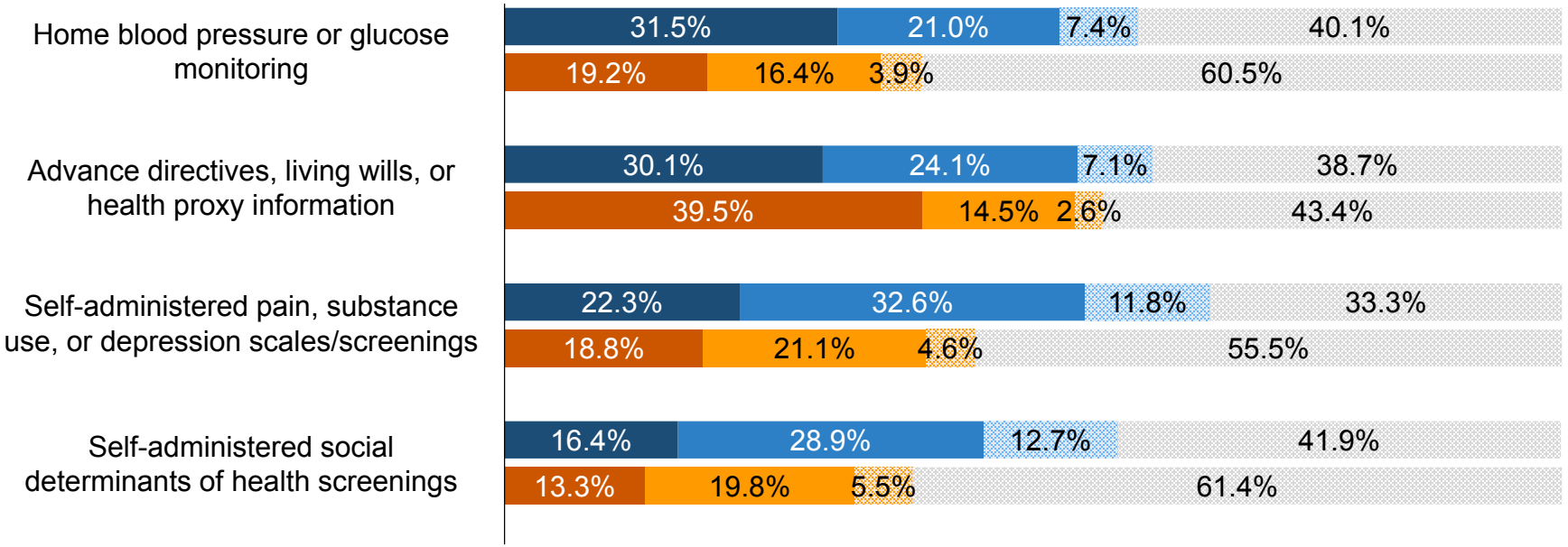
Patient generated health data



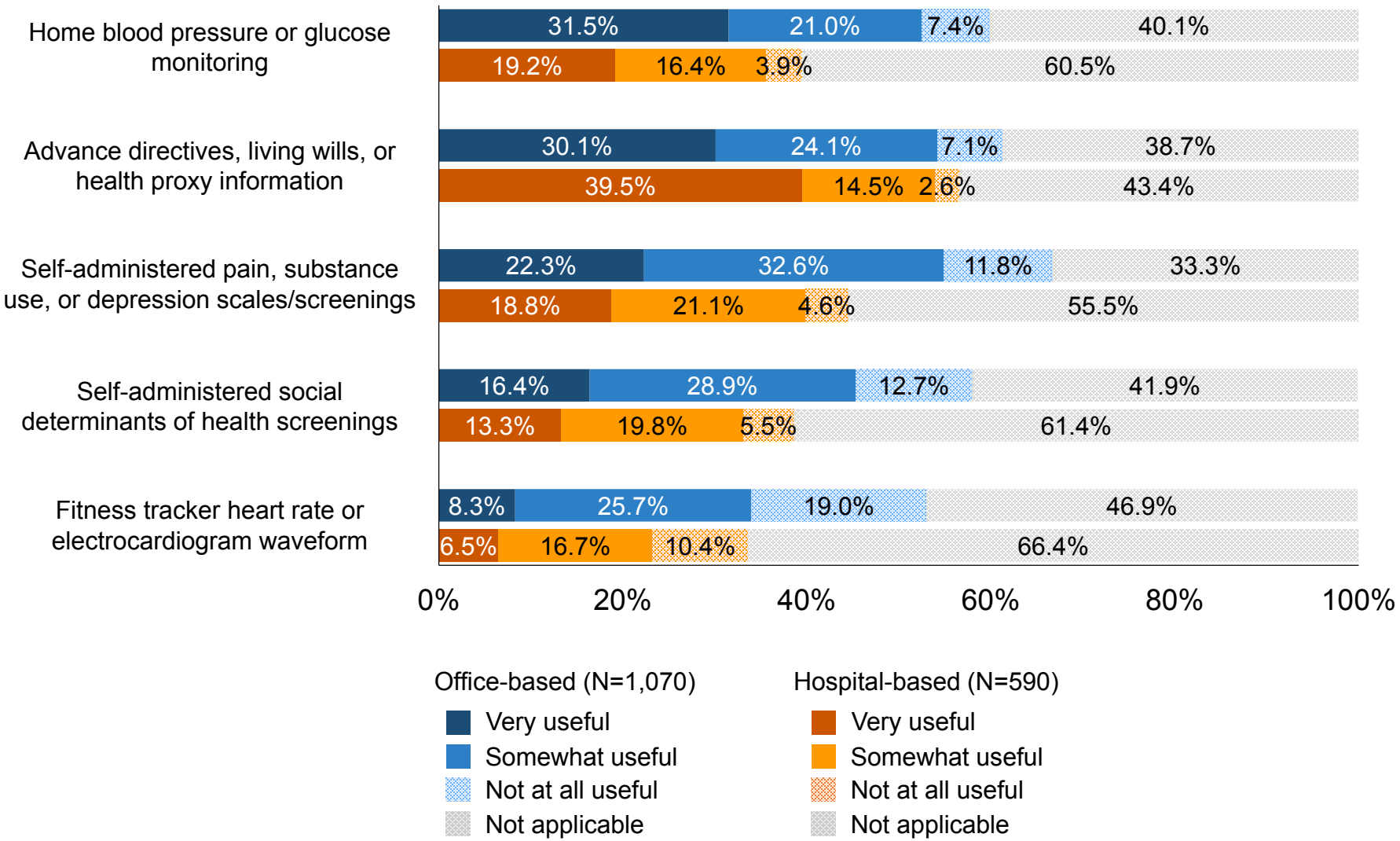
Patient generated health data



Patient generated health data

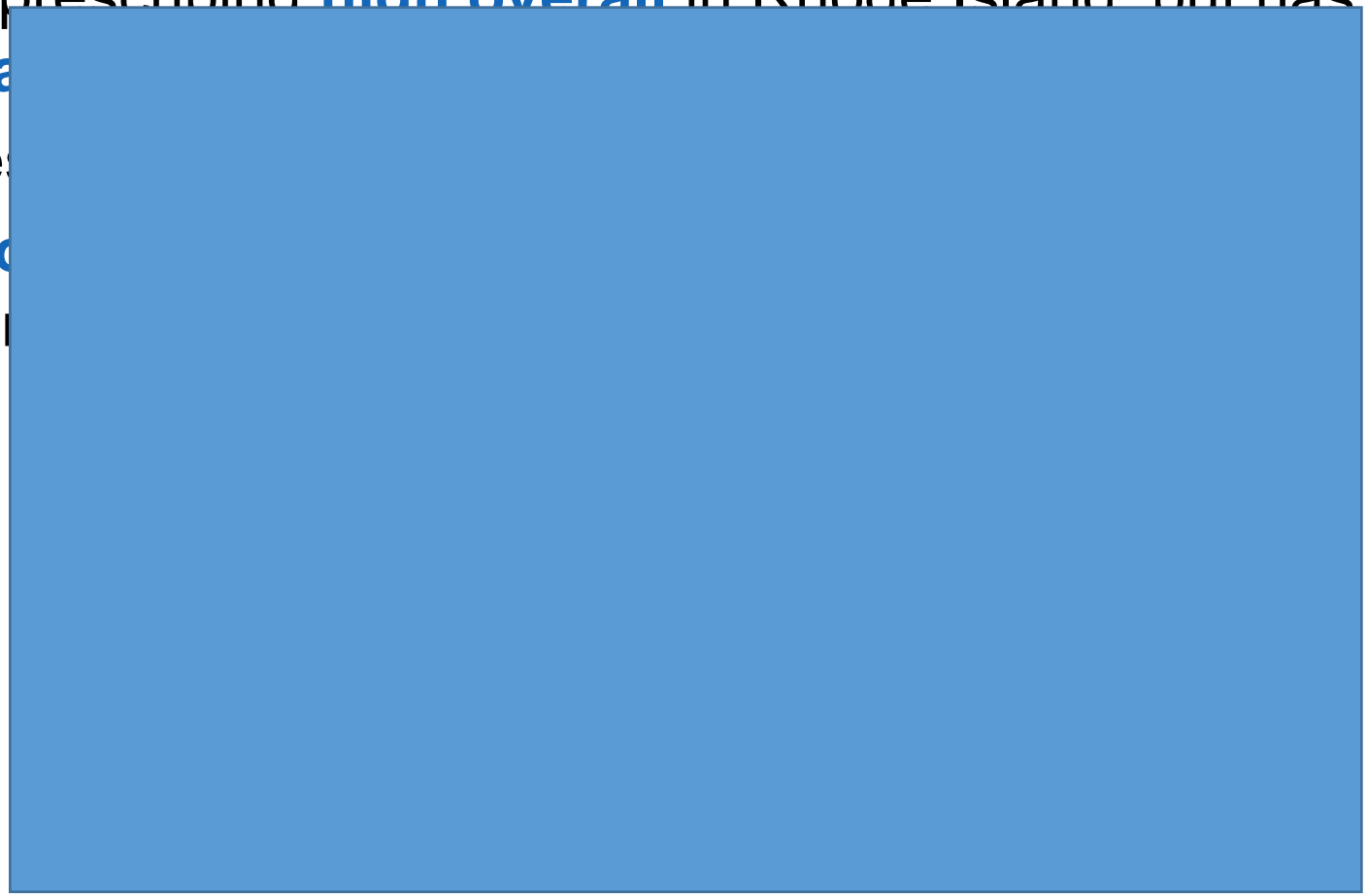


Patient generated health data

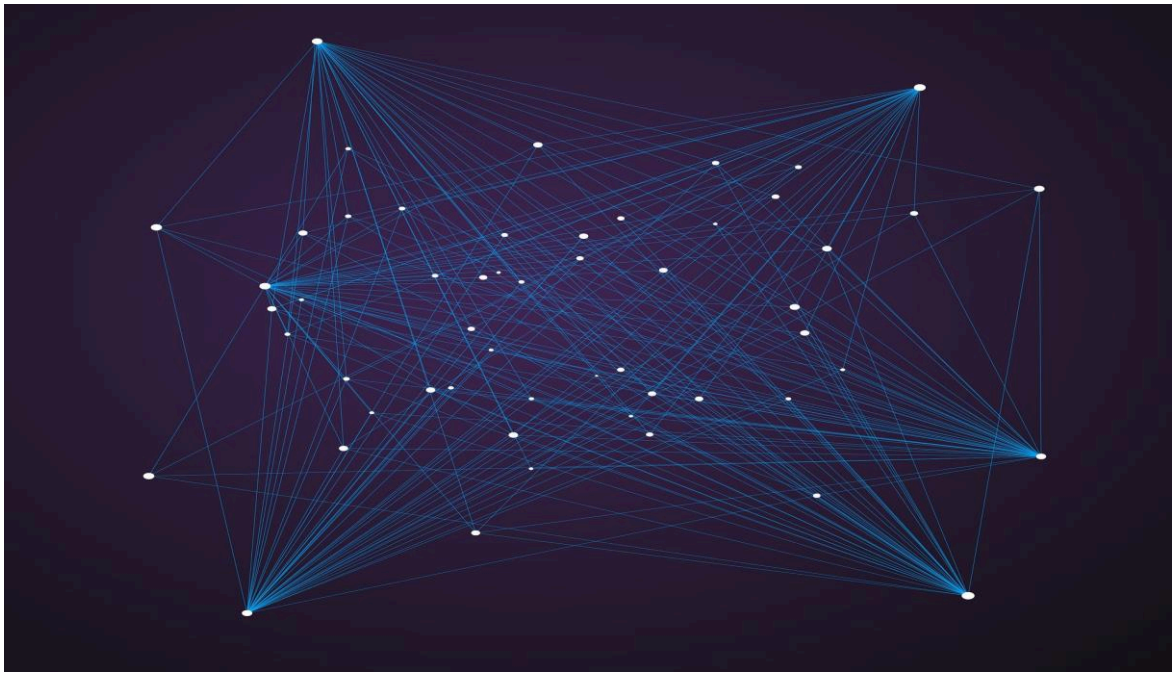


Key findings

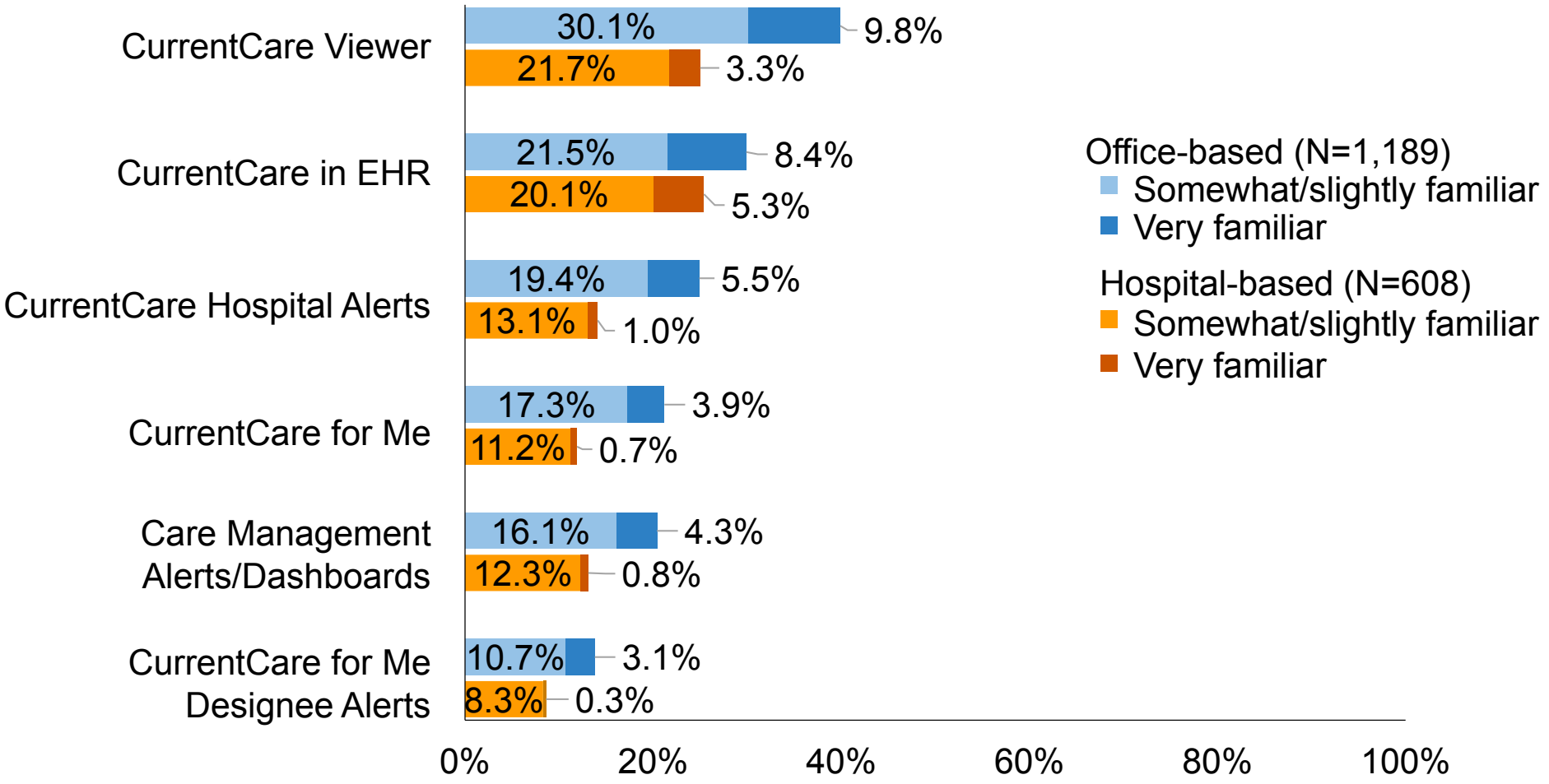
- E-prescribing **high overall** in Rhode Island, but has **pla**
- Le
- **Wo**
  co



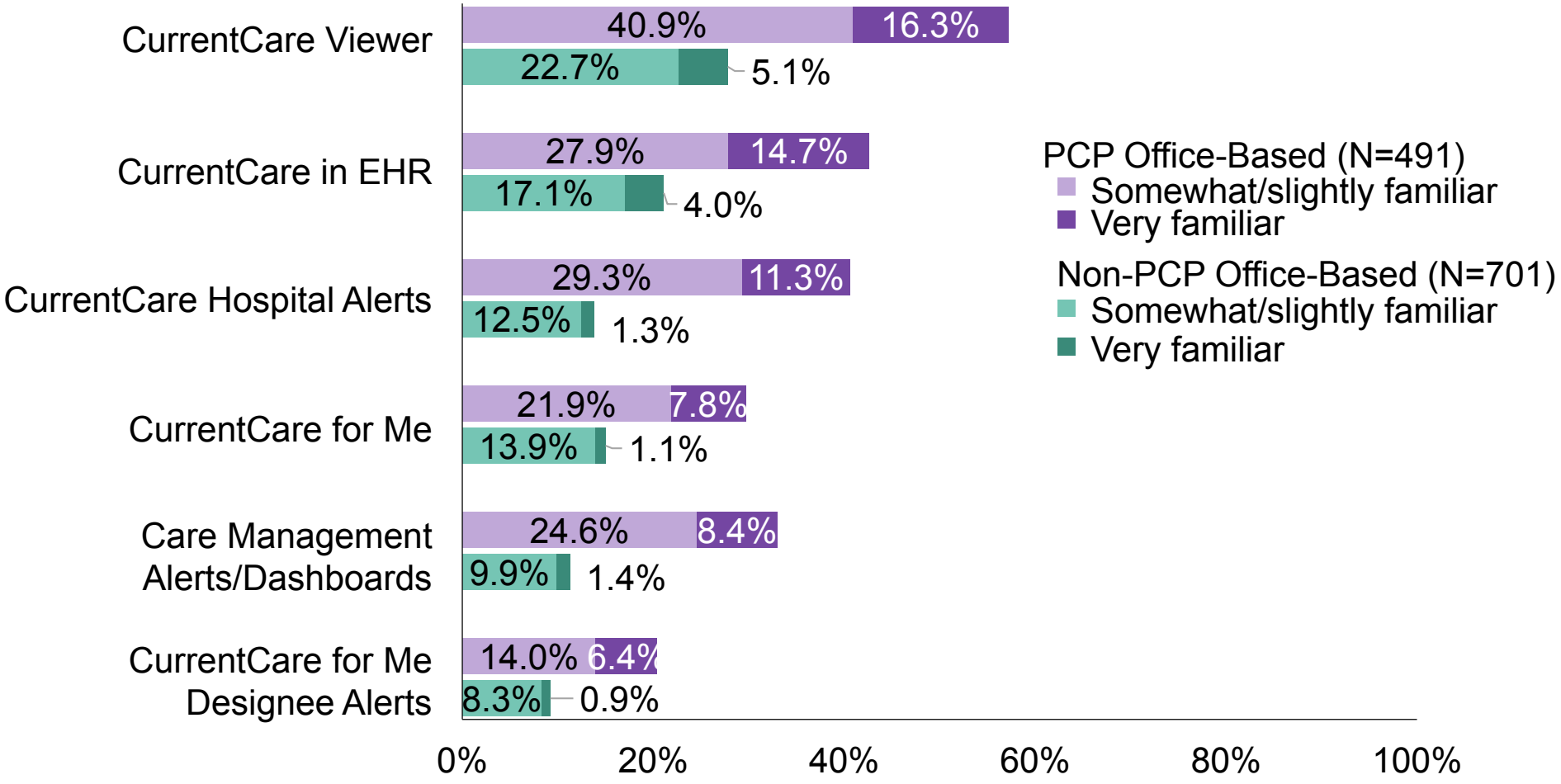
Health Information Exchange



HIE: physician familiarity by setting

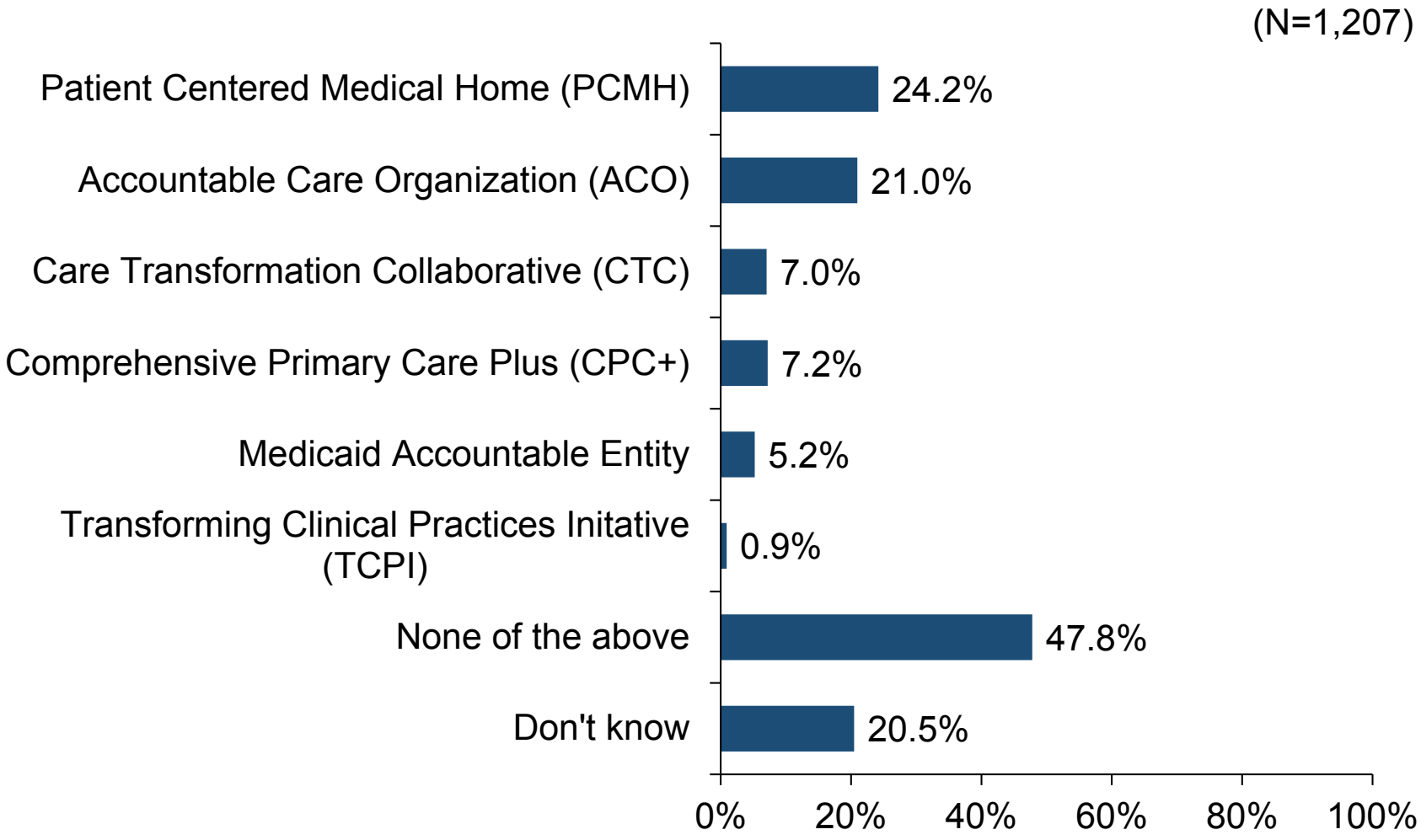


HIE: physician familiarity by PCP status



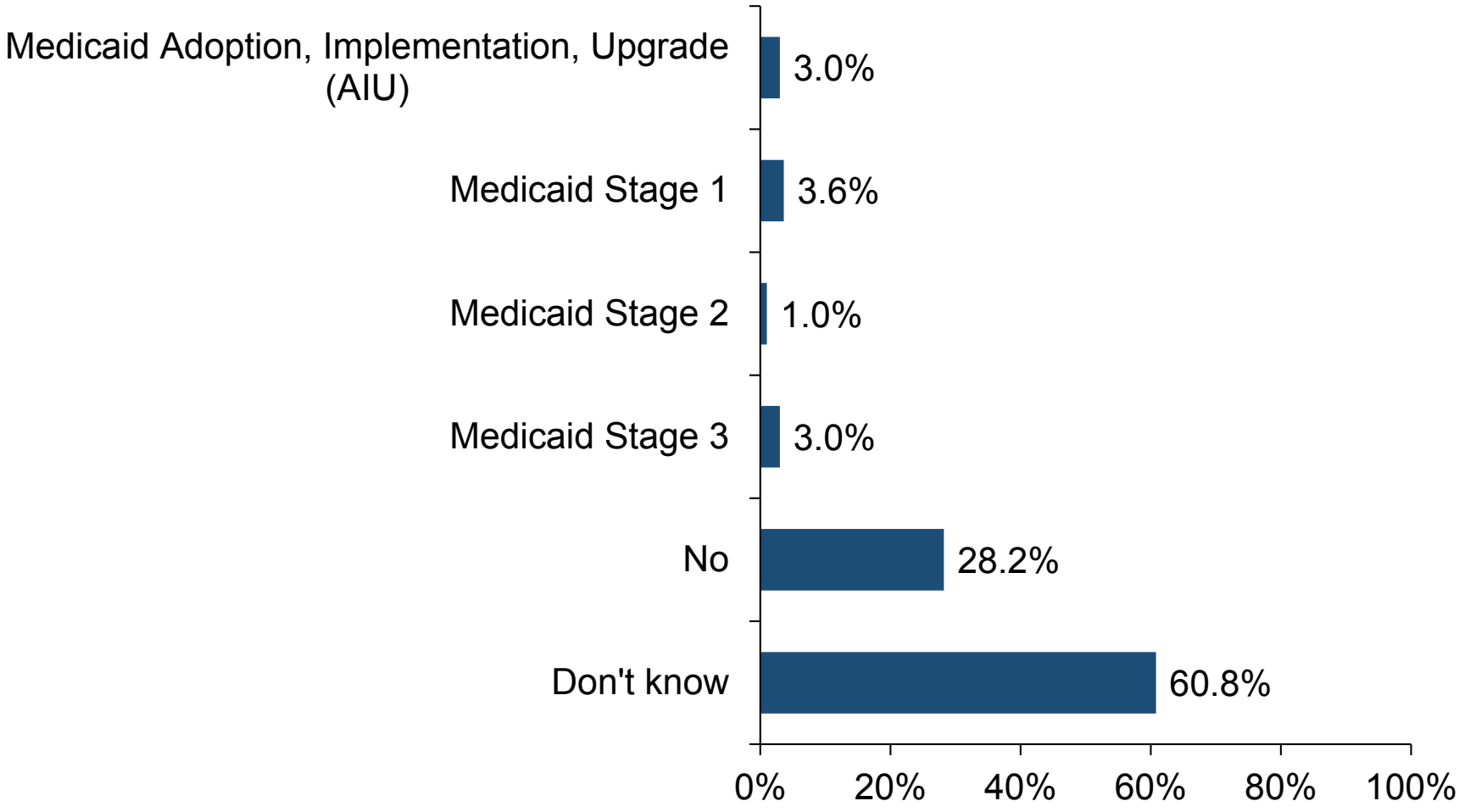
Incentive Programs & Alternative Payment Models

Alternative Payment Model



Medicaid Meaningful Use

(N=1,089)



Dissemination and Action

Dissemination

Dissemination

Reports and Data Sharing

- Practitioner-level report
- Summary and detail reports
- Physician-facing report
- Practitioner outreach
- Data sharing
- Ad hoc analysis requests
- Conference abstracts
- Scholarly publications

Physician report

2017 HIT Physician Report

State of Rhode Island Department of Health

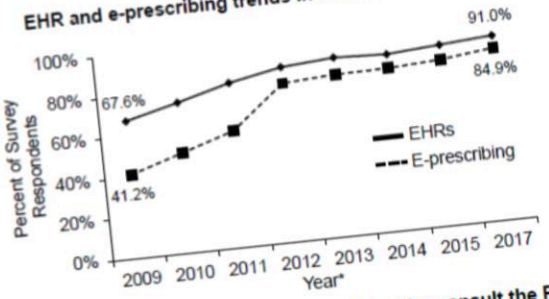
What's Inside?

- About the HIT Survey
- Prescription Drug Monitoring Program
- Physician Burnout and HIT-Related Stress
- HIT for Patient Engagement
- Incentive Programs
- Online Physician Selection Websites

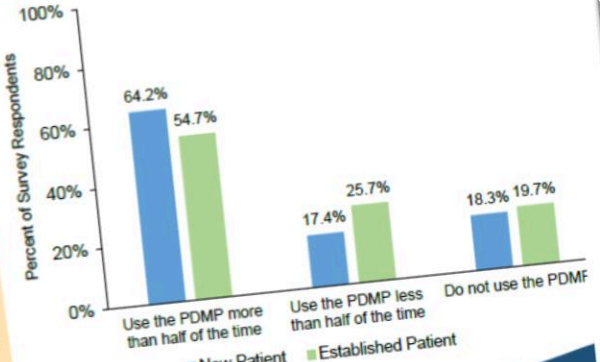
About the HIT Survey

In spring 2017, the Rhode Island Department of Health (RIDOH) administered the Health Information Technology (HIT) Survey to all 4,197 physicians licensed in Rhode Island, in active practice, and located in Rhode Island, Connecticut, or Massachusetts. The survey received a total of 1,792 responses, **for a response rate of 42.7%.**

EHR and e-prescribing trends in Rhode Island, 2009 to 2017



The percent of office-based physicians who consult the PDMP for new opioid or benzodiazepine prescriptions



*Prescribing practitioners in Rhode Island are **required to check the PDMP prior to initiating an opioid prescription**. This includes inpatient practitioners who prescribe an opioid on discharge.*

http://sos.ri.gov/documents/archives/regdocs/released/pdf/DOH/9054.pdf

Impact of prior surveys

- Alignment of HIT measures
- Guidance for allocation of state HIT resources
- Data for state grant applications
- Public use dataset for further research
- Fewer physician surveys overall

Action taken

- Solicit formal recommendations from primary care advisory group
- Improve education about new PDMP regulations
- Make PDMP accessible without separate login
- Make HIE accessible without separate login
- Connect physicians with help on HIE and QPP

Your Thoughts

Acknowledgments

Special thanks to Samara Viner-Brown at the Rhode Island Department of Health and Blake Morphis at Healthcentric Advisors

RGardner@HealthcentricAdvisors.org

Samara.VinerBrown@health.ri.gov

Survey limitations

- Response rate and administration in single state may affect generalizability
- Not anonymous, administered by Department of Health, burnout prevalence may be underestimate
- Administered electronically, those uncomfortable with computers may be less likely to respond

RHODE ISLAND
DEPARTMENT OF HEALTH

ACCREDITED HEALTH DEPARTMENT
PHAB
PUBLIC HEALTH ACCREDITATION BOARD

Appendix

Survey development

- Adapted from validated HIT surveys
- New questions piloted
- Stakeholder process
- Skip patterns