KPMG Digital Health Pulse 2017

April 2017

Research purpose and design

To identify **key perceptions about the pace of digital health adoption** and key challenges to implementing virtual care programs at hospitals and healthcare systems

Through a blinded **quantitative, voice of customer, web-based, market research study** with C-suite, IT and clinical leaders

About the KPMG Digital Health Pulse 2017
The KPMG survey, conducted by HIMSS Analytics from Feb. 15 - March 17, 2017, asked 147 healthcare executives about the state of adoption for virtual care services and explored the top challenges hospitals and healthcare systems face as they seek to implement digital health capabilities. Respondents were comprised of the C-suite, IT, and clinical leaders.

Research methodology

Survey was conducted between February 15 and March 17, 2017

Targeted Respondents:

C-Suite, IT Professionals, Clinicians, and Department Heads at hospitals and healthcare systems.
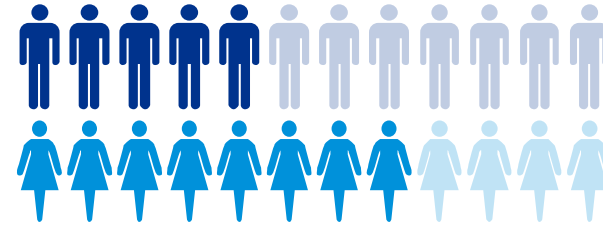
147 **Respondents**

Respondent Demographics

Respondent demographics
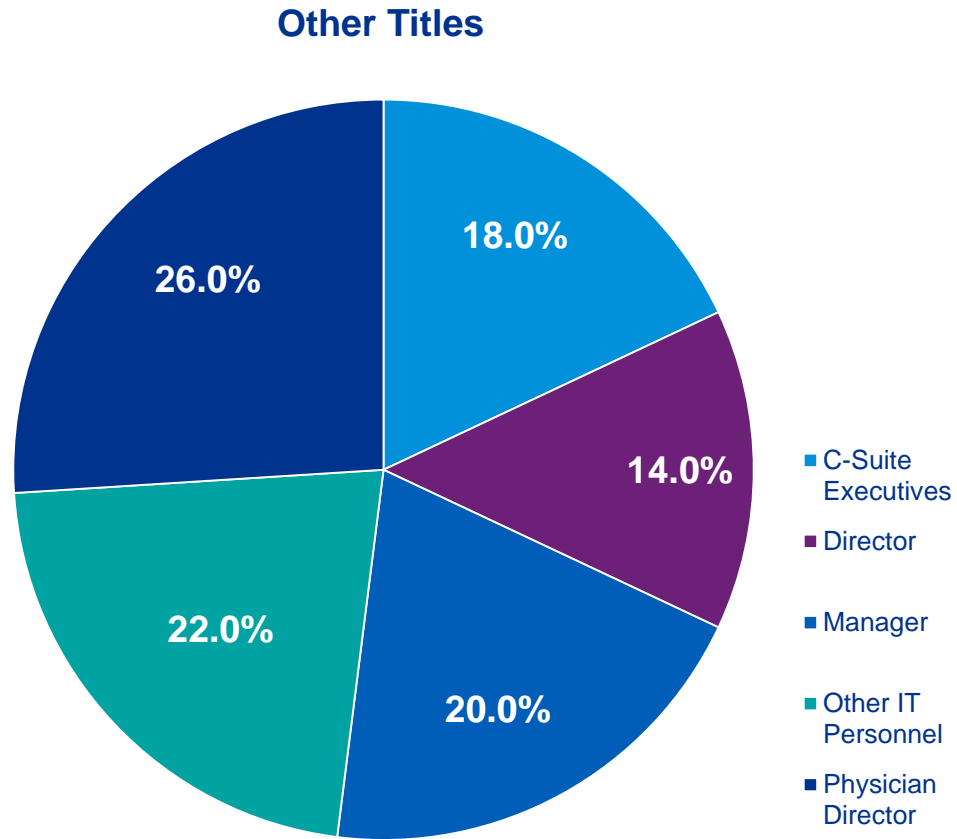
147 Respondents

C-Suite, IT Professionals, Clinicians, and Department Heads at hospitals and healthcare systems

46% **IT Based Roles**

36% **C-Suite Roles**

18% **Department Heads**

Respondent other titles

Other Titles

- C-Suite Executives — 26.0%
- Director — 18.0%
- Manager — 14.0%
- Other IT Personnel — 22.0%
- Physician Director — 20.0%

Chief Medical Officer
HIM Director/Revenue Integrity
IS Analyst
PMO – Program Director
Compliance and Privacy Program Coordinator
Chief Medical Information Officer
CEO
CFO
Chief Procurement/Supply Chain Officer
Patient Safety and Privacy Officer
Medical Director
Deputy Chief Doctor
Chief Nursing Information Officer
Data Analyst
Chief of Staff
COO
Director Clinical Informatics
IT Lead – Pharmacy
Senior Systems Analyst
Hospital Security Supervisor
PACS Manager

VP Clinical Services
Emergency Department Director
Clinical Informatics Manager
System Architect
Facility Manager
Project Manager
Administrator
Systems Coordinator
Director HIM
Service Line Program Manager
Medical Director for Clinical Engineering
Manager of Diagnostic Center & Manager of IT Medical Imaging
Medical Director of Innovation
Manager Nursing Informatics
Radiology Clinical Coordinator
Director of Organizational Effectiveness
Physician Lead
Senior Clinical Analyst
Quality Director

Top Challenges for 2017

Being adequately prepared for a cyber security threat/attack is the biggest challenge for 2017

How would you rank the top challenges your organization will face in 2017?
Please rank the all challenges 1 to 10 with 1 being the biggest challenge.

Challenge	1	2	3
Being prepared for cyber security threat/attack	25.2%	17.7%	8.2%
Bracing for potential changes to ACA	21.8%	11.6%	8.8%
Moving to value-based reimbursement models	13.6%	12.9%	18.4%
Enhancing patient engagement and experience	10.9%	6.8%	14.3%
Maximizing our revenue cycle for opportunities for margin improvement	8.8%	10.2%	8.2%
Optimizing EHR/EMR to demonstrate ROI	8.8%	13.6%	11.6%
Improving physical and virtual access to primary and specialty care	3.4%	9.5%	8.8%
Implementing cloud-based technologies/solutions	2.0%	3.4%	5.4%
Building and implementing pop health management strategy	2.0%	8.8%	8.2%
Upgrading our systems to incorporate new offerings	2.0%	5.4%	8.2%

Value-based care is here to stay

Stongly Agree — 32.7%

Agree — 39.5%

Somewhat Agree — 13.6%

Neutral — 10.9%

Somewhat Disagree — 2.7%

Stongly Disagree — 0.7%

N = 147
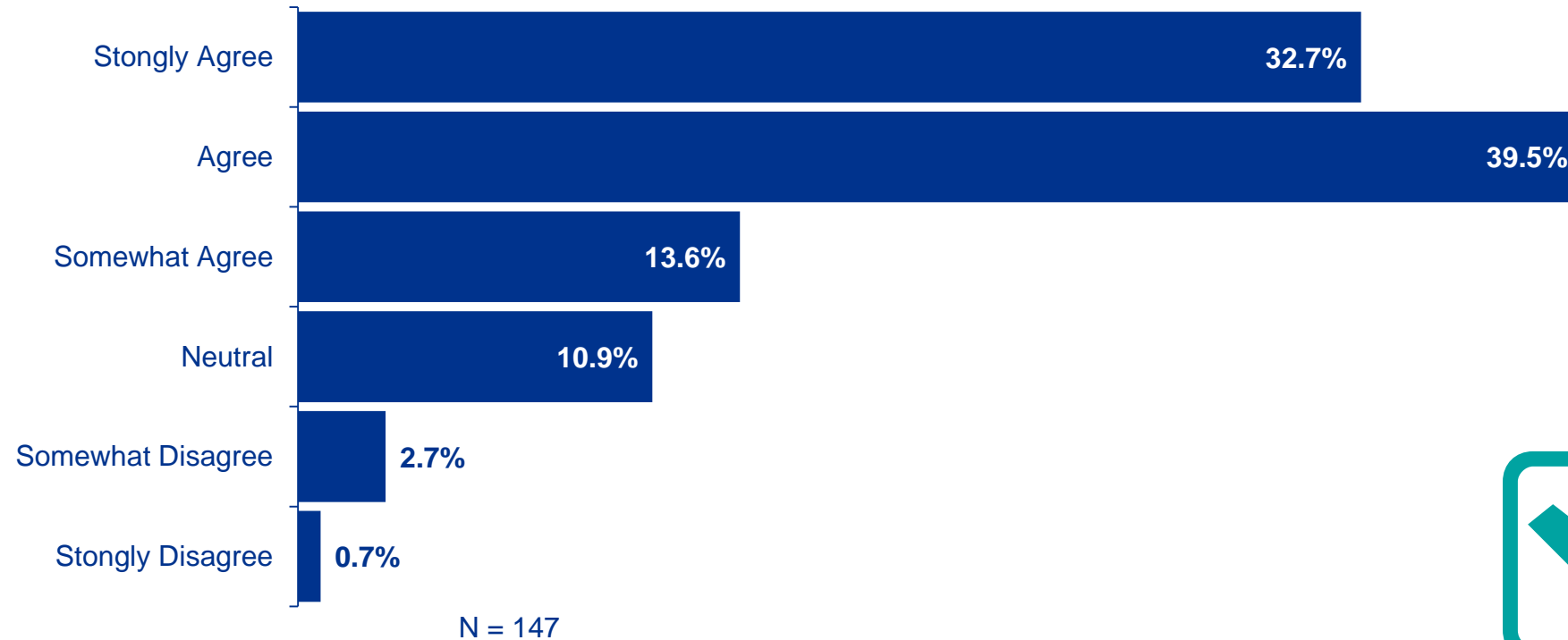
Virtual Care Services

(For purposes of this study virtual care refers to the use of technology to provide clinical healthcare treatment from a distance)

Organizations currently offer more virtual care services than they have plans to offer in the future

What virtual care services does your organization currently offer or plan to offer in the future?
Please select a status for each type of virtual care.

Category	Not currently offered and no plans	Plans	Currently offered
Clinician-to-clinician consults or continuous monitoring (i.e., telestroke, tele-ICU)	12.9%	35.2%	50.3%
Clinician-to-patient consults (i.e., eVisits, follow-up visits)	21.8%	35.3%	41.5%
Synchronous (i.e., video)	24.5%	43.5%	30.6%
Asynchronous (store-and-forward/secure messaging)	23.1%	37.4%	38.1%
Remote patient monitoring	17.7%	47.6%	34.0%

■ Currently offered   ■ Plans   ■ Not currently offered and no plans

Over 1/3 of respondents ranked improve patient access to care their top priority for expediting adoption of virtual care services

How would you rank the top drivers for expediting your adoption of Virtual Care Services?
Please rank the drivers in order from 1 to 8 with 1 being the biggest driver.

	1	2	3
Increase Patient volumes and loyalty	21.1%	10.9%	13.6%
Patient requests (consumer demand)	10.2%	15.0%	8.2%
Reduce costs for access to Medical Specialists	11.6%	12.2%	15.6%
Meaningful Use and other Payer incentives for adoption	5.4%	10.9%	10.2%
Improve patient access to care	36.1%	19.0%	15.0%
Care Coordination of High risk patients - chronic disease with multiple comorbidities	12.2%	17.7%	17.7%
Provider requests for virtual care services		6.8%	11.6%
Clinical staffing gaps or limitations		7.5%	8.2%
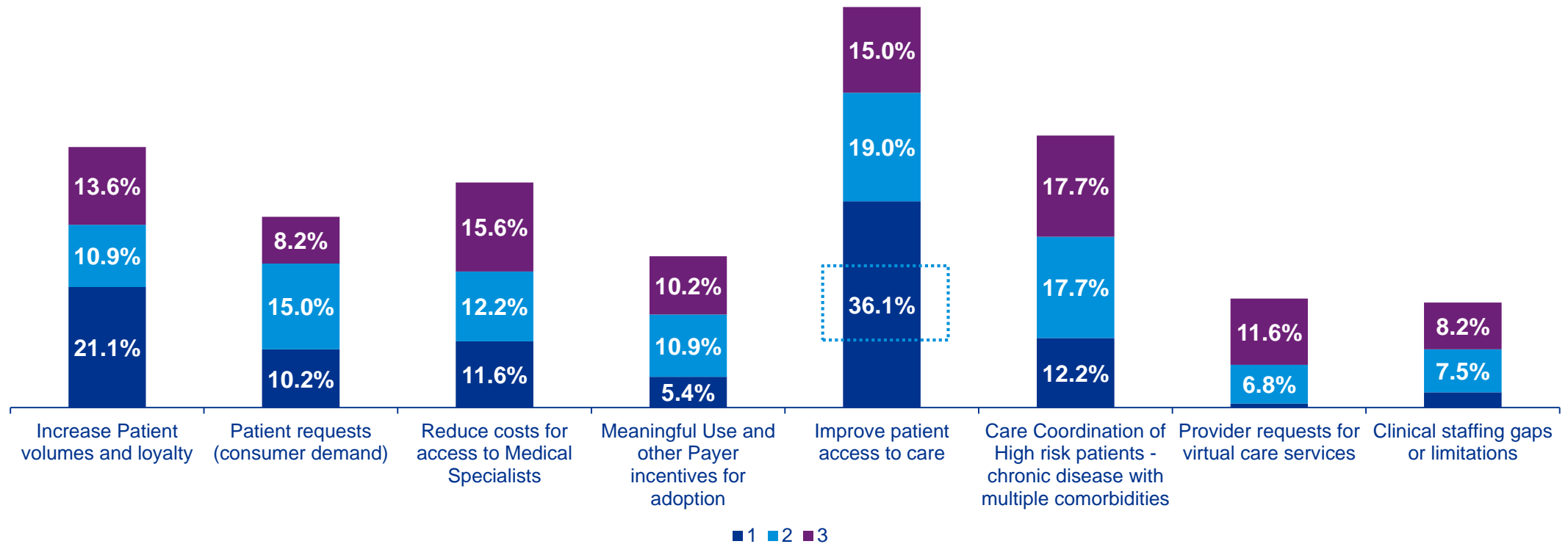
Almost 30% of respondents ranked clinical staffing gaps or limitations their lowest priority
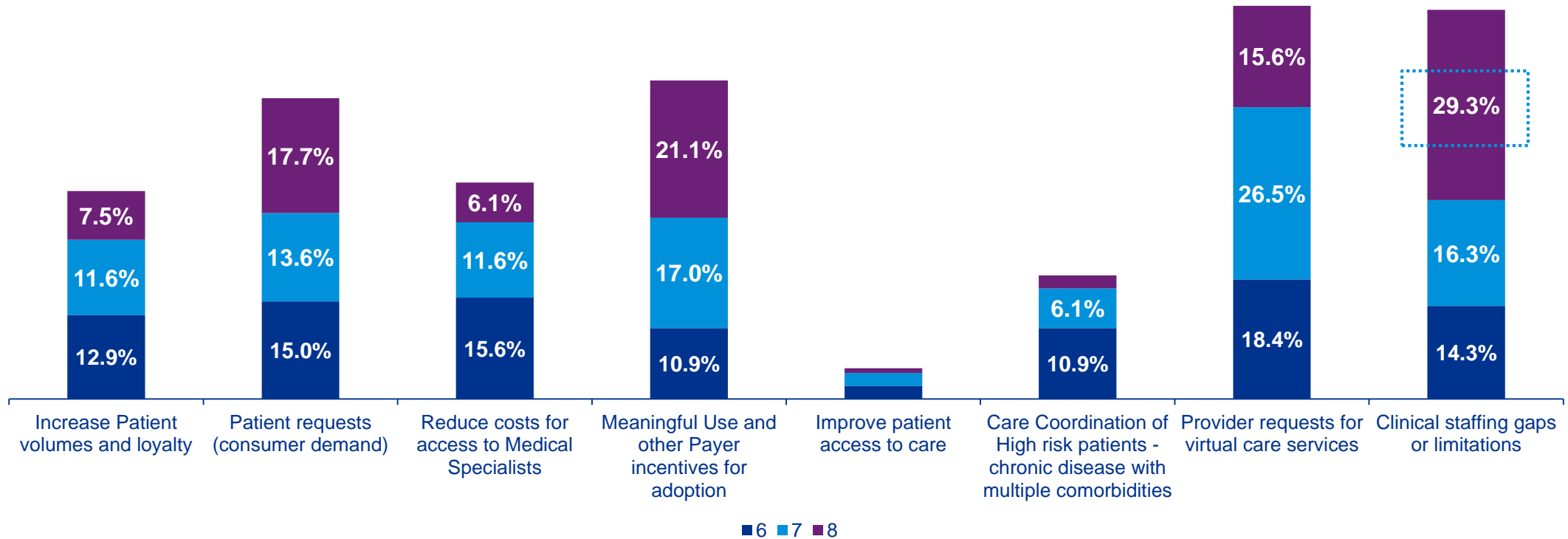
How would you rank the top drivers for expediting your adoption of Virtual Care Services?
Please rank the drivers in order from 1 to 8 with 1 being the biggest driver.

Legend: ■6 ■7 ■8

Increase Patient volumes and loyalty: 12.9%, 11.6%, 7.5%
Patient requests (consumer demand): 15.0%, 13.6%, 17.7%
Reduce costs for access to Medical Specialists: 15.6%, 11.6%, 6.1%
Meaningful Use and other Payer incentives for adoption: 10.9%, 17.0%, 21.1%
Improve patient access to care
Care Coordination of High risk patients - chronic disease with multiple comorbidities: 10.9%, 6.1%
Provider requests for virtual care services: 18.4%, 26.5%, 15.6%
Clinical staffing gaps or limitations: 14.3%, 16.3%, 29.3%

Over 20% stated neurology, tele-stroke and behavioral health are the top priorities around virtual care services lines

How would you rank the top priorities around Virtual Care service lines?
Please rank the priorities in order from 1 to 12 with 1 being the biggest / most urgent priority.

Neurology and Tele-stroke
- 23.1%
- 12.9%
- 12.2%

Behavioral Health
- 21.1%
- 11.6%
- 14.3%

Patient home or mobile eVisits for scheduled follow appointments (chronic condition management)
- 12.9%
- 10.2%
- 16.3%

Patient clinical portal for self-service empowerment and improved medical adherence
- 12.2%
- 6.8%
- 10.9%

Pulmonology/ICU
- 6.8%
- 8.8%
- 7.5%

Consumer home or mobile eVisits for urgent care
- 5.4%
- 13.6%
- 5.4%

Cardiology (including echo cardiology)
- 4.1%
- 12.2%
- 7.5%

■ 1 ■ 2 ■ 3

KPMG
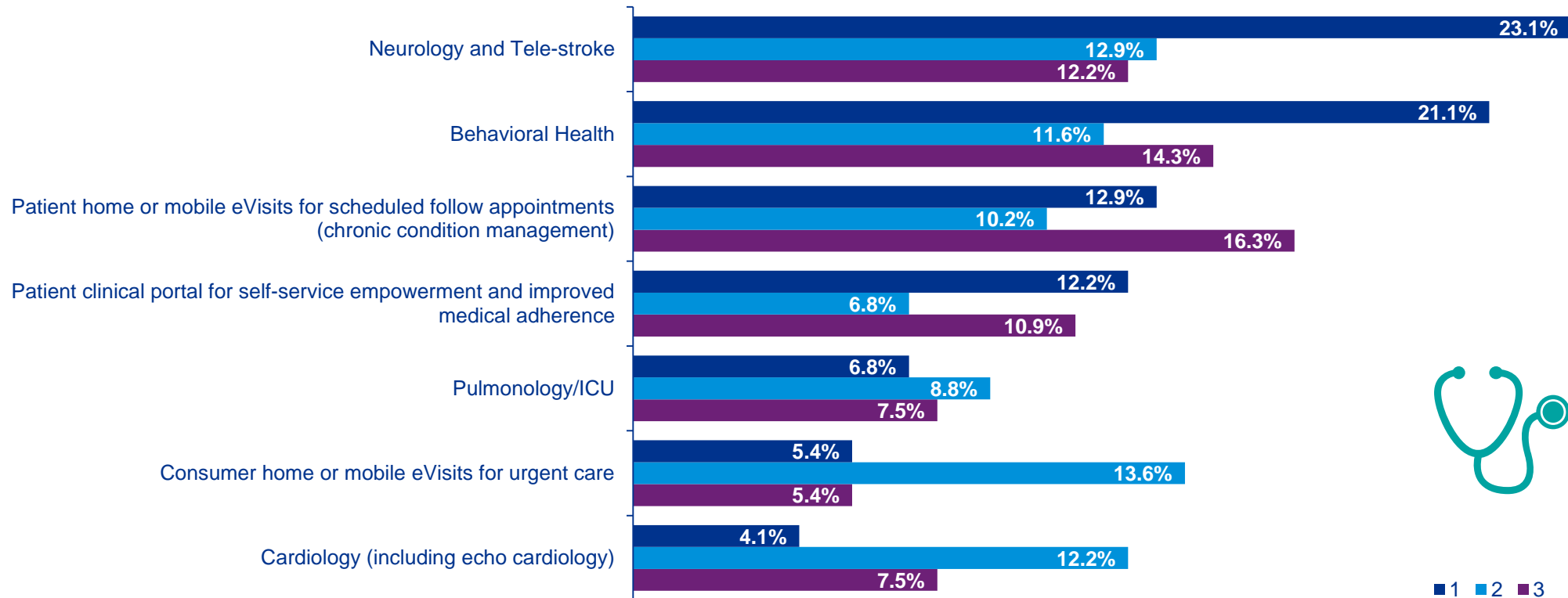
Tele-education and dermatology are the least urgent priorities for virtual care service

How would you rank the top priorities around Virtual Care service lines?
Please rank the priorities in order from 1 to 12 with 1 being the biggest / most urgent priority.
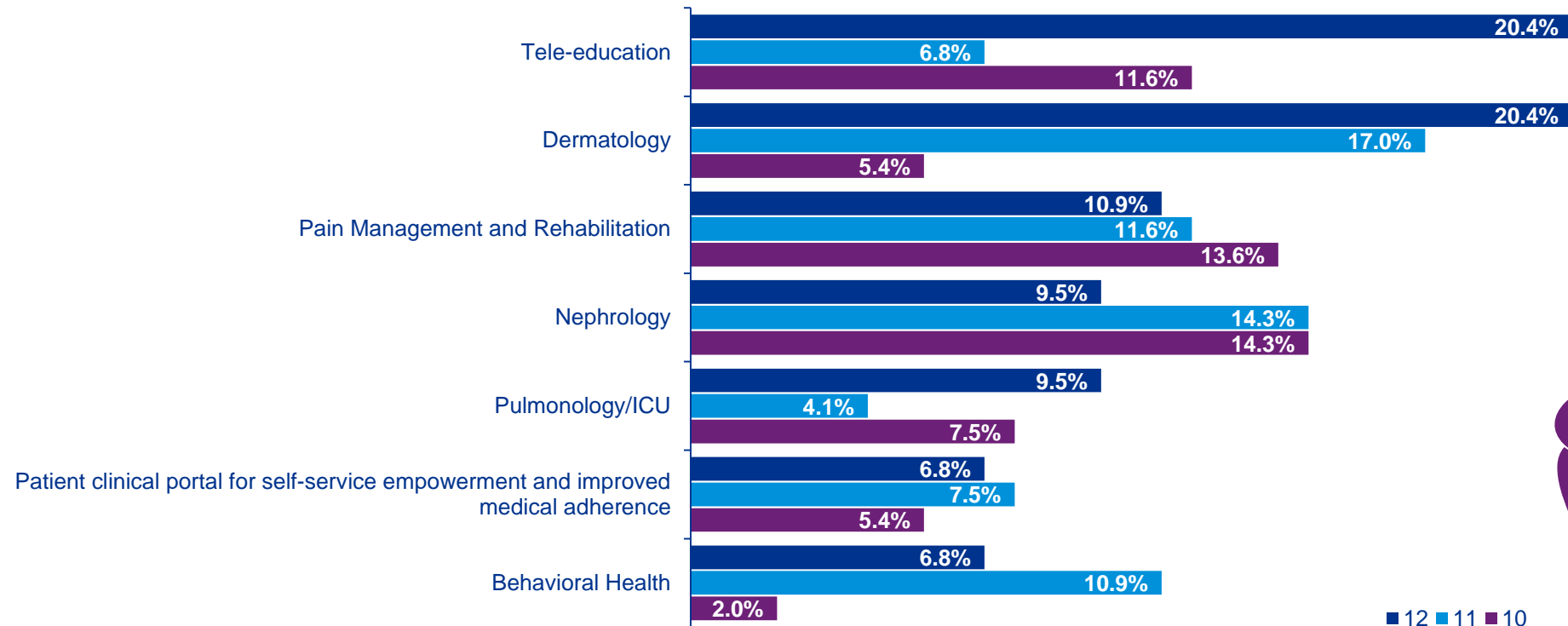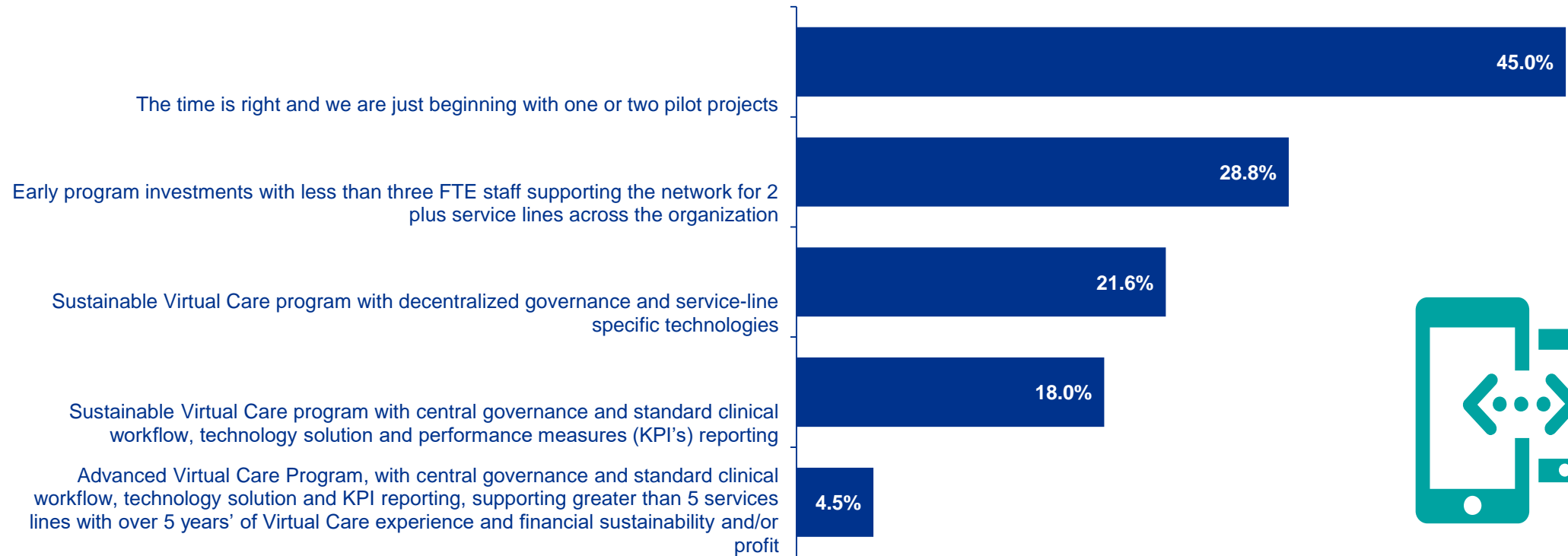

Tele-education
- 12: 20.4%
- 11: 6.8%
- 10: 11.6%

Dermatology
- 12: 20.4%
- 11: 17.0%
- 10: 5.4%

Pain Management and Rehabilitation
- 12: 10.9%
- 11: 11.6%
- 10: 13.6%

Nephrology
- 12: 9.5%
- 11: 14.3%
- 10: 14.3%

Pulmonology/ICU
- 12: 9.5%
- 11: 4.1%
- 10: 7.5%

Patient clinical portal for self-service empowerment and improved medical adherence
- 12: 6.8%
- 11: 7.5%
- 10: 5.4%

Behavioral Health
- 12: 6.8%
- 11: 10.9%
- 10: 2.0%

Legend: ■ 12 ■ 11 ■ 10

Almost 3/4s of organizations have virtual care initiatives in place, with more to come

How would you classify the maturity of your Virtual Care initiatives?
Please select all that apply.

Category	Percent
The time is right and we are just beginning with one or two pilot projects	45.0%
Early program investments with less than three FTE staff supporting the network for 2 plus service lines across the organization	28.8%
Sustainable Virtual Care program with decentralized governance and service-line specific technologies	21.6%
Sustainable Virtual Care program with central governance and standard clinical workflow, technology solution and performance measures (KPI's) reporting	18.0%
Advanced Virtual Care Program, with central governance and standard clinical workflow, technology solution and KPI reporting, supporting greater than 5 services lines with over 5 years' of Virtual Care experience and financial sustainability and/or profit	4.5%

Maintaining a sustainable business and/or financial model is the biggest challenge for implementing virtual care services

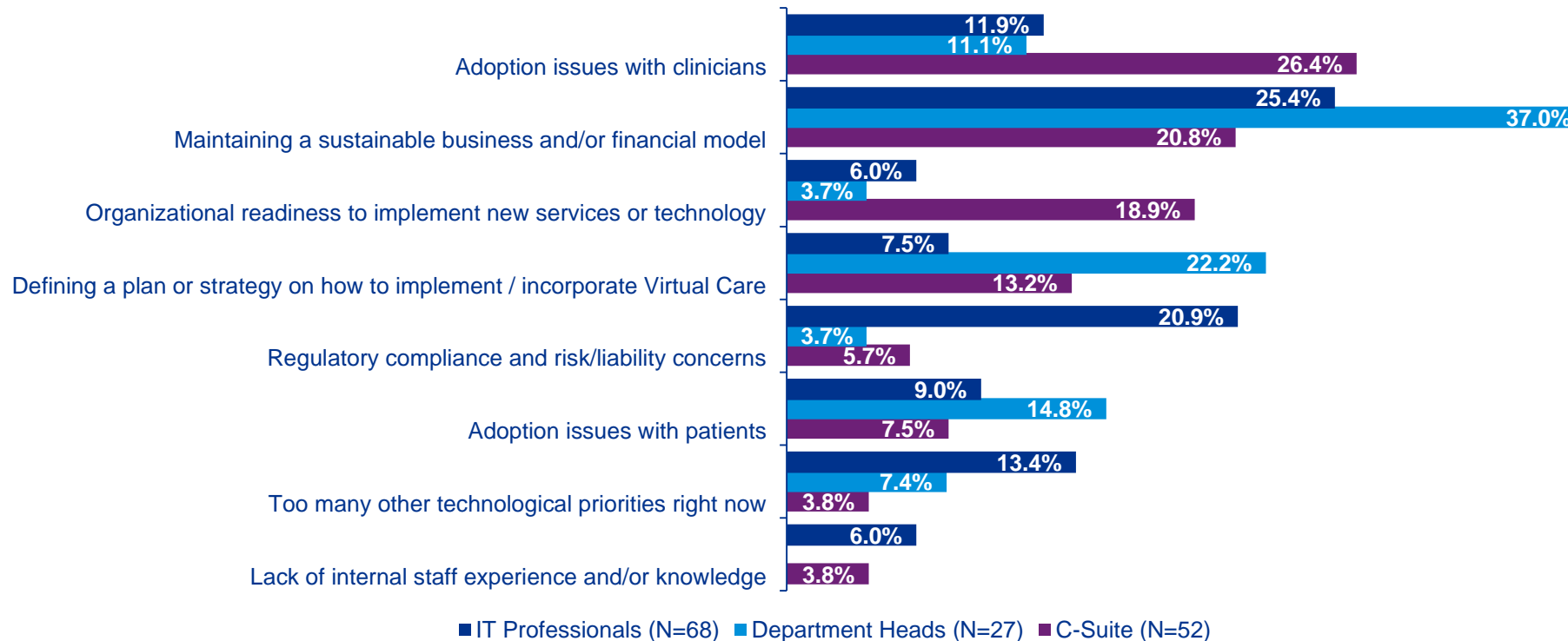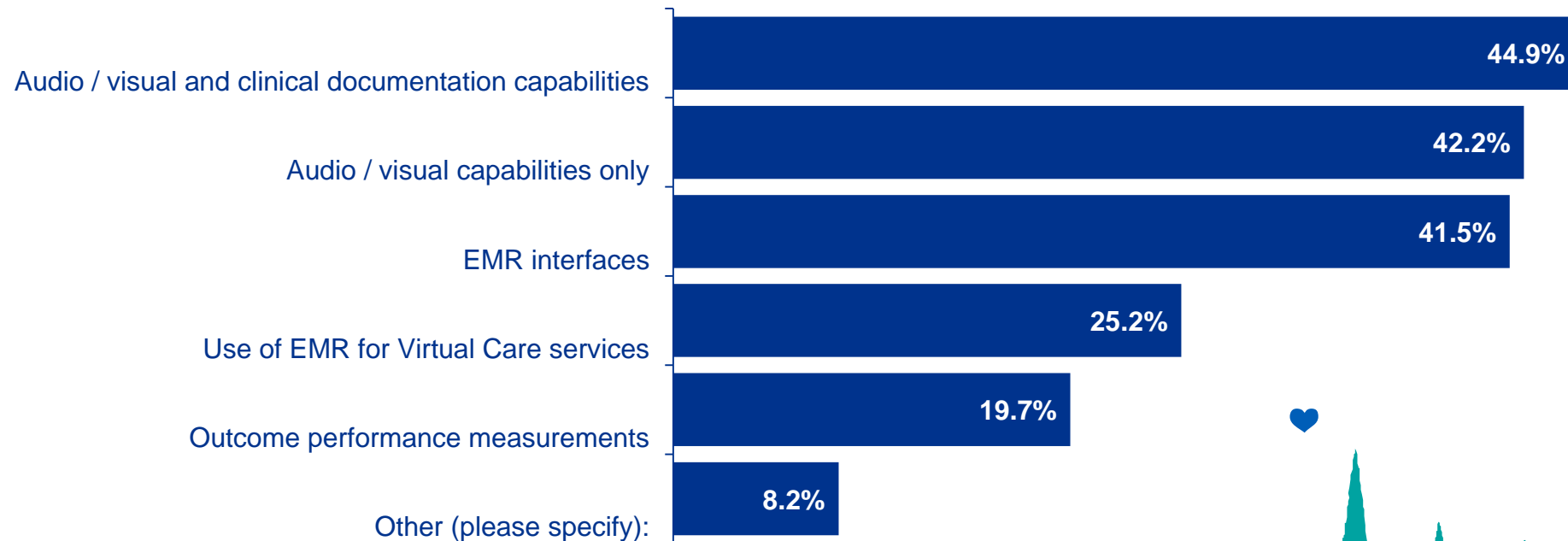## What are the top challenges you face in implementing Virtual Care services?
Please rank the top 3 challenges 1 to 3, with 1 being the biggest challenge and 3 being the third biggest challenge. Leave all others blank.

Challenge	Percentage
Maintaining a sustainable business and/or financial model	25.9%
Adoption issues with clinicians	17.0%
Defining a plan or strategy on how to implement / incorporate Virtual Care	12.2%
Regulatory compliance and risk/liability concerns	12.2%
Organizational readiness to implement new services or technology	10.2%
Adoption issues with patients	9.5%
Too many other technological priorities right now	8.8%
Lack of internal staff experience and/or knowledge	4.1%

N=147
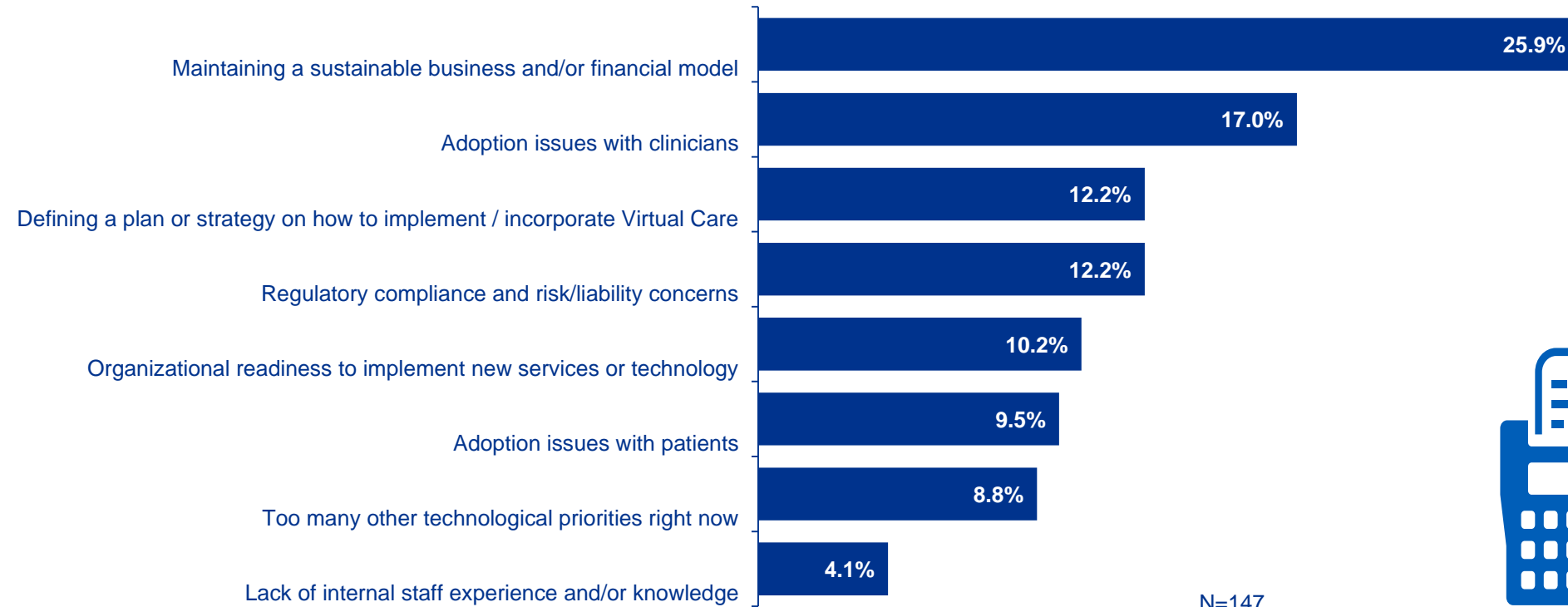
Comparing opinions per participant groupings

What are the top challenges you face in implementing Virtual Care services?
Please rank the top 3 challenges 1 to 3, with 1 being the biggest challenge and 3 being the third biggest challenge. Leave all others blank.

Adoption issues with clinicians
- 11.9%
- 11.1%
- 26.4%

Maintaining a sustainable business and/or financial model
- 25.4%
- 37.0%
- 20.8%

Organizational readiness to implement new services or technology
- 6.0%
- 3.7%
- 18.9%

Defining a plan or strategy on how to implement / incorporate Virtual Care
- 7.5%
- 22.2%
- 13.2%

Regulatory compliance and risk/liability concerns
- 20.9%
- 3.7%
- 5.7%

Adoption issues with patients
- 9.0%
- 14.8%
- 7.5%

Too many other technological priorities right now
- 13.4%
- 7.4%
- 3.8%

Lack of internal staff experience and/or knowledge
- 6.0%
- 3.8%

■ IT Professionals (N=68) ■ Department Heads (N=27) ■ C-Suite (N=52)

Audio/visual and clinical documentation capabilities, audio/visual capabilities, and EMRs are offered the most in their virtual care technology

Which of the following does your Virtual Care technology offer?
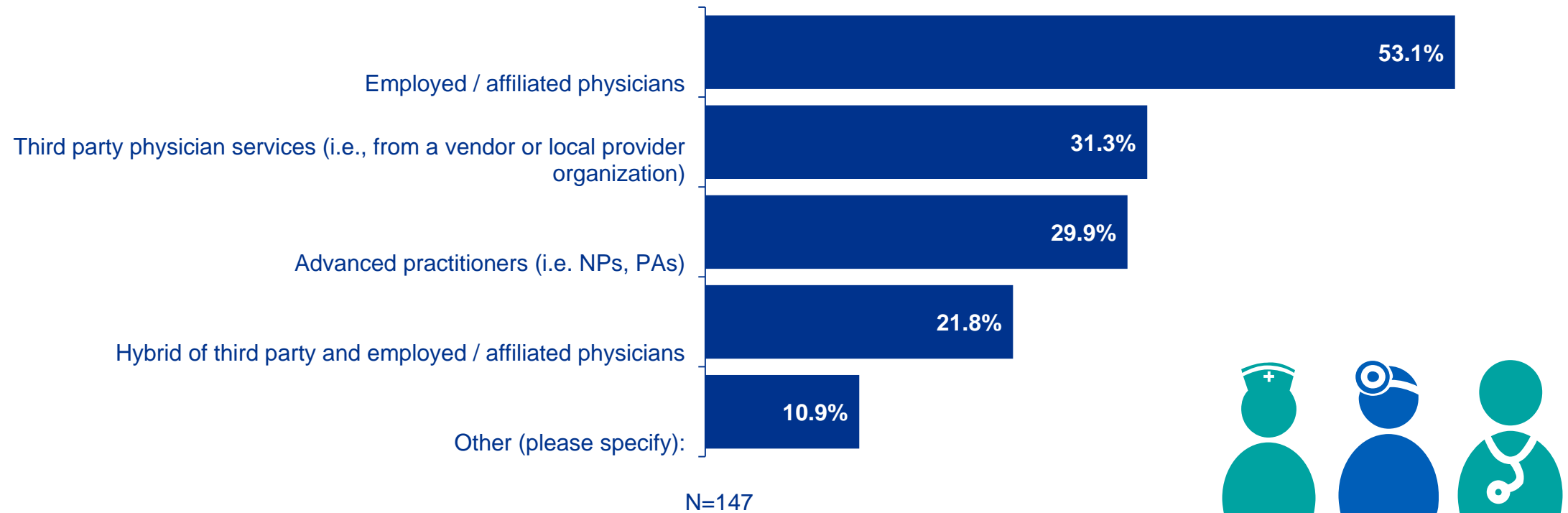Please select all the apply.

Category	Percentage
Audio / visual and clinical documentation capabilities	44.9%
Audio / visual capabilities only	42.2%
EMR interfaces	41.5%
Use of EMR for Virtual Care services	25.2%
Outcome performance measurements	19.7%
Other (please specify):	8.2%

N=147

Most organizations are using their physician network for virtual care

What type of physician staffing model are you using for virtual care?
Select all that apply.

Employed / affiliated physicians — **53.1%**

Third party physician services (i.e., from a vendor or local provider organization) — **31.3%**

Advanced practitioners (i.e. NPs, PAs) — **29.9%**

Hybrid of third party and employed / affiliated physicians — **21.8%**

Other (please specify): — **10.9%**

N=147

Nearly 2/3s stated they use operational metrics to track their virtual care program

What type of metrics are you tracking for your Virtual Care program?
Select all that apply.
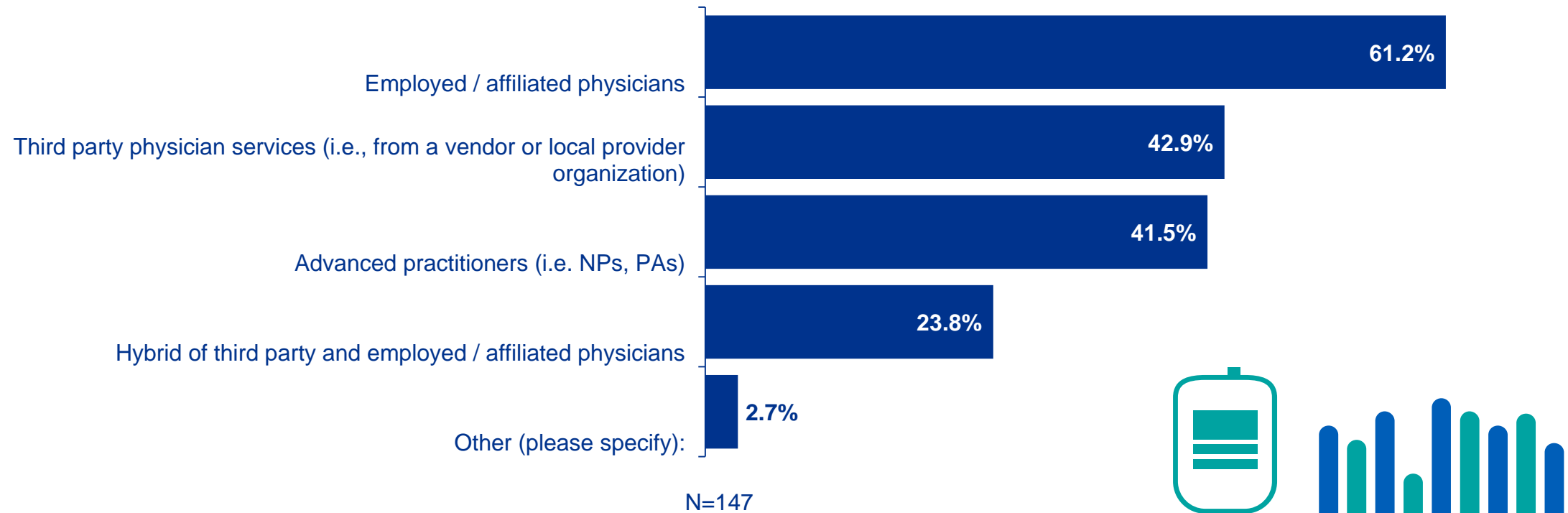
Employed / affiliated physicians — **61.2%**

Third party physician services (i.e., from a vendor or local provider organization) — **42.9%**

Advanced practitioners (i.e. NPs, PAs) — **41.5%**

Hybrid of third party and employed / affiliated physicians — **23.8%**

Other (please specify): — **2.7%**

N=147
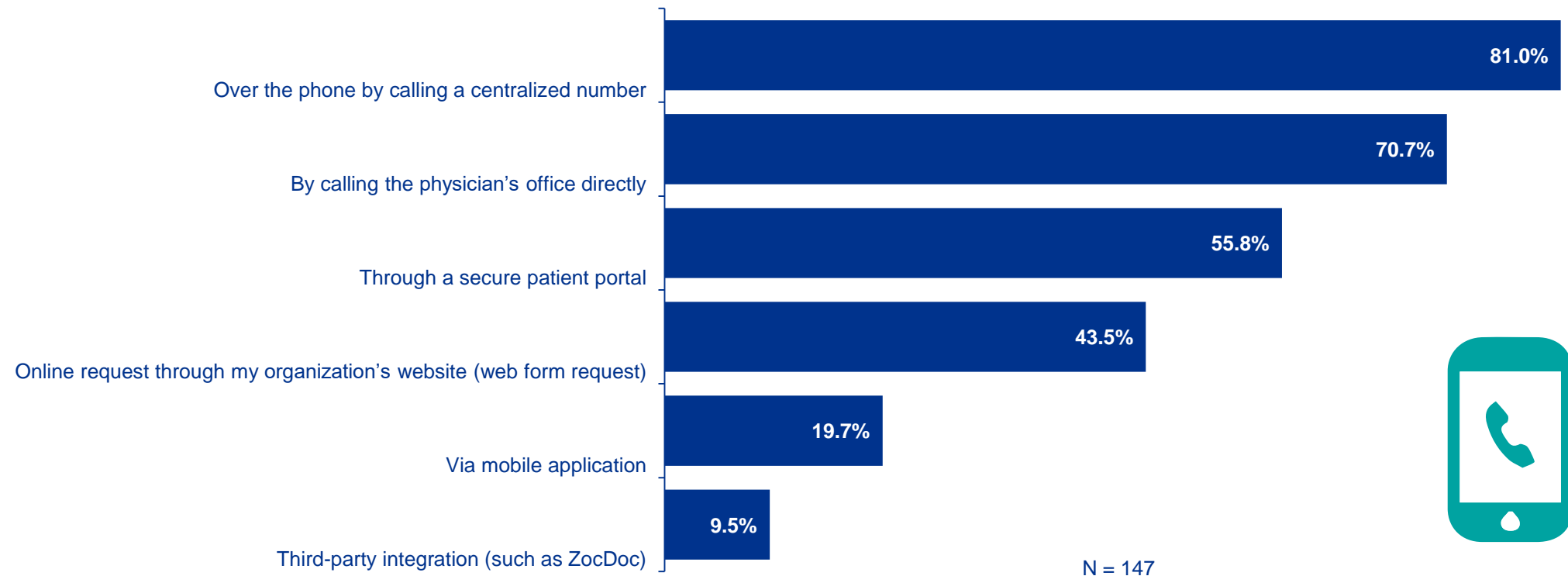
Over half of the participants stated they are not using a dedicated electronic referral system
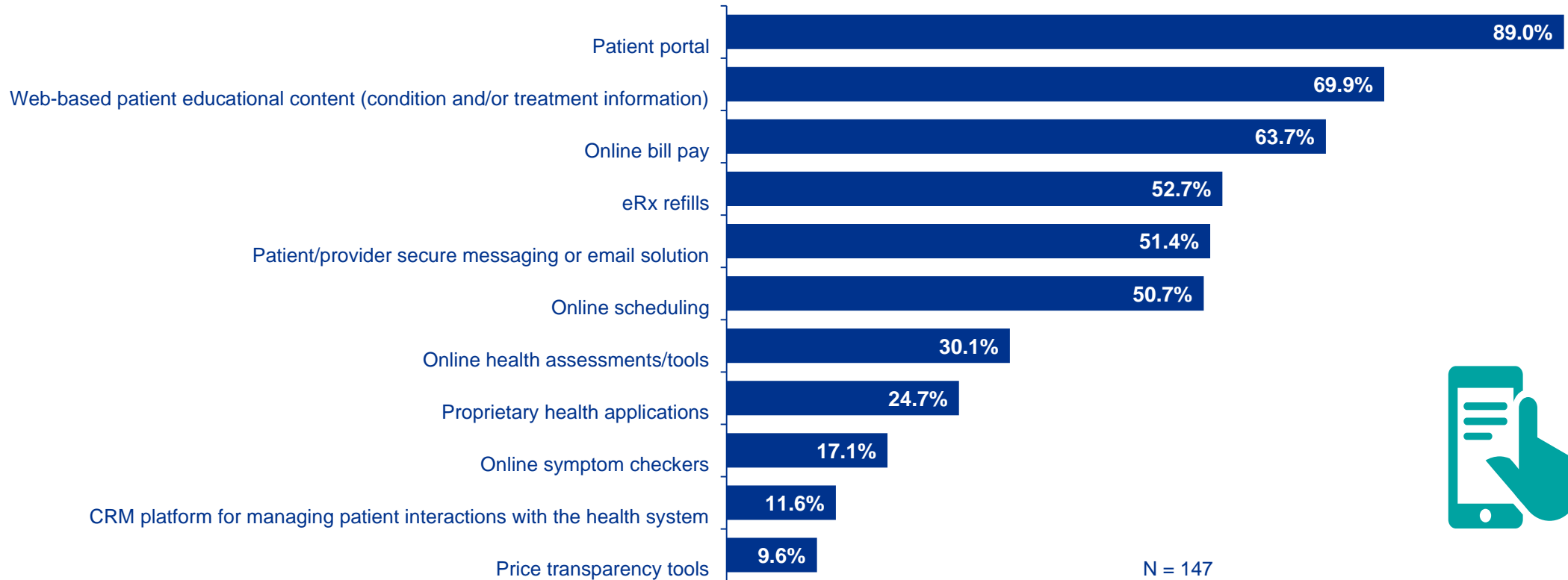
What kind of tools does your organization use to manage referrals electronically?
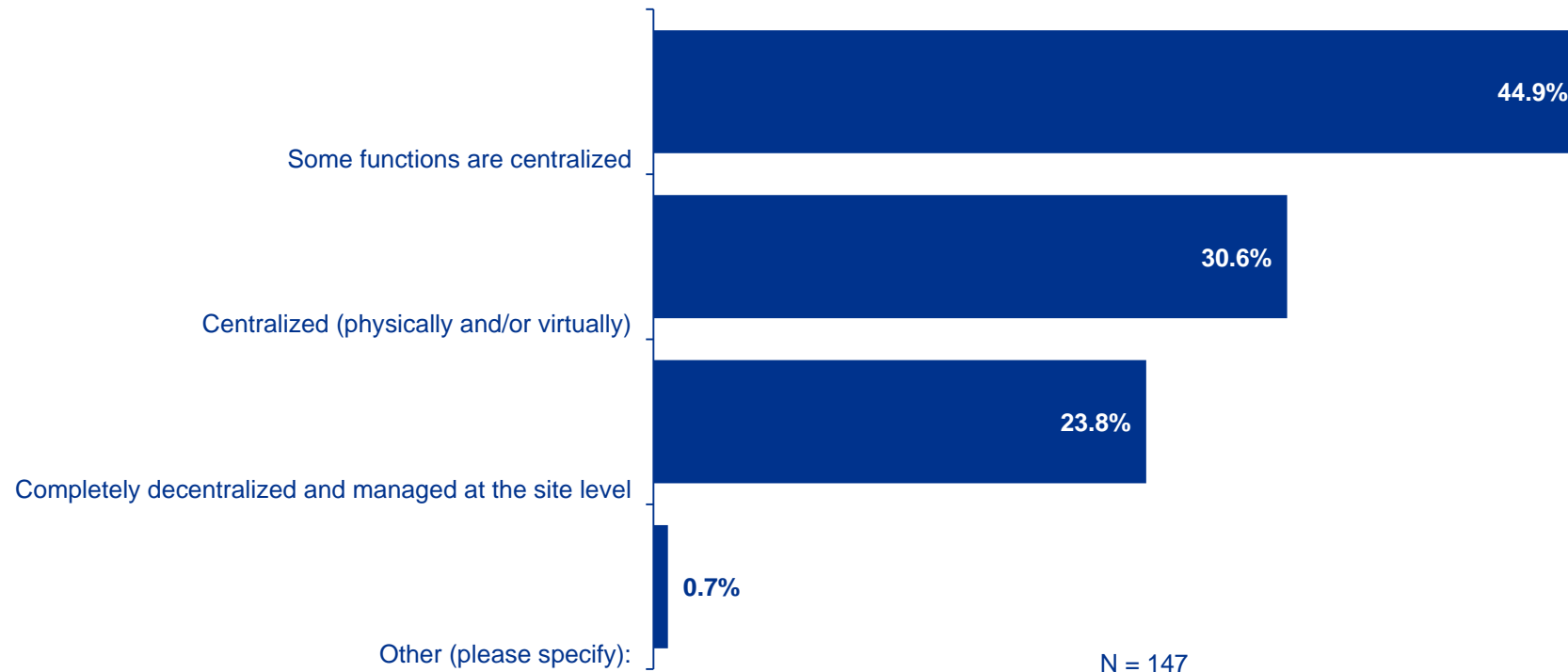Please select all tools used and indicate the approximate percentage of referrals captured from that tool.

Fax/paper based
- 15.6%
- 31.3%
- 24.5%
- 21.1%
- 7.5%

Telephone based
- 7.5%
- 29.3%
- 27.2%
- 22.4%
- 13.6%

Dedicated electronic referral management system, i.e., Kyruus, Leading Reach, etc.
- 55.8%
- 25.2%
- 9.5%
- 4.8%
- 4.8%

Manage electronically through EHR platform
- 16.3%
- 23.8%
- 23.8%
- 15.6%
- 20.4%

Legend: ■ Not in use ■ 0-25%2 ■ 25-50% ■ 50-75% ■ 75-100%

N = 147
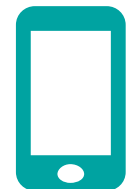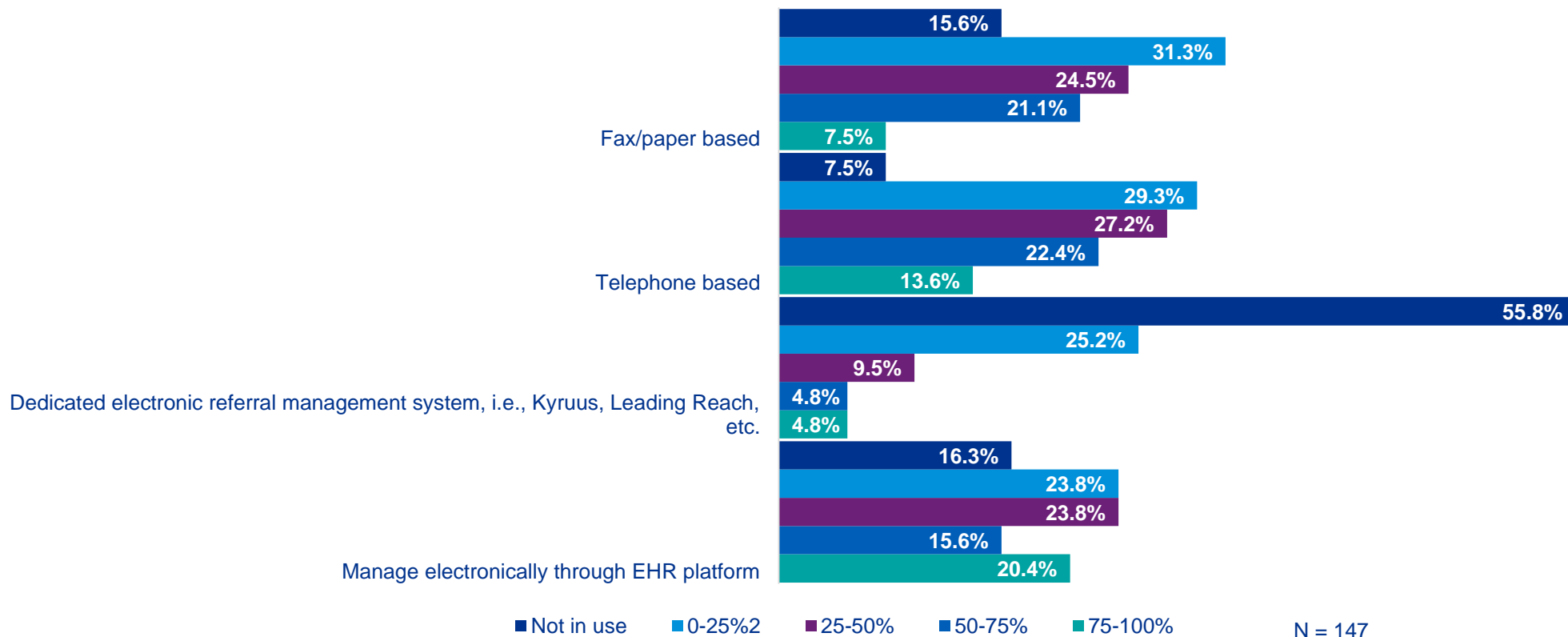
Nearly all the organizations stated they are using a patient portal

What patient-facing tools and resources does your organization use today?
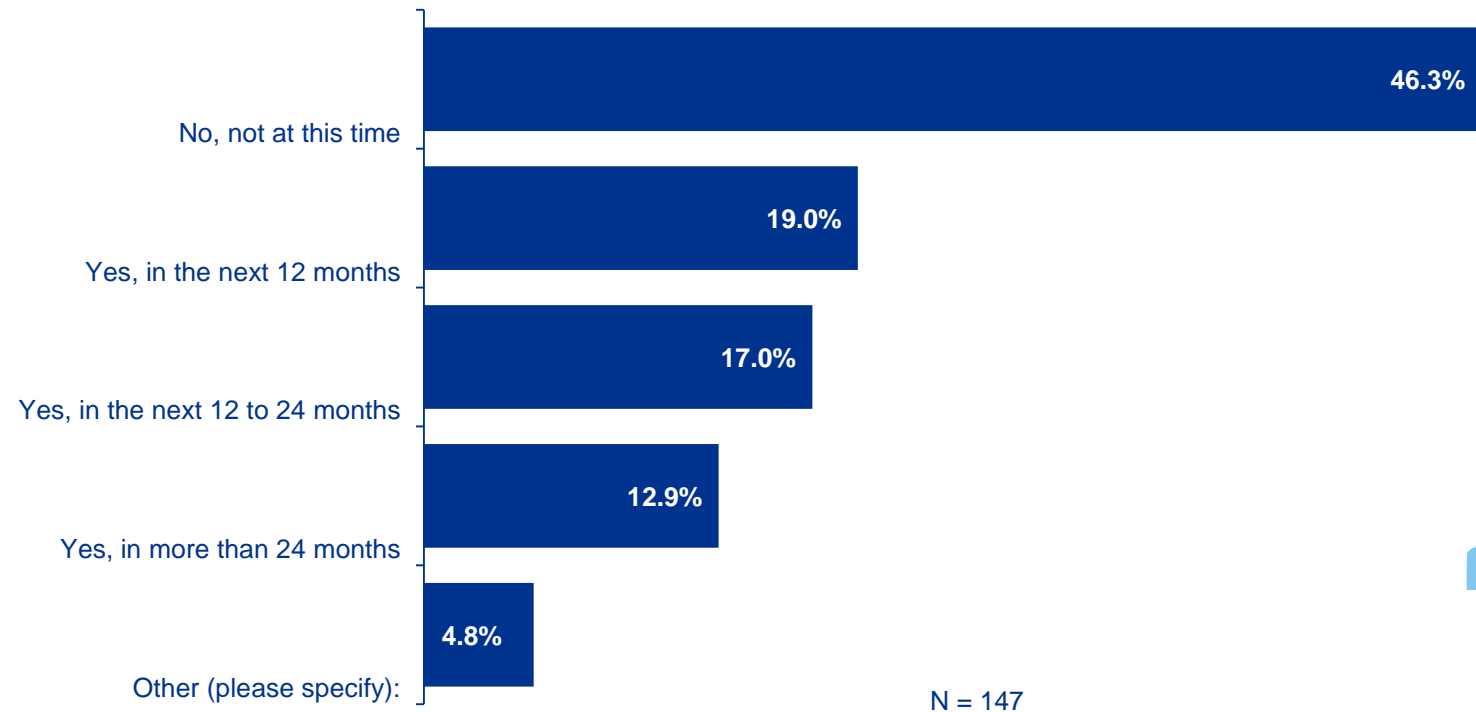Please select only one.

Tool	Percentage
Patient portal	89.0%
Web-based patient educational content (condition and/or treatment information)	69.9%
Online bill pay	63.7%
eRx refills	52.7%
Patient/provider secure messaging or email solution	51.4%
Online scheduling	50.7%
Online health assessments/tools	30.1%
Proprietary health applications	24.7%
Online symptom checkers	17.1%
CRM platform for managing patient interactions with the health system	11.6%
Price transparency tools	9.6%

N = 147

75% of respondents have a centralized call center or some functions are centralized
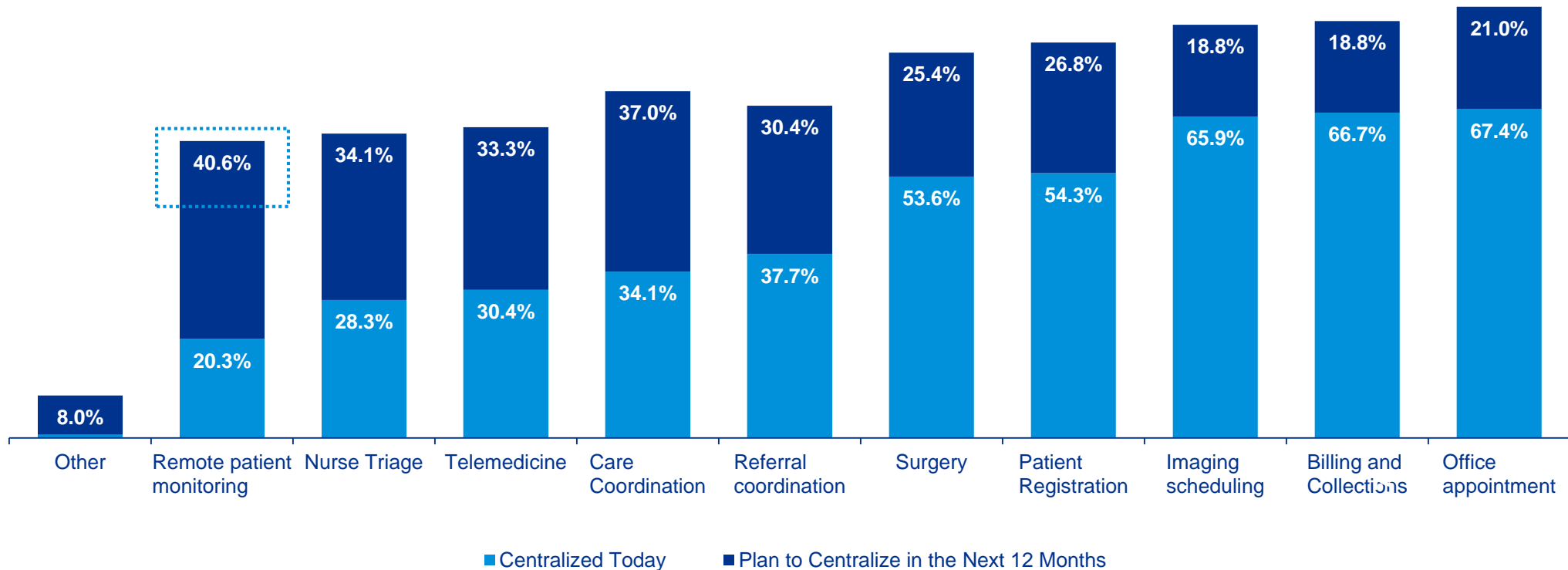
How is your patient call/contact center organized today?

Some functions are centralized — 44.9%

Centralized (physically and/or virtually) — 30.6%

Completely decentralized and managed at the site level — 23.8%

Other (please specify): — 0.7%

N = 147

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Almost half of organizations have plans to further consolidate their call center

Does your organization have plans to further consolidate/centralize your call center?

No, not at this time — **46.3%**

Yes, in the next 12 months — **19.0%**

Yes, in the next 12 to 24 months — **17.0%**

Yes, in more than 24 months — **12.9%**

Other (please specify): — **4.8%**

N = 147

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Organizations focusing on remote patient monitoring in the next 12 months

Please select the functions that are centralized within your call center today and those that your organization plans to centralize in the next 12 months:

Function	Centralized Today	Plan to Centralize in the Next 12 Months
Other		8.0%
Remote patient monitoring	20.3%	40.6%
Nurse Triage	28.3%	34.1%
Telemedicine	30.4%	33.3%
Care Coordination	34.1%	37.0%
Referral coordination	37.7%	30.4%
Surgery	53.6%	25.4%
Patient Registration	54.3%	26.8%
Imaging scheduling	65.9%	18.8%
Billing and Collections	66.7%	18.8%
Office appointment	67.4%	21.0%

■ Centralized Today   ■ Plan to Centralize in the Next 12 Months

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