# Technology Competency in Clinical Research:

## Key Findings from ACRP and Forte's 2019 Survey

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## Contributors

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**Director of Analytics, Forte**

Wendy Tate is Director of Analytics at Forte. In her current role she collaborates with institutions to develop and validate meaningful and quality metrics regarding various aspects of clinical trial operations. Prior to Forte, Wendy worked at the University of Arizona for 15 years, where she spent two years at the University of Arizona Cancer Center in clinical trials administration and 6½ years at the IRB where she focused her efforts on operational metrics, process improvement and compliance. She has a master's degree in Applied Biosciences and received her PhD in Pharmaceutical Economics, Policy and Outcomes, with a minor in Epidemiology from the University of Arizona.

### Beth Harper, BS, MBA
**Workforce Innovation Officer, ACRP**

Beth Harper currently serves as the Workforce Innovation Officer for the Association of Clinical Research Professionals (ACRP) where she is responsible for driving ACRP's efforts to define, validate and standardize the competency guidelines and training requirements to enhance the quality of the clinical research workforce. Beth has had multiple roles across all industry sectors and brings a 360 degree perspective to designing and delivering clinical trials. She has passionately pursued solutions for optimizing clinical trials and educating clinical research professionals for over three decades. Beth received her B.S. in Occupational Therapy from the University of Wisconsin and her MBA from the University of Texas.

## About Forte

Forte provides software and services in the critical areas of clinical trial management, clinical data management and research administration for cancer centers, academic medical centers and health systems.

With a strong belief in community, collaboration and standards-based development, Forte also facilitates the Onsemble Community, a customer-exclusive group for peer networking, best practices and support. Twice a year at the Onsemble Conference, clinical research professionals meet in person and discuss the latest challenges and solutions in clinical research.

Forte provides all research professionals complimentary blog articles, eBooks, webinars and more to support continuous learning on industry topics.

## About ACRP

Founded in 1976, the Association of Clinical Research Professionals (ACRP) is an international non-profit organization that supports clinical research professionals through membership, training and development, and certification. Headquartered in Washington, DC, ACRP has more than 13,000 members who work in clinical research in more than 70 countries. ACRP's vision is that clinical research is performed ethically, responsibly, and professionally everywhere in the world. ACRP's mission is to promote excellence in clinical research.

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## Introduction

Technology is having an increasingly greater impact on the conduct of clinical research. Advances in technological systems and tools offer tremendous opportunities to streamline and accelerate clinical trials, as well as reduce barriers to participant involvement. Technology also plays a significant role in the evolution of clinical research professions. Individuals must learn and manage multiple technologies, requiring broader, more sophisticated skills and competencies.

ACRP has worked to define competencies for the clinical research workforce and technology is encompassed in one of those competencies. However, there's currently no organized evidence on what features, training, documentation and organizational infrastructure assist a person in achieving competency in the use of clinical research technologies.

In order to get a better understanding of the aspects that contribute to an individual's mastery of clinical research technology, Forte and ACRP teamed up to conduct the 2019 Technology Competency Survey. The survey aimed to find information that will help leadership develop and support technology competency at their organization and provide insight on how individuals can be empowered to boost their own proficiencies.

## Competency Scale

Competency is defined as a combination of knowledge, skills/abilities and job attitude that is reflected in an individual's performance (observed, measured, evaluated)

**Novice/Beginner**

I have a casual knowledge of the technology in the field.

**Developing/Growing**

I can perform the task and/or exhibit the knowledge at an essential or foundational level. I may require some coaching or supervision for some necessary tasks.

**Proficient/Competent**

I can perform tasks/skills independently, consistently, accurately, and have a moderate level of expertise. I am efficient and execute high quality work. I am able to independently navigate resources and uses tools well.

**Advanced/Mastery**

I demonstrate advanced skills and knowledge and the ability to teach, coach, or supervise others with clinical research technology. I consistently apply critical thinking and problem solving.

Chapter 1

# Respondent Demographics

Of the 1,506 total survey respondents, we analyzed 1,227 that provided responses on technology competency.

## Organization Type

**37%** Academic Medical Center
*453 of 1,227*

**19%** Investigative Site
*237 of 1,227*

**10%** Cancer Center
*128 of 1,227*

**9%** Health System
*106 of 1,227*

**8%** Contract Research Organization (CRO)
*92 of 1,227*

**6%** Community Hospital
*74 of 1,227*

**3%** Biopharmaceutical Company (Sponsor)
*41 of 1,227*

**2%** Medical Device Manufacturer
*23 of 1,227*

**2%** Consultant
*22 of 1,227*

**2%** Site Network
*19 of 1,227*

**1%** Vendor
*8 of 1,227*

**1%** Government Agency
*7 of 1,227*

**1%** Other
*16 of 1,227*

**<1%** Not answered
*1 of 1,227*

## Role Type

**34%** Site-focused coordinator that **works directly** with clinical trial participants
*412 of 1,227*

**23%** Site-focused management that **manages day-to-day** clinical research activities and/or oversees staff
*281 of 1,227*

**12%** Site-focused coordinator that **does not work directly** with clinical trial participants
*150 of 1,227*

**12%** Site-focused leadership that **manages organizational strategy** but does not manage day-to-day clinical research activities
*141 of 1,227*

**6%** Study Monitor that interacts with site-focused staff
*72 of 1,227*

**5%** Contract Research Organization (CRO)
*56 of 1,227*

**4%** Sponsor
*51 of 1,227*

**3%** In-house Monitor
*38 of 1,227*

**1%** Site Investigator
*10 of 1,227*

**6%** Not answered
*1 of 1,227*

## Clinical Research Technology System Usage


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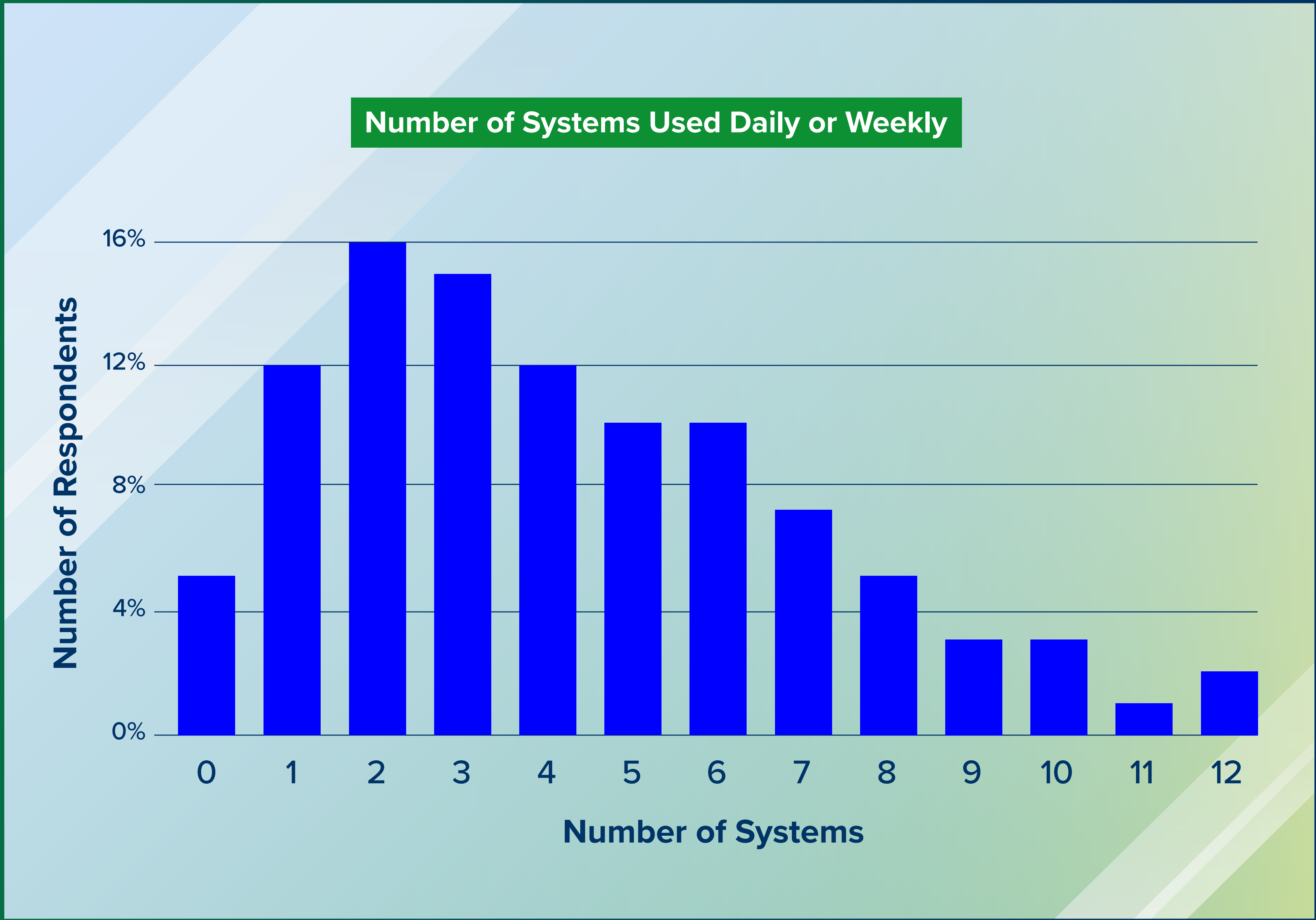

Number of Systems Used Daily or Weekly
Number of Respondents
16%
12%
8%
4%
0%
0
1
2
3
4
5
6
7
8
9
10
11
12
Number of Systems

## Competency by Clinical Trial Technology

| | ●●●● | ●●●○ | ●●○○ | ●○○○ |
|---|---|---|---|---|
| **Electronic Data Capture** | **49%** | **33%** | **7%** | **5%** |
| **IVRS/Registration Systems** | **32%** | **31%** | **11%** | **9%** |
| **Clinical Trial Management Software** | **23%** | **39%** | **22%** | **10%** |
| **eRegulatory Tools** | **22%** | **30%** | **22%** | **13%** |
| **eSource** | **20%** | **37%** | **20%** | **11%** |
| **Trial Managemet Portals** | **13%** | **23%** | **17%** | **18%** |
| **Wearable Devices & Sensors** | **12%** | **25%** | **22%** | **19%** |
| **Participant Payment Systems** | **14%** | **23%** | **18%** | **19%** |
| **eClinical Outcome Assessment** | **12%** | **27%** | **18%** | **17%** |
| **Risk Based Monitoring** | **10%** | **24%** | **23%** | **16%** |
| **Investigator Payment Systems** | **7%** | **18%** | **21%** | **24%** |
| **eConsent** | **6%** | **17%** | **21%** | **25%** |

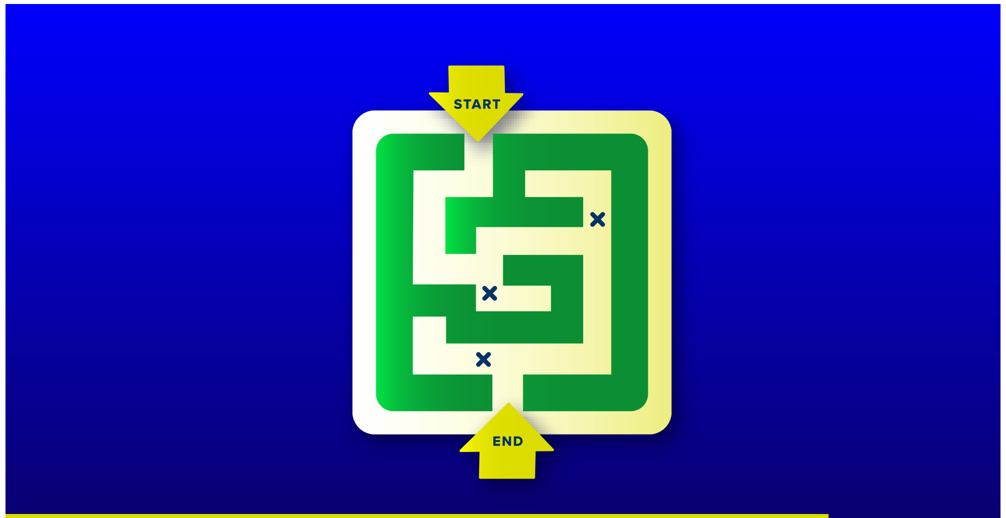
## Daily Users: Competency by Clinical Trial Technology

| | ●●●● | ●●●○ | ●●○○ | ●○○○ |
|---|---|---|---|---|
| **Electronic Data Capture** | 66% | 31% | 2% | 1% |
| **IVRS/Registration Systems** | 69% | 26% | 2% | 1% |
| **Clinical Trial Management Software** | 39% | 45% | 13% | 2% |
| **eRegulatory Tools** | 52% | 35% | 9% | 3% |
| **eSource** | 47% | 42% | 6% | 3% |
| **Trial Managemet Portals** | 44% | 39% | 10% | 3% |
| **Wearable Devices & Sensors** | 41% | 38% | 15% | 5% |
| **Participant Payment Systems** | 61% | 30% | 6% | 3% |
| **eClinical Outcome Assessment** | 43% | 41% | 9% | 5% |
| **Risk Based Monitoring** | 50% | 31% | 11% | 4% |
| **Investigator Payment Systems** | 42% | 31% | 12% | 13% |
| **eConsent** | 36% | 51% | 6% | 7% |

Chapter 2

# Data Sections

Survey results revealed key insights related to the navigation, job responsibilities, documentation, training, and support and resources related to clinical research technology.




## Navigation of Clinical Research Technology

In general, respondents indicated that they knew how to navigate technology for the purposes of their job. However, despite feeling they were able to navigate technology, they were less likely to agree that systems were intuitive, easy to access or convenient, or that they had the tools necessary to do their job.

Echoing industry trends, the majority of respondents did not believe that duplicate data entry was minimized through automated data sharing between systems.

## 24 to 38%

of respondents disagreed that systems were intuitive, easy to access or convenient, or that they had the tools they needed to do their job

## 2 out of 3

people disagree that duplicate data entry is minimized through automated data sharing between systems

## Job Responsibilities with Clinical Research Technology

While a strong majority of respondents agreed that they knew their organization's rationale and expectations for using clinical research technology, fewer people agreed that there were organized features in place to ensure its use, such as mandates to use technology or the inclusion of technology usage in performance evaluation.

Although most respondents stated that they knew their organization's policies surrounding the use of clinical research technology, fewer agreed they were clear policies, and often felt organizational communication related to technology was not effective or regular enough.

**Over 80%**

of respondents agreed they know what is expected of them for using clinical research technology

**27%**

said their organization did not have mandates to use clinical research technology

**35%**

said technology usage was not a part of their performance evaluation

## Documentation of Clinical Research Technology

While most respondents agreed that both print and online documentation are helpful, many stated that they do not have access to role-specific, adequate or up-to-date documentation regarding clinical research technology at their organization.

This discrepancy could contribute to lower perceived or actual technology competency at an organizational level.

# Between 1 in 3 and 1 in 6

people stated that they do not have access to role-specific and/or updated documentation regarding clinical research technology

## Training in Clinical Research Technology

Many respondents said they do not get adequate training on clinical research technology, either initial or continuing education, however many also do not seek it out. Respondents indicated that both in-person and online training are helpful.

Most agreed that the training they received was relevant to their job, but fewer respondents agreed that their organization has a training program in place that sets them up for success. Respondents also generally felt comfortable teaching their peers, as well as research participants, about necessary clinical research technologies.

**80%**

agreed that the training they received was relevant to their job

**Less than half**

agreed their organization has a training program that sets them up for success

## Support & Resources for Clinical Research Technology

Overall, respondents are supportive of their organization's use of clinical research technologies and indicated that they would attend office hours for additional support.

However, a portion indicated that their organization does not have support resources to assist with clinical research technology.

**Between 24-44%**

of people said their organization does not have support resources to assist with clinical research technology

## Conclusion

If you feel that you as an individual or your organization as a whole struggle with using clinical research technology effectively, you are not alone. The first step to improving technology competency and proficiency individually or at your organization is identifying the areas in need of improvement. Instead of shying away from competency shortfalls, being honest and forthcoming can give you a good starting point on the path to improvement.

How does your perception of technology competency measure up against the industry? What improvements could you or your organization make to maximize the value of your clinical research technology and improve the conduct of your clinical trials?

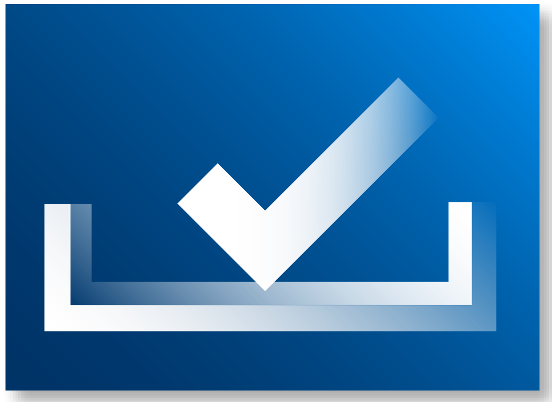
# Additional Resources

Webinars

**Competency-Based Approaches to Staff Hiring, Management and Advancement**

In this webinar, Beth Harper of Clinical Performance Partners, Inc. shares how institutions can bring clinical trial competencies to the hiring process.

Watch it here →



Worksheets

**Training Matrix**

One way to ensure successful end user training for a software system is by using a role-based approach. Use this worksheet to develop a specific and relevant training curriculum.

Download it here →


Infographics

**The State of Technology in Clinical Research**

The clinical research industry has always had a complicated relationship with technology. See the results of Forte's 2018 survey on what influences the success of systems at research institutions.

Read it here →

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