VOICES FROM THE FRONT LINES

INSIGHTS FROM THE WORKFORCE ON TRANSFORMING THE CLINICAL RESEARCH ENTERPRISE–PAST, PRESENT, AND FUTURE

ACRP

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INTRODUCTION

More than half (52%) of 735 respondents to the Association of Clinical Research Professionals (ACRP) *Transformation of the Clinical Research Enterprise Survey* believe that the conduct of clinical research has improved over the past five to 10 years, while 27% feel it has stayed the same.

Of the 735 respondents who qualified and completed the survey, 46% are from research sites, 33% from academic research organizations (AROs), and 10% from contract research organizations (CROs). One of the survey's goals was to identify solutions that will accelerate progress in clinical research or address persistent barriers.

The survey asked about changes in clinical research over the past five to 10 years, the present situation, expectations for the next five to 10 years, and the opportunities to invest in improvements. Successes, setbacks, predictions, and areas for 'bending the curve' were identified. A summary of key findings—by percentage of respondents who agreed—is provided on the next page. The key topics are discussed in detail in the sections below.

SURVEY DEPLOYMENT

A link to the online survey—which was live from December 18, 2024, to February 12, 2025—was deployed to thousands of potential survey participants. This first-ever national survey to gauge ACRP community viewpoints on transforming clinical trials was part of ACRP's commitment to advocate for – and amplify the voices of—clinical research professionals. Initial survey findings were summarized in a **press release** and discussed in a **Signature Series session at ACRP 2025**. ACRP partnered with Continuum Clinical to develop and deploy the survey.

KEY FINDINGS BY PERCENTAGE OF RESPONDENTS

MORE THAN FOUR-FIFTHS

(82-90%) of respondents noted:

- They understand their responsibilities in clinical research (90%) and feel that they have sufficient training to run their clinical trials (86%)
- In the trials they work on, data quality is high (82%)
- Their own sites can manage multiple trials concurrently (82%)

AROUND THREE-QUARTERS

(60-77%) of respondents said that:

- Clinical research is viewed very positively as a career path, with most respondents expecting that continuing to work in this area will be a fulfilling career (77%) and expecting to be working in clinical research in five to 10 years (70%)
- Their own sites can and do deliver a very good patient experience (77%)
- Stakeholders likely to have the greatest positive impact on clinical research in the coming five to 10 years are technology providers (73%), individual clinical research professionals or trade groups (72%), and site networks and organizations (65%)
- Clinical trial data quality is currently high industry-wide (67%)
- Gradual change is expected in clinical research over the next five to 10 years (67%)
- Improvements are expected in trial design (62%), operations (60%), and data quality (60%)

AROUND ONE-HALF

(42-58%) of respondents believe that:

- Their own site operations are efficient and effective (58%)
- The conduct of clinical research has improved over the past five to 10 years (52%)
- Hiring and retaining of clinical research staff are worse today than five to 10 years ago (52%)
- Clinical trial data quality has improved over that period (50%)
- Protocols and procedures are clearly written and support good trial operations (49%)
- There will be improvements in site/CRO collaboration over the next five to 10 years (46%)
- Trial data quality is a key area for operational improvement (44%)
- Sponsor staff have the training, skills, and experience needed to run trials successfully (44%)
- The skills and experience of CRO/sponsor staff will improve over the next five to 10 years (42%)

AROUND ONE-THIRD

(18-38%) of respondents indicated that:

- Top areas for investment would be clinical research being thought of as care option (integration of clinical research activities into routine healthcare; 40%); more funding for clinical trial operations (38%); improved time and effort required to start-up clinical trials (36%); ease of use of platform technology (34%); and skills and experience of site staff (33%)
- Trial operations are efficient industry-wide (33%)
- In the trials they work on, 31% say budgets are sufficient to support good operations
- For streamlining of operations, major elements are improving trial data quality (32%), reducing the time taken to run a trial (29%), and lowering costs (21%)
- Key areas for operational improvement include decreasing the time taken to run a trial (23%) and reducing the cost of running a trial (18%)

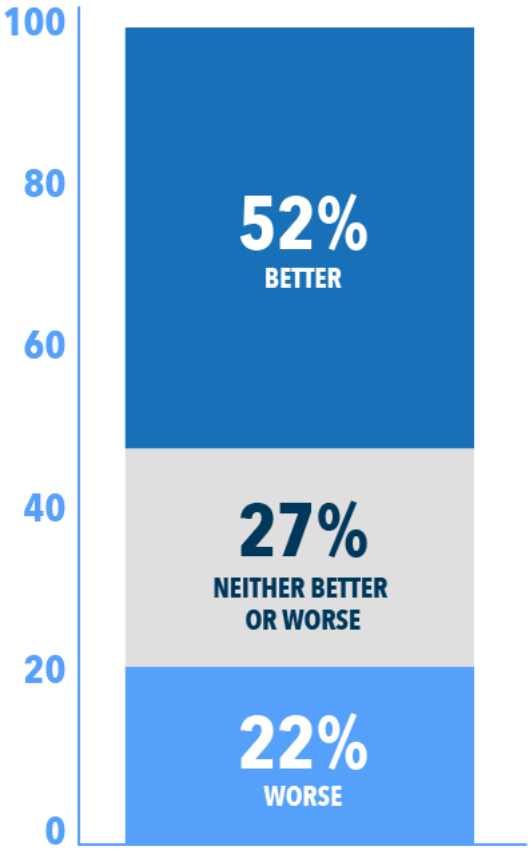
02

SUMMARY OF SURVEY RESULTS

SUCCESSES

Areas of improvement over the past five to 10 years include clinical research conduct, data quality, site operations, and understanding of responsibilities. For example, more than half of respondents (52%) say that the conduct of clinical research has improved over the past five to 10 years, with a further 27% stating that research conduct is neither better nor worse.

COMPARED TO 5 - 10 YEARS AGO, HAS THE CONDUCT OF CLINICAL RESEARCH (AS A WHOLE) GOTTEN BETTER OR WORSE? (N=735)



VOICES FROM THE FRONT LINES

"Ability to do work remotely—for example, file sharing and remote access to EMR—makes the staff more efficient."

"SOPs are well-established, supporting compliance. Research teams hold increased responsibility for compliance due to remote monitoring."

Of the 735 respondents, half (50%) believe that clinical trial data quality has improved over that period, compared to only 10% that think it got worse. Overall, 67% indicated that data quality is currently high industry wide.

Clinical research professionals mostly believe that their own site operations are efficient and effective (58%), with the ability to manage multiple trials concurrently (82%), and deliver a very good patient experience (77%).

And a large majority of professionals understand their responsibilities in clinical research (90%) and feel that they have sufficient training to run their clinical trials (86%).

02

SUMMARY OF SURVEY RESULTS

SETBACKS

Negative trends over the past five to 10 years are noted in hiring and retention; protocols and procedures; training, skills and experience; efficiency; and budgets. Fifty-two percent of survey respondents say that hiring and retaining clinical research staff are worse today than five to 10 years ago, while 28% said these were neither better nor worse.

While there was positive overall sentiment towards operations (58%), less than half (49%) of respondents indicated that protocols and procedures are clearly written and support good trial operations. Only 44% of research site respondents say that sponsor staff have the training, skills, and experience needed to run trials successfully.

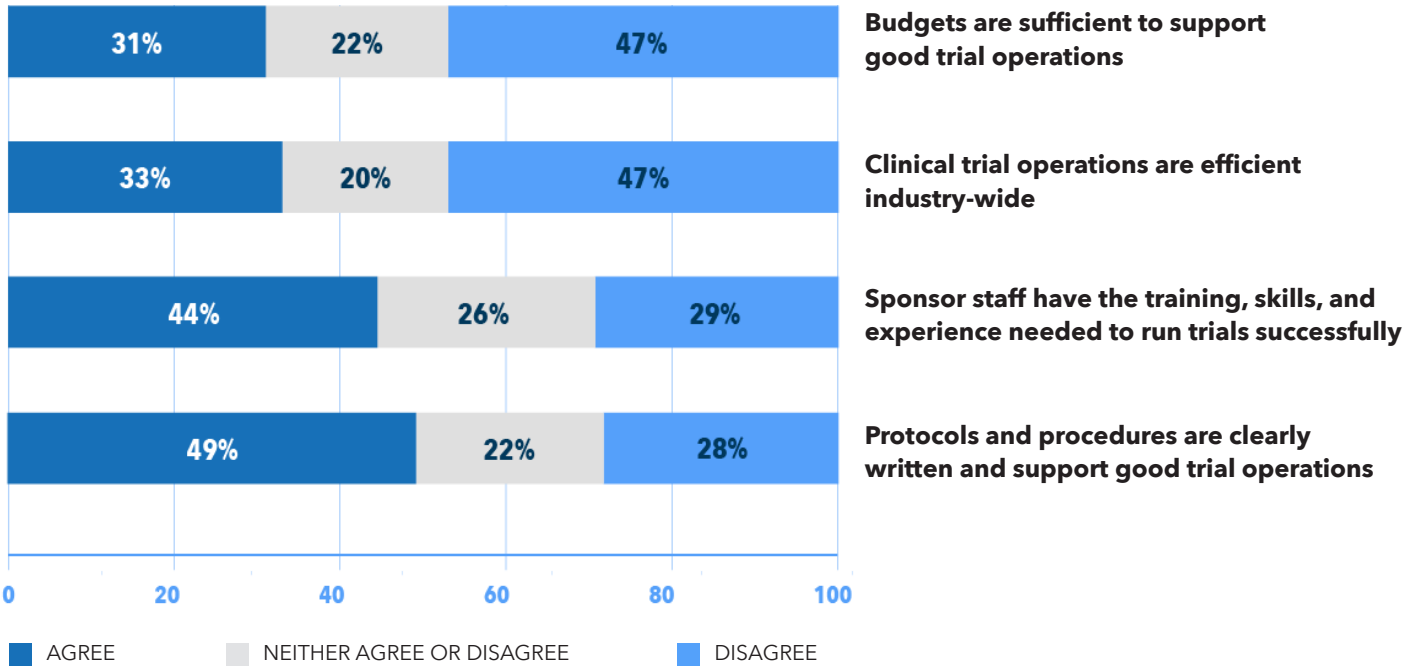
Many in contrast to operational quality, many are concerned about operational efficiency: only 33% say that trial operations are efficient industry wide. And in the trials they work on, only 31% say budgets are sufficient to support good operations.

VOICES FROM THE FRONT LINES

"Protocols have become more complicated; new technologies have introduced additional layers of complexity in both planning and management of trials."

"The number of tasks required of a CRC based on the schedule of events has almost doubled or tripled."

HOW MUCH DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS? (N=735)



02

SUMMARY OF SURVEY RESULTS

PREDICTIONS

In terms of driving positive transformation of clinical research, key areas where improvements are expected are trial design (62%), operations (60%), and data quality (60%).

This positive outlook appears to have a clear impact on professionals' personal viewpoints on clinical research as a career, with most expecting that continuing to work in clinical research will be a fulfilling career (77%) and that they will still be working in this field in five to 10 years (70%).

Some 67% of respondents expect change to be gradual over the next five to 10 years, while expressing concerns about political changes. Most feel generally prepared for these changes, with only 22% reporting they feel unprepared.

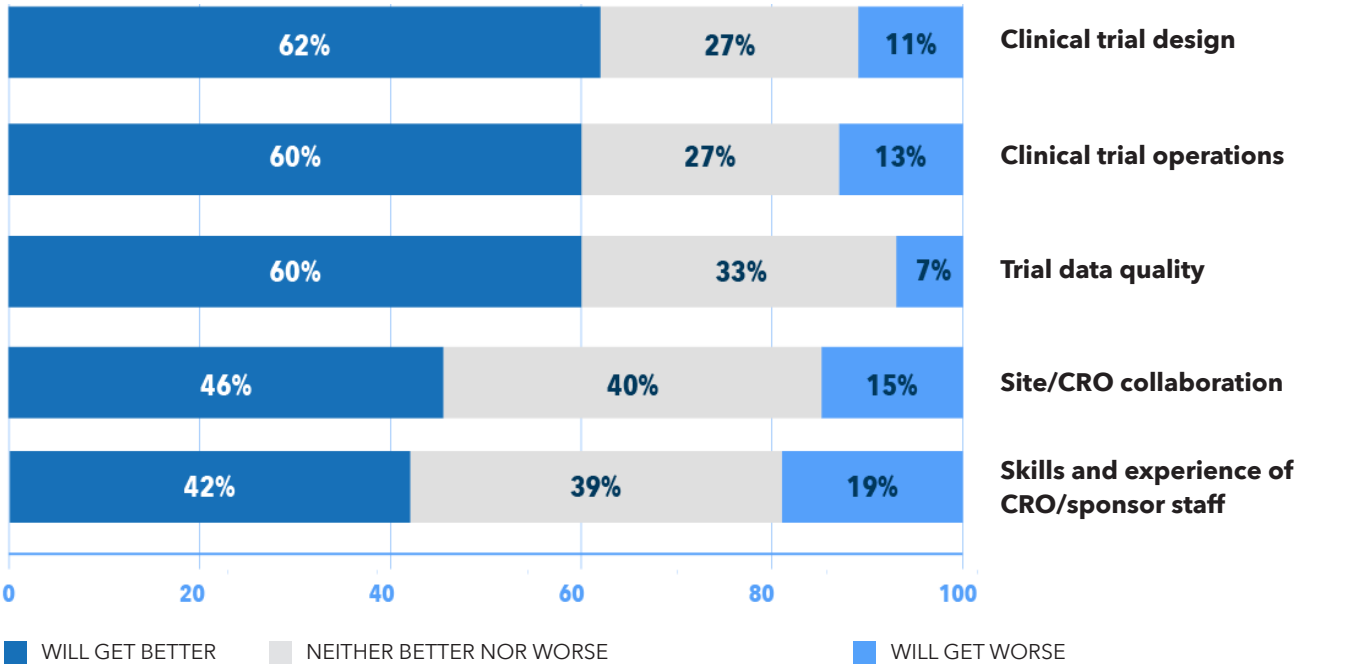
However, some concerns about the future emerge: fewer than one-half anticipate improvements over the next five to 10 years in the skills and experience of CRO/sponsor staff (42%) or in site/CRO collaboration (46%).

VOICES FROM THE FRONT LINES

"AI will assume many of the current roles. Protocol writing, statistical calculations, and data and safety monitoring."

"I worry about changes to NIH, FDA, and the CDC that will be impacted by changes in the political landscape—not necessarily for the better."

IN THE NEXT 5 - 10 YEARS, WILL THE FOLLOWING AREAS OF CLINICAL RESEARCH GET BETTER OR WORSE? (N=735)



02

SUMMARY OF SURVEY RESULTS

"BENDING THE CURVE"

There is little consensus about areas for investment that would yield the greatest improvement. Respondents identified the top five as follows:

1) clinical research being thought of as a care option (40%)
2) increased funding for clinical trial operations (38%)
3) improvements in the time and effort required to start-up clinical trials (36%)
4) ease of use of platform technology (34%)
5) skills and experience of site staff (33%)

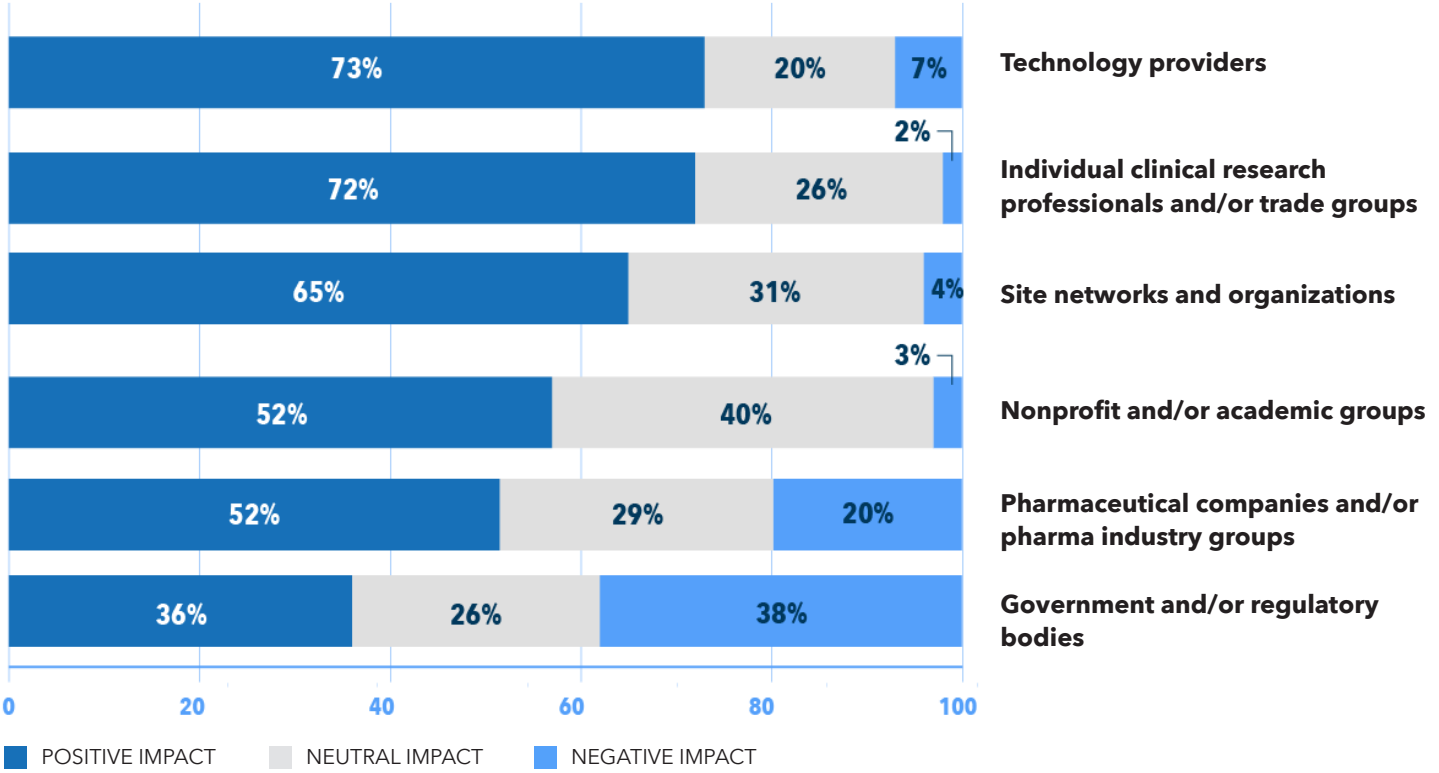
Areas viewed as least important for investment included the quality of patient informed consent processes (10%) and level of patient engagement (10%).

More than one-half (57%) believe that certain issues will pose a major risk to the future of clinical research if not fixed soon, including the experience and knowledge of the sponsor, CRO, and site staff.

Areas identified for operational improvement include trial data quality (44%); decreasing the time taken to run a trial (23%); and reducing the cost of running a trial (18%). For streamlining operations, major elements are improving trial data quality (32%); reducing the time taken to run a trial (29%); and lowering costs (21%).

The stakeholders likely to have the greatest positive impact on clinical research in the coming five to 10 years were technology providers (73%), individual clinical research professionals or trade groups (72%), and site networks and organizations (65%).

HOW MUCH IMPACT DO YOU FEEL THE FOLLOWING GROUPS WILL HAVE IN IMPROVING CLINICAL RESEARCH IN THE NEXT 5 - 10 YEARS?



03

SURVEY RESULTS: SUCCESSES

Areas of improvement include data quality, regulatory elements

CONDUCT OF CLINICAL RESEARCH

Some 52% of the 735 survey respondents believe that the conduct of clinical research has improved over the past five to 10 years, with a further 27% saying it is neither better nor worse. Pharmaceutical and medical device company respondents were most likely to say the conduct of clinical research has improved compared to five to 10 years ago (60%). Technology solutions providers (44%) and research sites (49%) are less likely to say there have been improvements, but nearly half of each agree that clinical research conduct is now better.

Respondents who have worked in the industry for one to five years (53-57%) are slightly more likely than industry veterans of six or more years (49%) to think that the conduct of clinical research has improved compared to five to 10 years ago. Those new to the industry within the last year are a lot more likely to think things may have improved (78%; small sample size).

DATA QUALITY, REGULATORY AFFAIRS, STAFF SKILLS

Roughly half of respondents cite improvements over the past five to 10 years in trial data quality (50%), regulatory submissions and approval (46%), and skills and experience of site staff (42%; Figure 1 in Appendix).

Some 67% of those surveyed believe that data quality is currently high, with only 10% of respondents saying that data quality is worse today than five to 10 years ago. Most respondents believe that in the trials they work on, data quality is high (82%). Some 58% believe that their site operations are efficient and effective.

Pharmaceutical and medical device company respondents are more likely to say almost every area of clinical research has improved compared to the other groups, especially trial data quality (62%), clinical trial start-up (57%), and site/sponsor collaboration (57%). Tech providers are significantly more likely to think regulatory submission and approval have improved (63%). CROs and tech solution providers are less likely than the total sample to say that clinical trial data is high quality (48% CROs, 50% tech, 67% total). Research sites (70%) and AROs (70%) are significantly more likely to say trial data is high quality than CROs and tech solutions providers (Figure 2 in Appendix).

Those with fewer years of experience in the industry (five years or less) tend to feel more positive about the changes for each area of clinical research compared to five to 10 years ago. The less experience they have in the industry, the more positive they tend to feel (especially those with less than one year of experience).

UNDERSTANDING RESPONSIBILITIES

The vast majority of respondents (90%) say they understand their responsibilities in clinical research and feel they have sufficient training to run their clinical trials (86%). Some 67% believe they have adequate resources for their trials. Technology solutions providers are significantly less likely than other groups to say they understand their responsibilities in clinical research (63%) or that they have sufficient training (50%) and resources (31%) that they need to successfully run their clinical trials. Those with 3+ years of experience in the industry are more likely to say they fully understand all responsibilities associated with their role and that they have the training they need to successfully run their clinical trials, compared to those with less experience. From an industry-wide perspective, 61% of respondents believe that clinical research professionals understand how their role fits into the larger clinical research enterprise.

PANDEMIC HAD A POSITIVE IMPACT ON TRIAL DESIGN

Most respondents (82%) believe that the COVID-19 pandemic significantly changed trial operations, with 73% stating these changes still impact their work today. Some 59% say they are optimistic that the changes during the pandemic put the industry in a better place moving forward, with 55% stating that there was a positive effect on the way clinical trials were run. Pharma and medical device company respondents (65%) are more likely to say that the COVID-19 pandemic positively affected the way clinical trials were run compared to the total sample (55%).

03

SURVEY RESULTS: SUCCESSES

SITES SUCCESSFULLY MANAGE MULTIPLE TRIALS CONCURRENTLY

Most respondents believe that in the trials they work on, their site can manage multiple clinical trials concurrently (82%). Research sites (92%) and AROs (84%) are significantly more likely to say their sites can manage multiple trials concurrently than CROs (57%) and tech solution providers (50%).

PATIENT EXPERIENCE IS PERCEIVED AS BEING GOOD

In the trials they work on, most respondents believe the patient experience is very good (77%). Research sites (87%) and AROs (75%) are significantly more likely to say the patient experience is very good for the clinical trials they work on compared to other groups (63% or less).

SITE ADHERENCE TO PROTOCOLS IS STRONG

From an industry-wide perspective, 62% of respondents believe that site adherence to protocols is strong. Research sites are more likely to say that site adherence to clinical trial protocols is strong industry wide (71%), while CROs and tech solution providers are less likely (42% CROs, 44% tech, 62% total). Most respondents believe that in the trials they work on, site adherence to protocols is strong (79%).

SPONSOR RESOURCES VIEWED AS SUFFICIENT

More than half of research site respondents (59%) believe that sponsors have the resources to run clinical trials successfully.

TECHNOLOGY SUPPORTS TRIAL OPERATIONS

The majority believe that trial technology enables and supports good trial operations (56%), with AROs more likely to believe that tech enables and supports good trial operations (63%). Those that have worked in the industry for two years or less are more likely to believe that trial technology enables and supports good trial operations (70%).

Survey results suggest that technology is less polarizing than often characterized. In open-ended responses, trial tech is the most-cited driver by those who thought trials had improved in the last five to 10 years. Some 56% agree that current trial technology enables and supports good trial operations, with 73% saying that tech providers would have a positive impact on future trials. However, a significant minority (22%) believe that tech has made clinical research worse.

04

SURVEY RESULTS: SETBACKS

Challenges in budgets, hiring and retention, and efficiency

BUDGETS INSUFFICIENT

Only one-third (33%) believe that clinical trial operations are efficient industry wide. CROs (44%) and pharma/medical device companies (40%) are more likely to believe that clinical trial operations are efficient industry-wide compared to other groups (33% or less). Research sites are more likely to say that site operations are efficient and effective (65%) compared to other groups (53% or less). Respondents who are newer in the industry (two years or less) are more likely to believe that clinical trial operations are efficient (60%) than those with three or more years of experience (30%).

In the trials they work on, 31% say budgets are sufficient to support good operations and 58% believe that their site operations are efficient and effective. Some 59% of research site respondents say sponsors have the resources to run clinical trials successfully (Figure 3 in Appendix).

Pharma/medical device company respondents are more likely to say that budgets are sufficient to support good trial operations (45%) compared to CROs (26%), and AROs (23%). Those that have worked in the industry for two years or less are more likely to believe that budgets are sufficient to support good trial operations (51%) compared to those with three or more years of experience in the industry (29%).

HIRING AND RETENTION WORSE THAN IN THE PAST

More than half (52%) say that the hiring and retaining of clinical research staff are worse now than five to 10 years ago, while only 19% believe that the hiring and retention of clinical research staff have improved. Some 36% feel that the skills and experience of CRO/sponsor staff have worsened over this period. Among the 22% of respondents who feel clinical research has worsened over this period, reasons mentioned include protocol complexity, a lack of clarity in protocol requirements, and narrow inclusion/exclusion criteria; lack of qualified and experienced clinical research professionals; staff being overworked, in part due to the multiple technology platforms required by different sponsors; and an increased regulatory burden.

SITE RESOURCES AND SKILLS SEEN AS INSUFFICIENT

Staffing and training levels were viewed negatively, with 52% saying that staff hiring and retention have worsened over the last five to 10 years. Today, only 42% agree that "CRAs are knowledgeable and available enough to support good trial operations," while 42% believe that CRO/sponsor experience will improve in the future (lowest ranking). Of non-site respondents, one-half (50%) say that sites have the training, skills, and experience they need to run clinical trials, with 42% saying that sites have sufficient resources (Figure 3 in Appendix).

Pharma and medical device company respondents are more likely to say that hiring and retaining clinical research staff have worsened (58%). They are less likely to believe that the skills and experience of CRO/sponsor staff are worse (25%). Research sites are more likely to think that the skills and experience of CRO/sponsor staff have worsened (42%). CROs (43%) are more likely to say that the skills and experience of site staff have worsened compared to the total sample (27%). AROs (29%) are less likely to think the skills and experience of CRO/sponsor staff have worsened compared to the total sample (36%). ARO respondents are more likely to agree that sites have the resources (46%), training, skills, and experience (54%) they need to successfully run their clinical trials compared to CROs and pharma/medical device company respondents.

CROs, AROs, and pharma/medical device company respondents with more than 10 years of experience in the industry are less likely to think that sites have the resources (38%), training, skills, and experience (44%) they need to successfully run their clinical trials.

CRO RESOURCES VIEWED AS INSUFFICIENT

Some 42% say that CROs have the resources needed, and 31% say CROs have the training, skills, and experience required for study success. Researchers at sites with more experience in the industry (6+ years) are less likely to think that sponsors and CROs have the resources, training, skills, and experience they need to successfully run their clinical trials compared to sites with less experience.

04

SURVEY RESULTS: SETBACKS

SPONSOR STAFF TRAINING

Some 44% of research site respondents said that sponsor staff have the training, skills, and experience they need to run trials successfully.

PROTOCOLS AND PROCEDURES

Just under one-half (49%) say that protocols and procedures are clearly written and support good trial operations (Figure 4 in Appendix). Pharma/medical device company respondents are more likely to believe that protocols and procedures are clearly written and support good trial operations (63%), compared to CROs (42%) and research sites (46%).

REGULATORY ELEMENTS

Some 46% of respondents report improved regulatory processes. Tech providers are more likely than other groups to say almost every area is worse compared to five to 10 years ago, with the exception of regulatory submission and approval, which they think has improved. Respondents with more than 10 years of experience are more likely than less experienced groups to think almost every area of clinical research has worsened.

05

SURVEY RESULTS: PREDICTIONS

Areas of improvement and career outlooks

IMPROVEMENTS EXPECTED IN TRIAL DESIGN, OPERATIONS, DATA QUALITY, CAREERS, AND TECH

Over the next five to 10 years, enhancements are expected in clinical trial design (62%); operations (60%); and data quality (60%; Figure 5 in Appendix). Some 44% believe that trial data quality is the single most important area for improvement.

PERSONAL OUTLOOKS POSITIVE

Personal outlooks on clinical research as a career path were strongly positive. Most respondents expect that continuing to work in clinical research will be a fulfilling career (77%) and say they are likely still to be working in the field in five to 10 years (70%; Figure 6 in Appendix).

Pharma/medical device company respondents are even more likely to say that continuing to work in clinical trials will be a fulfilling career for them (88%). Pharma/medical device company (78%) and CRO respondents (70%) are significantly more likely to believe that continuing to work in clinical trials will be financially beneficial for them compared to other groups (54% or less).

Those with 6+ years of experience in the industry are more likely to say that continuing to work in clinical trials will be fulfilling for them (79%) and that they will probably still be working in the field in five to 10 years (71%), compared to those with two years or less experience in the industry (63% or below, 61% or below).

05

SURVEY RESULTS: PREDICTIONS

GRADUAL CHANGE EXPECTED

Few respondents are concerned that their role will become obsolete during the next five to 10 years (11%). Most believe that change during this time will be gradual (67%; Figure 7 in Appendix), although in open-ended questions, many expressed concerns about political impacts. Overall, future changes are expected to be gradual and modest, but there are concerns among research professionals about being prepared. About one-half of respondents (52%) say they feel prepared for the changes that are likely to occur in the clinical trials industry over the coming years, while 22% feel unprepared (Figure 7 in Appendix).

Pharma/medical device company respondents (40%) are significantly more likely to think that major changes will occur in the industry in the next five to 10 years, compared to other groups (25% or less). Technology solutions providers (88%) feel significantly more prepared for changes that are likely to occur in the industry over the next five to 10 years, compared to other groups (54% or less; small sample size, N=16 for tech providers).

ISSUES SEEN AS PRESENTING A RISK TO THE FUTURE OF CLINICAL RESEARCH

More than one-half (57%) of respondents say that there are issues that present a major risk to the future of good clinical research if not fixed soon, such as the experience and knowledge of sponsor, CRO, and site staff. Pharma/medical device company respondents (71%) and technology solutions providers (69%) are more likely to say such issues exist. More experienced respondents are more likely to say these issues exist, with 62% of industry veterans (10+ years) believing in the existence of such issues.

KEY AREAS FOR OPERATIONAL IMPROVEMENTS

Important areas for improvement within clinical trial operations are identified as including:

- Improving the quality of trial data (44%)
- Decreasing the time taken to run a trial (23%)
- Reducing the cost of running a trial (18%)

CROs cite the quality of trial data as the most important area to improve (64%). Pharma/medical device company respondents (32%) place greater value on decreasing the time it takes to run a trial compared to other groups (25% or less), while AROs and tech respondents are more likely to value decreasing the cost of running a trial (23-25%), compared to other groups (17% or less).

To streamline clinical trial operations, the three most important factors are identified as:

- Improving the quality of trial data (32%)
- Decreasing the time taken to run a trial (29%)
- Reducing costs (21%)

CROs are even more likely to say that improving the quality of trial data is the most important area to streamline clinical trial operations (39%). Those with five years or less experience in the industry are also likely to say that improving the quality of trial data is the most important area for streamlining clinical trial operations (40%). Pharma/medical device company respondents are more likely to say that decreasing the time it takes to run a trial is the most important area to streamline (51%). Tech solutions providers are more likely to say decreasing the costs of running a trial is the most important area to streamline (38%).

Industry veterans (with six or more years of experience) are more likely to be split on this measure between improving quality of trial data and decreasing the time it takes to run a trial (29 or 30% for each).

06

BENDING THE CURVE: AREAS FOR INVESTMENT AND KEY STAKEHOLDERS

MIXED OPINIONS ON TARGET AREAS

There is little consensus about areas for investment that would yield the most improvement, with the top five identified as:

1) Clinical research being thought of as a care option (40%)
2) Increased funding for clinical trial operations (38%)
3) Improved time and effort required to start-up clinical trials (36%)
4) Ease of use of platform technology (34%)
5) Skills and experience of site staff (33%)

Research sites and AROs value the same top three areas for investment as the total sample (clinical research as a care option, funding for trial operations, and reducing time taken for study start-up). CROs are more likely to value investing in the skills and experience of site staff (48%), compared to other groups (36% or less). Pharma/medical device company respondents would value investing in diversity of clinical trial participants (38%) more than other groups (28% or less). Technology solutions providers are more likely to value investing in the amount of real-world evidence that is used in clinical trials (56%), compared to other groups (26% or less).

Among the areas seen as being least important for investment were the quality of the patient informed consent processes (identified as most important by 10%), level of patient engagement in trials (10%), the ability to retain patients in trials (11%), and the diversity of trial staff (11%; Figure 8 in Appendix).

LEADING THE CHARGE: POSITIVE IMPACTS EXPECTED FROM TECH PROVIDERS, PROFESSIONALS, AND TRADE GROUPS

Technology providers are predicted to have the most positive impact on clinical trials in the next five to 10 years by 73% of respondents, followed by individual clinical research professionals or trade groups (72%). Next come site networks and organizations (65%), nonprofit and/or academic groups (57%), pharmaceutical companies and/or pharma industry groups (52%), and government or regulatory bodies (36%).

AROs (77%), pharma/medical device company respondents (82%), and technology solutions providers (81%) are even more likely to believe that technology providers will have the most positive impact in improving clinical research moving forward. Pharma/medical device company respondents are also significantly more likely to think that pharma companies and pharma industry groups will have a positive impact (75%), compared to other groups (58% or less). Regardless of years of experience in the industry, technology providers and professionals, and/or trade groups are seen as most likely to have a positive impact on clinical research moving forward (Figure 9 in Appendix).

07

CONCLUSION

The survey paints a generally positive picture of progress, with survey respondents having high confidence in their understanding of their responsibilities within clinical research (90%) and in their level of training being sufficient to run their trials (86%). This remains a highly attractive career path, with respondents expressing confidence that they will continue to work in this area and find it a fulfilling career (77%) and expecting to remain in the field for the next five to 10 years (70%). In terms of key metrics within clinical research, data quality is perceived as high (67%), with improvements anticipated in trial design (62%), operations (60%), and data quality (60%).

However, only one-third (33%) say that trial operations are efficient industry-wide and only 31% say budgets are sufficient to support good operations in their own studies. In addition, hiring and retaining clinical research staff are worse today than five to 10 years ago (52%). These findings cannot be ignored. By "bending the curve"—identifying solutions to accelerate progress and address persistent barriers— improvements may be achieved. It is encouraging that participants expect a high level of contributions to clinical research from stakeholders over the next five to 10 years, with greatest positive impacts forecast from technology providers (73%), individual clinical research professionals and trade groups (72%), and site networks and organizations (65%). These will help accelerate the benefits from future investments in areas such as clinical research being thought of as a care option (40%); increased funding for clinical trial operations (38%); and improvements in the time and effort required to start-up clinical trials (36%).

Visit the ACRP website for more insights from the Transformation of the Clinical Research Enterprise Survey, including a summary report, webinar recording, and blog insights.

08

ACKNOWLEDGEMENTS

ACRP would like to thank the 735 clinical research professionals who shared their insights and experiences in this first-of-its-kind workforce survey. ACRP is grateful for the partnership of Continuum Clinical, especially Paul Ivsin and Dylan Gundry. We are appreciative to the dedication of the ACRP Board of Trustees, our Partners Advancing the Clinical Research Workforce (PACRW), and the Transforming the Clinical Research Enterprise Working Group, listed here, who contributed to the development of the survey.

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ABOUT ACRP: From new clinical research professionals just starting out to industry veterans who are looking for ways to move ahead in their career, the Association of Clinical Research Professionals (ACRP) is where success starts—and grows. With more than 20,000 global members, ACRP is the strongest advocate for clinical research professionals—amplifying their voice throughout the research industry and elevating their position by providing gold-standard education, rigorous certification, and strong community connections. Learn more at acrpnet.org.

ABOUT CONTINUUM CLINICAL: Continuum Clinical is a global clinical trial solutions provider that elevates interest, increases access, and enhances experiences in clinical trials. Continuum Clinical has been providing fact-based patient recruitment solutions since 1993 and have established a track record of meeting and exceeding enrollment goals for clinical trials on behalf of some of the world's largest pharmaceutical companies. Learn more at continuumclinical.com.

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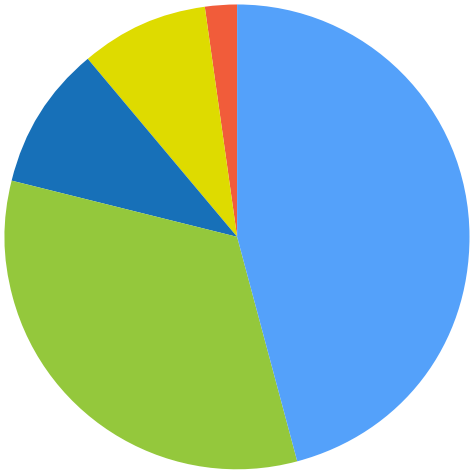
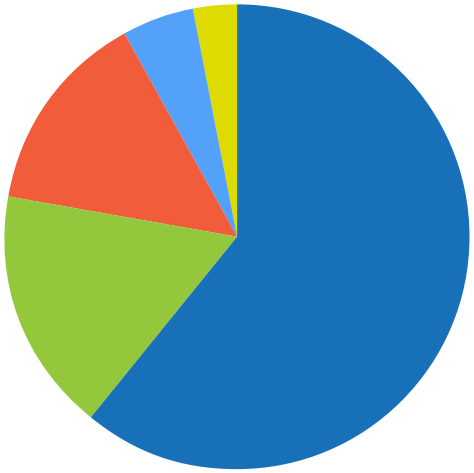
APPENDIX: SURVEY RESPONDENT DETAILS

SURVEY RESPONDENT PROFILE BY EMPLOYER TYPE



- RESEARCH SITE 46%
- ACADEMIC RESEARCH ORGANIZATION (ARO) 33%
- CONTRACT RESEARCH ORGANIZATION (CRO) 10%
- PHARMACEUTICAL OR MEDICAL DEVICE COMPANY 9%
- TECHNOLOGY SOLUTIONS PROVIDER 2%

SURVEY RESPONDENT PROFILE BY YEARS OF EXPERIENCE IN CLINICAL TRIALS INDUSTRY



- MORE THAN 10 YEARS 61%
- 6 – 10 YEARS 17%
- 3 – 5 YEARS 14%
- 1 – 2 YEARS 5%
- LESS THAN 1 YEAR 3%

SURVEY RESPONDENT ROLES AND EXPERIENCE

Of the 735 respondents, roles and levels of experience were as follows:

- 46% are from research sites, 33% from academic research organizations (AROs), and 10% from contract research organizations (CROs).
- Of research site staff, 49% are from academic medical centers, while 29% are from hospitals, healthcare systems, foundations, and trusts
- Among 65 respondents from pharmaceutical or medical device companies, 65% work at large companies with more than 10,000 employees
- Among 77 respondents from CROs, 57% are employed at large/full-service CROs with more than 5,000 employees, with 27% at smaller/specialty CROs with fewer than 500 employees, and the remaining 16% at midsized CROs with 500 to 4,999 employees
- 78% of respondents have worked in the clinical trial sector for six years or more
- The most common roles among research site respondents are clinical research coordinators (30%), research managers/directors (23%), and site director, manager, or equivalent (13%)
- Among all respondents, 56% are individual contributors, while 44% are managers with direct reports; and 58% have earned at least one clinical research certification (25% were certified clinical research coordinators [CCRCs] and 22% were certified clinical research professionals [CCRPs])
- Respondents have conducted clinical trials in many different therapeutic areas, including oncology (35%), cardiovascular (25%), neurosciences (19%), and infectious diseases (18%)

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APPENDIX: FIGURES (N=735)

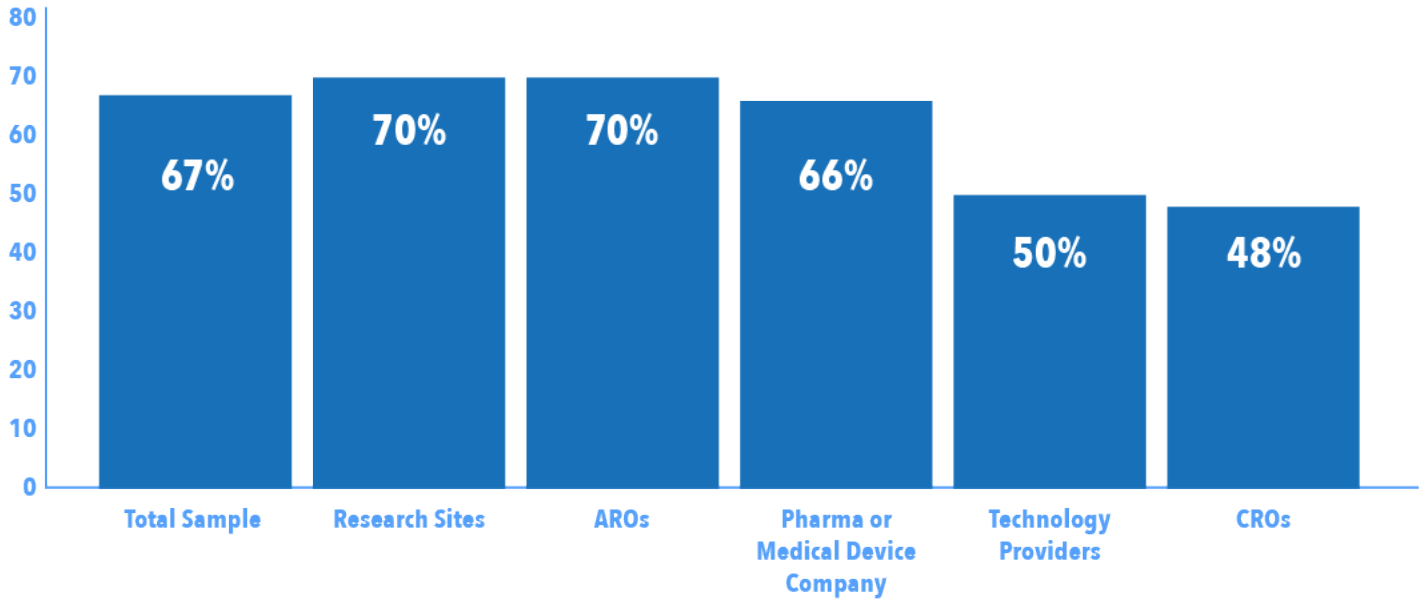
FIGURE 1: CHANGES OVER THE PAST FIVE TO 10 YEARS

Digging deeper

Compared to 5-10 years ago, have the following specific areas of clinical research gotten better or worse? (% = Much better or somewhat better)	
Trial data quality	**50%**
Regulatory submission and approval (e.g., legal, IRB, EC, etc.)	**46%**
Skills and experience of site staff	**42%**
Clinical trial start up (set-up, contracting and initiation)	**39%**
Site/Sponsor collaboration	**37%**
Patient enrollment	**36%**
Site/CRO collaboration	**33%**
Skills and experience of CRO/Sponsor staff	**26%**
Hiring and retaining clinical research staff	**19%**

FIGURE 2: CLINICAL TRIAL DATA IS HIGH QUALITY INDUSTRY-WIDE

How much do you agree or disagree with the following statement: Clinical trial data is high quality today industry wide. (% = Agree strongly or somewhat)



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APPENDIX: FIGURES

FIGURE 3: VIEWPOINTS ON RESOURCES OF OTHER STAKEHOLDER GROUPS

Looking across the table: resources are a concern, but site perception of CRO experience is a red flag

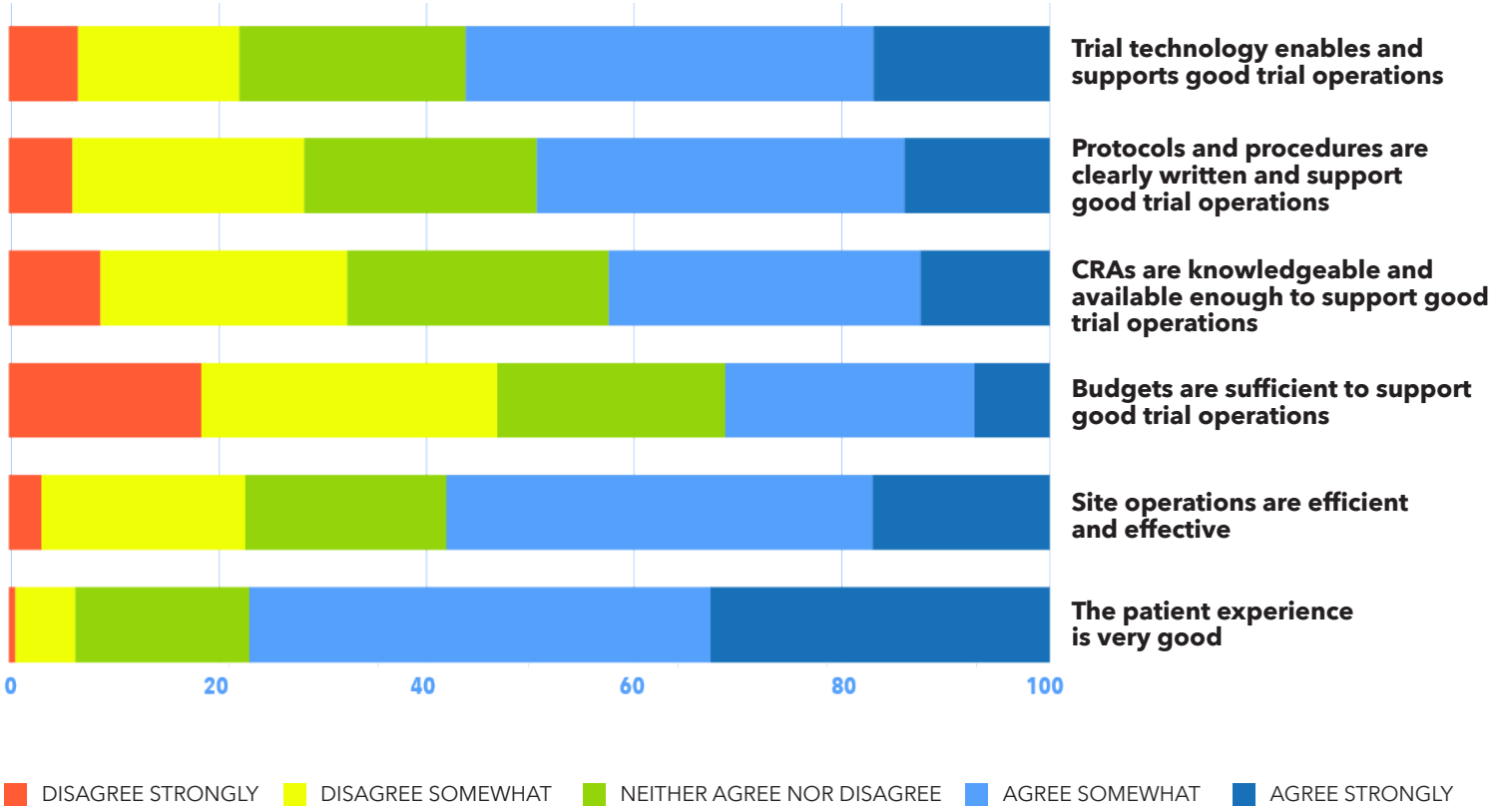
Sponsor/CRO Perspective	N=381
Sites have the resources they need to successfully run our clinical trials	**42%**
Site staff have the training, skills, and experience they need to successfully run our clinical trials	**50%**

Site Perspective	N=338
Sponsors have the resources they need to successfully run our clinical trials	**59%**
Sponsor staff have the training, skills, and experience they need to successfully run our clinical trials	**44%**

Site Perspective	N=338
CROs have the resources they need to successfully run our clinical trials	**42%**
CRO staff have the training, skills, and experience they need to successfully run our clinical trials	**50%**

FIGURE 4: THE PRESENT: RESPONDENT PERSPECTIVES ON CLINICAL RESEARCH

For the clinical trials that you work on today, how much do you agree or disagree with the following statements:



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APPENDIX: FIGURES

FIGURE 5: VIEWPOINTS ON DATA QUALITY

Data quality was the most highly-ranked item across the survey's timeline.

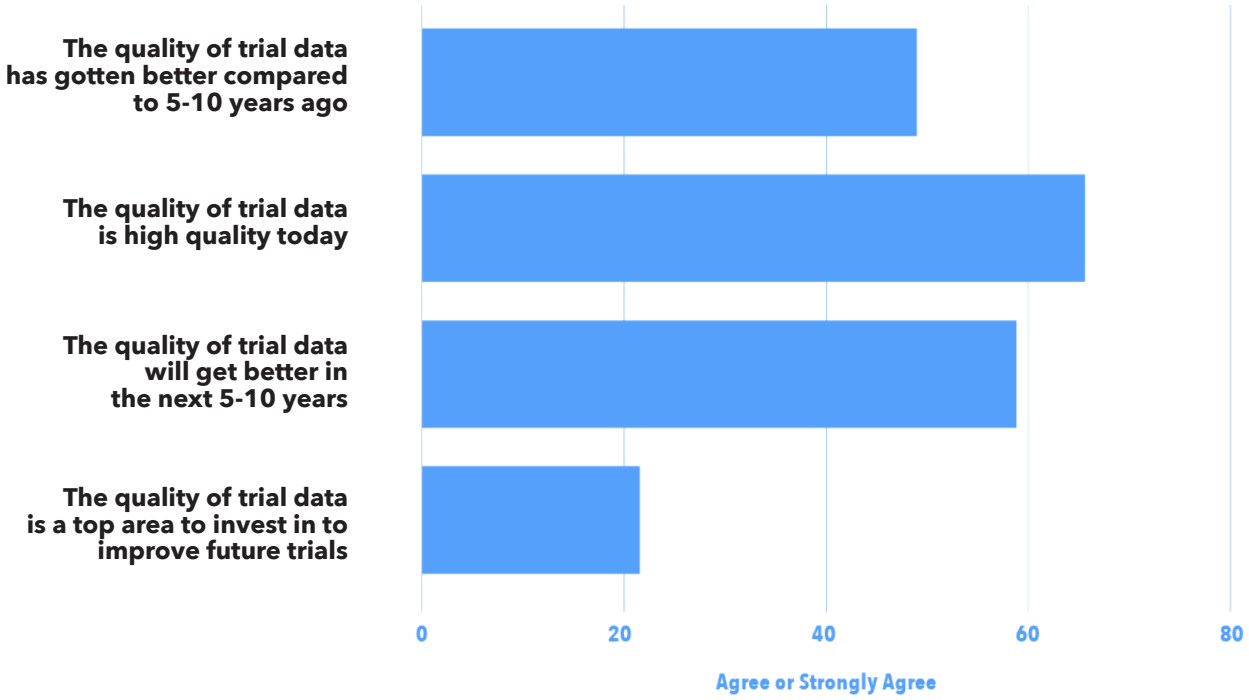

FIGURE 6: PERSPECTIVES ON CAREER SATISFACTION AND FUTURE OPPORTUNITIES

Personal outlook is strongly positive

Looking ahead to the next 5-10 years, how much do you agree or disagree with these statements? (% = Agree strongly or somewhat)	
Continuing to work in clinical trials will be a fulfilling career for me	**77%**
I will probably still be working in clinical trials in 5-10 years	**70%**
There are clear opportunities for me to advance my career in clinical research	**58%**
Continuing to work in clinical trials will be financially beneficial for me	**54%**
My role in clinical trials will be obsolete/no longer essential in 5-10 years	**11%**

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APPENDIX: FIGURES

FIGURE 7: GRADUAL, MODEST CHANGES EXPECTED; RESPONDENTS EXPRESS CONCERN ABOUT PREPAREDNESS

Future change may be modest, but still a cause for concern about readiness

In the next 5-10 years, do you think any major changes will occur in the clinical trials industry, or will change be more gradual?	
Major changes will occur	**26%**
Change will be more gradual	**67%**
There will be no or almost no real change	**7%**

How prepared do you feel for the changes that are likely to occur in the clinical trials industry over the next 5-10 years?	
Very unprepared	**4%**
Somewhat unprepared	**18%**
Neither prepared nor unprepared	**26%**
Somewhat prepared	**43%**
Very prepared	**9%**

FIGURE 8: PRIORITY AREAS FOR INVESTMENT

Where do we invest? There is surprisingly little consensus

If the industry could invest in improving just 5 of these areas, what investments would yield the most improvement?	
Clinical research being thought of as a care option (integration of clinical research activities into routine healthcare)	**40%**
Increased funding for clinical trial operations	**38%**
The time and effort it takes to start-up clinical trials (set-up, contracting, and initiation)	**36%**
The ease of use of platform technology (e.g., eConsent, EDC system, CTMS system, etc.)	**34%**
Skills and experience of site staff	**33%**
Diversity of clinical trial participants	**28%**
The ease of use of patient-focused technology (e.g., mobile apps for patients, telemedicine, wearables, etc.)	**27%**
The burden on patients participating in clinical trials	**27%**
Clinical trial data quality (e.g., accuracy, reliability, completeness)	**25%**

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APPENDIX: FIGURES

FIGURE 9: WHICH STAKEHOLDERS WILL LEAD THE CHARGE TO DELIVER CHANGE?

Who will lead the charge to make the change?

How much impact do you feel the following groups will have in improving clinical research in the next 5-10 years? (% = Mostly or somewhat positive impact)	
Technology providers	**73%**
Individual clinical research professionals and/or trade groups	**72%**
Site networks and organizations	**65%**
Nonprofit and/or academic groups (e.g., CTTI, FasterCures)	**57%**
Pharmaceutical companies and/or pharma industry groups (e.g., PhRMA, TransCelerate)	**52%**
Government and/or regulatory bodies	**36%**