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White Paper

Merits of a **Multifaceted Approach** to Clinical Trial Recruitment

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Merits of a Multifaceted Approach to Clinical Trial Recruitment

Clinical trial recruitment remains a difficult, time-consuming, and expensive prospect for sponsors and sites. According to the 2024 study "Benchmarking Site Activation and Patient Enrollment," across all sites, 33% under-enrolled, and 14% failed to enroll a single patient. The enrollment timeline across all trials was nearly 15 months on average.

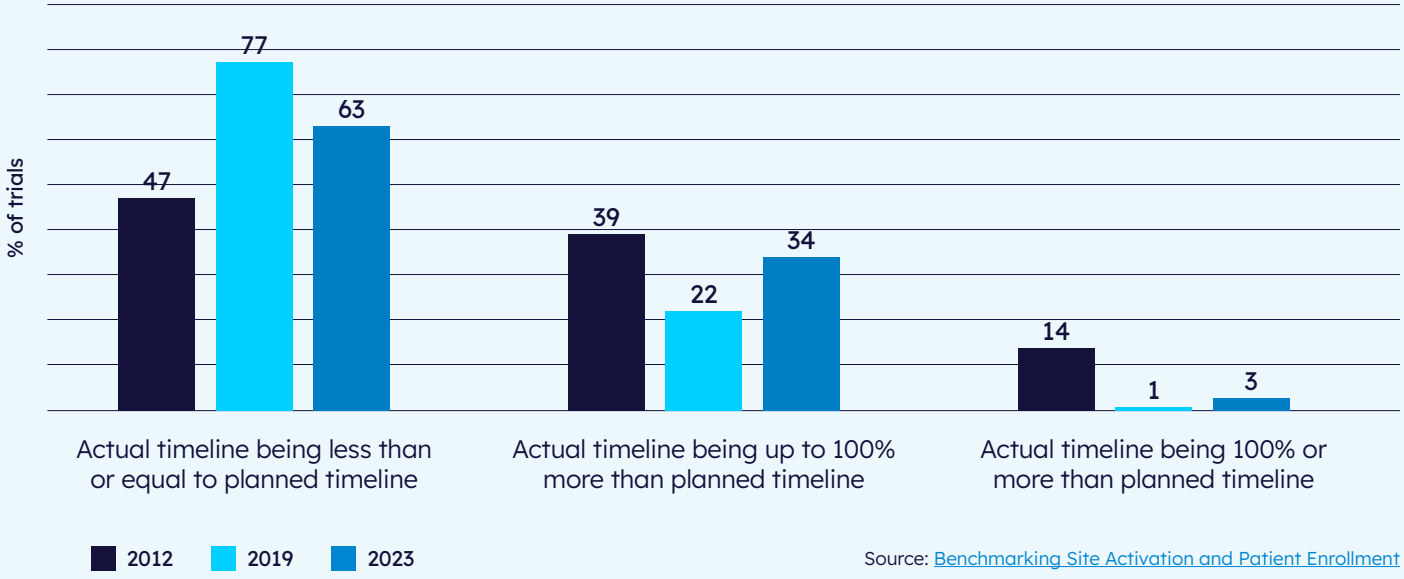
The best way to approach these difficulties is to adopt a multifaceted approach to recruitment that goes beyond traditional channels and ways of thinking. This includes bringing the patient front and center in recruitment efforts, engaging healthcare practitioners (HCPs) in dialogue about clinical trials, and expanding recruitment partnerships.

Nazar Hembara, CEO of AllClinicalTrials.com (formerly Curify), compares the idea of using only traditional recruiting methods to a bookstore that refuses to sell books online, or a shop that insists on only renting out VHS tapes in the age of streaming services — "charming, perhaps, but not very effective."

"Other industries have adapted faster by embracing multiple channels to connect with their audience, and if we don't do the same in clinical trial recruitment, we risk being left behind like that nostalgic VHS rental shop," Hembara says.

Of course, even in 2024, bookstores still exist, so it is not to say traditional methods do not work well, he says. "However, it's very risky to rely on them only. Combining traditional approaches with new, multifaceted strategies ensures we reach as many potential participants as possible."

Figure 1. Enrollment timeline performance



Source: Benchmarking Site Activation and Patient Enrollment

Incorporates online outreach

Sites often rely on their own patient databases for trial recruitment. While a good place to start, these databases are often limited in scope and not equal to the task of fully enrolling the study, not to mention fulfilling the requirements for a diverse study population.

The question then becomes how to go about expanding the patient base. Some sites expand their recruiting efforts to local hospitals and community health centers. But as Ram Bhat, co-founder of Clinrol, observes, this still limits recruitment efforts to those already connected to the healthcare system.

A multifaceted strategy expands this reach by incorporating digital tools as well as local outreach. This increases diversity and geographic coverage, making clinical trials more inclusive and efficient.

According to Bhat, one of the ways a multifaceted recruitment approach builds upon traditional methods is by leveraging modern digital platforms such as social media, search engine optimization (SEO), and targeted online ads. It also involves partnerships with patient advocacy groups and local general practitioners, which allows trials to reach a broader audience — including those who may not regularly engage with healthcare providers.

"For example, targeted social media campaigns on platforms like Facebook and Instagram enable researchers to reach specific demographics based on interests and behaviors, increasing the number and quality of participants," he says. "This diversified, multifaceted recruitment model, which includes digital channels that can be localized instantly with a click of a button, is particularly effective in reaching hard-to-access populations, such as those in rural or minority communities or those who do not speak the local language spoken by site staff, which might be missed by traditional site-based recruitment methods."

One big advantage of the multifaceted recruitment strategy is its flexibility. "This diversified approach is essential because you never know which method will yield the best results for a particular study, even if certain strategies have been successful in the past," Hembara says.

For example, Hembara notes, digital advertising is highly effective for certain chronic conditions like skin disorders that impact patients' daily lives. "Patients with these conditions often search online for information on how to manage their symptoms and improve their quality of life," he says. "When they encounter ads for experimental treatments during their search, they are more likely to be interested and consider participating in a clinical trial. This direct alignment with their immediate needs increases engagement and enrollment rates."

By contrast, patients with common conditions that don't severely affect daily life, such as chronic sinusitis, may not respond as well to digital ads because they may not be actively seeking new treatments. "In these cases, outreach to patient communities can yield better results," Hembara says. "Engaging with these communities connects us with individuals who are motivated to contribute to research, sometimes more out of altruism than a need to improve their own quality of life."

A multifaceted recruitment strategy is dynamic enough to navigate the complexities of different studies while mitigating the risks that come with relying on a single recruitment method.

Faster, broader, and less costly

Three additional areas in which a multifaceted recruitment strategy shines over traditional methods are in speed, reach, and cost-effectiveness.

Bhat notes that a multifaceted strategy allows access to a wider demographic, including underrepresented groups such as rural populations and culturally diverse communities. Digital tools make it easier to target these populations through localized online ads and community-based outreach, improving inclusivity in clinical trials.

He cites other advantages, including real-time data tracking and campaign optimization. Digital platforms enable trial sponsors to monitor metrics such as geolocation information, click-through rates, engagement, and cost per participant. Sponsors can then use this information to adjust campaigns for maximum efficiency, something not possible with slower, site-based outreach methods.

“This data-driven approach can significantly reduce recruitment timelines, helping trials meet enrollment targets faster and minimizing costly delays,” Bhat says.

Many aspects of a multifaceted recruitment strategy can save sponsors money. For example, Bhat cites a study published in the *Journal of Clinical and Translational Science* that found social media recruitment, such as on Facebook, can be up to 50% more cost-effective than traditional methods, with per-participant costs ranging from nothing to $517, compared to $19 to $777.

Dave Penrod, managing partner at LeadSlinger, agrees that social media is much faster than the traditional approach of doctor’s referrals, television ads, etc. “Once given the go-ahead — approved IRB creatives and the study ready for recruitment — we are typically live the same day, and more often than not our partners see the first referrals within hours of us setting the campaign live,” he says.

Penrod also highlights social media’s advantages of efficiency, worldwide reach, quality, and diversity, not to mention its high randomization rates.

It is important for a multifaceted recruitment strategy to account for the complexities of the clinical trial in terms of disease type and inclusion/exclusion (I/E) criteria for patients. Sponsors must clearly and concisely present I/E criteria to potential patients and their caregivers.

Also, as part of a multifaceted strategy, sponsors need to determine whether their trial will be best served by a strict direct-to-patient approach or a more nuanced solution that takes trial complexity into account. This can be done through tools that offer a recruitment strategy customized to fit a complex protocol and target only those patients who meet its requirements.

Distributing recruitment efforts across multiple channels reduces reliance on any one source of patient candidates, such as physician referrals. This minimizes the risk of underperformance in any single area and creates a more balanced and resilient recruitment process, increasing the likelihood of completing trials on time, Bhat says.

Improves diversity in recruitment

Another key strength of a multifaceted recruitment strategy is how it improves patient diversity. This is more important than ever, given the draft guidance from the US Food and Drug Administration (FDA) that all sponsors have a Diversity Action Plan for all Phase III clinical trials.

The FDA's guidance gives another boost to industry-wide efforts to address underrepresentation of key demographics in clinical trials. This effort is sorely needed; a Harvard University analysis revealed that of participants in American clinical trials, only 8% were Black, 6% were Asian, 11% were Hispanic, and 30% were aged 65 or older. As Bhat notes, this lack of diversity in trials can result in less effective or harmful treatments for certain groups.

When the Society for Clinical Research Sites (SCRS) collected diversity, equity, and inclusion data at the Diversity Site Solutions Summit in April 2023, 64% of respondents said their site successfully represents diverse populations. However, 60% said they need more support for diverse recruitment.

According to Bhat, traditional methods often face geographic, socioeconomic, and/or language barriers, making it difficult for them to engage underrepresented groups. Plus, many minority groups are outside the healthcare system, which reduces the likelihood of them appearing in site databases.

"This highlights the need for alternative recruitment methods, such as digital outreach, to bring awareness of trials to populations that might otherwise be unaware," Bhat says. "A multifaceted strategy leverages digital channels and community-based outreach tailored to reach diverse populations effectively."

Bhat offers social media campaigns as an example. "[These] can be customized with culturally relevant messaging to target specific minority communities," he says. As for partnerships with local advocacy groups, these can help build trust with groups that may be hesitant to participate in medical research, he adds.

According to Bhat, strategies such as telemedicine and decentralized trials can enable participation from remote or rural areas, including indigenous or culturally and linguistically diverse communities. "This flexibility helps overcome barriers such as travel or limited access to healthcare facilities, which are often significant challenges for underserved populations," he says.

"By improving representation across various demographic groups, multifaceted recruitment strategies help ensure that clinical trial results are more generalizable to the broader population."

A diverse clinical trial recruitment team can further support diverse clinical trials. In fact, Hembara says, having team members whose lived experience can inform recruitment efforts is essential for successful multifaceted studies.

"A diverse team can tailor approaches to specific audiences more effectively," he says. "For example, we had a marketer who specialized in TikTok ads and created content that truly resonated with younger users, addressing their interests and needs. Meanwhile, another team member attended Spanish-speaking patient support groups, engaging directly with that community in their own language. Both of them worked hard to develop IRB-approved materials that were clear and meaningful for their specific audiences."

Benefits of a Diverse Clinical Trial Recruitment Team

- **Reach Different Demographics:** Utilizing various channels like social media, community events, and healthcare providers helps connect with a wider range of people.
- **Customize Communication:** Tailoring messages to fit cultural and linguistic preferences encourages participation from diverse groups. Providing materials in multiple languages and respecting cultural nuances makes information more accessible.
- **Partner with Trusted Leaders:** Collaborating with community leaders and organizations builds trust and credibility, increasing the likelihood that individuals from different backgrounds will consider joining a trial.
- **Remove Barriers:** Understanding and addressing practical obstacles like transportation or scheduling issues allows more people to participate.

Source: Nazar Hembara, CEO, AllClinicalTrials.com

A view from the site side

Fenway Health is a Boston-based community healthcare provider that conducts clinical research, including studies involving underrepresented communities such as LGBTQIA+.

Chris Vivieros, director of communications, says for these studies, Fenway has utilized social media and paid online advertising in addition to more traditional engagement of HCPs and hospitals. "....Like if we're doing a study that is specifically for trans people or gay men, they'll find dating apps that people use, put advertisements there," Vivieros says. This has proven popular for recruiting, specifically for gay men, he adds.

With the shadow of the pandemic having receded, Vivieros says, "they do actually do a lot of face-to-face outreach again. They go to community events or out to bars or clubs where the folks we're trying to reach hang out and do recruitment that way.

"We have been doing a lot of trans research lately, and a lot of that recruitment is more community-oriented," he adds. "That involves sometimes more face-to-face stuff than online stuff."

Fenway adjusts its recruitment strategy depending on the intersection of demographics. "Different folks use the internet in different ways, so it really depends on who we're trying to reach," Vivieros says.

Vivieros notes it's "pretty helpful to get input from folks who are members" of the communities from which Fenway is trying to recruit. "....We do have people on staff who are parts of various aspects of that community," he says. "Also if we're doing a study that's specifically for BIPOC people who are part of the LGBTQIA+ community, we want to get buy-in from those stakeholders as well."

Community members are "very helpful in helping to direct us to places where we might want to do our outreach, whether that's an online space," Vivieros says. "There are still quite a few ... places where people go specifically to have conversations with other members of the community. So getting access to those kinds of online spaces, it's very helpful to have folks who are connected already to help vouch for you."

In terms of face-to-face outreach, Vivieros notes that nightlife and social lives change over time. "So it's always good to keep up to date on where people are hanging out, what they're doing for fun, what's a good place to go in the winter, what are better places to go in the summer, all of that stuff," he says.

Best practices for reaching HCPs

Regardless of the channels employed, all recruitment efforts come down to the patients. They are the ones who must make the decision whether to participate, and they need information to be able to do so.

Involving HCPs in the clinical trial recruitment process can be key to getting patient buy-in. As a Health Information National Trends Study (HINTS) notes, 62% of respondents said they would go to their HCP first when seeking information about clinical trials.

"[HCPs] are pivotal in a multifaceted clinical trial recruitment strategy, serving as trusted advisers and connectors between patients and clinical research opportunities," Hembara says. "Their involvement significantly enhances recruitment effectiveness and helps diversify participant pools."

With their access to medical records, HCPs can efficiently identify and target patients who meet specific eligibility criteria and inform them about relevant trials, Hembara says. They can address patients' concerns directly and provide tailored information about a clinical trial's benefits and risks. This personalized approach can alleviate fears and misconceptions, making patients more willing to participate.

HCPs serving diverse communities are also in a better position to recruit underrepresented patients. Fenway Health, with its diverse patient population, often includes its own HCPs as well as those of local hospitals in its multifaceted recruitment process.

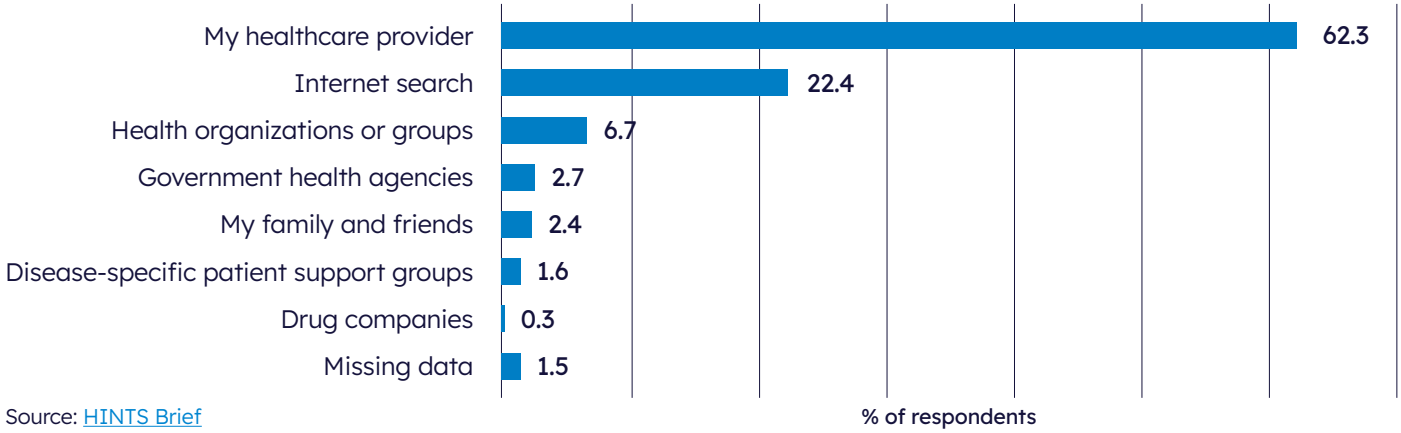
"....Because we are a medical organization and we see patients, it's often very helpful to have our providers involved in recruitment," Vivieros says. "So if we're looking for a specific kind of person and that's a patient that someone might be seeing, they can say, 'Here's some information, if you're interested, here's a phone number and email you can get in touch with.' That's just another tool that we use.

"And ... because we're in Boston we sometimes partner with some of the bigger hospitals in these things too, because they can bring things to the table that we just don't have as a community health center," such as bigger patient populations, Vivieros continues. "What will happen sometimes depending on the study is we're the ones who are out in the community doing outreach, and [the hospitals are] spending more time going through their patient appointments and their providers and trying to figure things out that way."

Interestingly, many HCPs are still learning about trials in more traditional ways. According to an Underscore Marketing survey, around 75% of HCPs learn about clinical trials from site outreach. Visits from clinical trial

Figure 2. Sources of clinical trial information

"Imagine you had a need to get information about clinical trials. Which of the following would you go to first?"



Source: HINTS Brief

coordinators (CTCs) are the second most popular method for getting educated about clinical trials, with 68% of respondents citing them as a source.

By contrast, 42% of respondents received information on clinical trials from online search results. Less than half of surveyed HCPs received clinical trial information from email or medical associations, and only around 10% gain awareness of clinical trials from social media channels.

While CTC visits remain popular with HCPs for gaining clinical trial information, sites often do not have enough staff to send out to all the HCPs in their local recruitment area. And if the recruitment area expands, as is often the case in trials for rare diseases or those with complex I/E criteria, visits from CTCs become impossible.

This is where online resources can fill the gap. However, as indicated by the Underscore survey results, there remains room to grow in the area of online outreach. This could be because HCPs do not have the time or bandwidth to seek out trials on their own through online search or social media.

One way to bridge this divide is to connect HCPs with trial information proactively, in a way that requires little to no effort on their part. For example, when ready to recruit for a particular trial, a sponsor or site could employ a platform that sorts through HCPs and singles out those with relevant patients for that trial. They can then use the platform to automatically send those physicians materials with trial information they can share with their patients as well as details as to how they can enroll in the study.

Hembara says, from his experience, involving HCPs early during feasibility studies has led to significant improvements in recruitment outcomes. “For example, in a cardiovascular study, partnering with cardiologists resulted in a 50% increase in enrollment rates, after implementation of suggestions from the cardiologists, with a notable rise in participation from underrepresented populations,” he says. “Physicians provided valuable insights into effective communication strategies tailored to their patients’ needs and backed by years of experience.”

Expanding beyond one partner

Patient recruitment efforts often fall on clinical trial sites, which can be understaffed and overburdened with running multiple trials at once. Challenges include resource allocation, study prioritization, and activity coordination. They also often lack resources such as the technological capability to manage trials efficiently or the budget to establish trial websites.

This is where a patient recruitment company can help. A patient recruitment company often has its own list of potential clinical trial patients. However, just going with one patient recruitment company can be limiting in terms of patient reach, particularly if a trial is complex and has detailed I/E criteria. Resources that make it possible to forge multiple partnerships are valuable for extending recruitment reach.

One way to broaden the search for clinical trial patients is to consider teaming up with nontraditional as well as traditional partners. These include patient engagement community platforms and apps, advertising agencies, pharmacies, and diagnostic or genetic screening firms.

For example, the Center for Information and Study on Clinical Research Participation (CISCRP) emphasizes the pivotal recruitment role played by patient advocacy and support groups. This is especially true among minority communities; according to CISCRP’s 2023 Perceptions & Insights study, 12% of Black respondents reported being asked to participate in a clinical trial by an advocacy group, compared with 6% of white respondents. Partnering with these groups can broaden and enhance outreach to diverse communities in a culturally sensitive way.

Pharmacies are increasingly being considered as alternative clinical trial sites, so partnering with them for recruitment makes sense. Results of two CISCRP studies from a decade ago made it clear patients were receptive to direct engagement with pharmacists to gain information about clinical trials. And in the 2023 Perceptions & Insights study, 46% of participants overall said they were very willing and 38% said they were somewhat willing to go to a local pharmacy for their study visits. Given these responses, it is likely that patients remain quite open to gaining clinical trial knowledge from their pharmacists.

An AI-enabled future

It is clear that the future of clinical trial recruitment is multifaceted. And as is the case in other aspects of the clinical trial process, artificial intelligence (AI) is bound to play a bigger role in recruiting and retaining clinical trial patients.

As an article in *Communications Medicine* notes, AI-enabled models can be used to match patients to suitable clinical trials. These clinical trial matching systems use natural language processing (NLP) tools trained on both the clinical trial protocols and patient real-world data (RWD) to extract key information and make decisions on patient eligibility. Previous studies have demonstrated the ability of these systems to efficiently, accurately, and reliably screen cancer patients for clinical trials.

Bhat says he believes the future will be shaped by technology-driven, data-centric strategies, with AI, machine learning (ML), and large language models (LLMs) all playing pivotal roles in optimizing participant selection and retention. The ability of AI to analyze large datasets, including health electronic records, makes it a valuable tool for identifying ideal trial candidates.

Bhat says Clinrol has already started using AI to help patients better understand complex terminology and medical jargon, making the trial process more accessible with simplified language.

"As patients respond best when contacted promptly, AI can also automate and optimize study outreach, potentially creating AI-first call centers trained on study-specific information," he says. "Lastly, predictive analytics will be crucial in anticipating which participants will likely enroll and stay in a trial, enabling sponsors to fine-tune their recruitment efforts."

Hembara says leveraging AI and high-quality support call centers has allowed his organization to provide instant responses to inquiries from potential participants. "For example, chatbots powered by AI can handle frequently asked questions 24/7, while trained support staff can address more complex concerns," he says. "This prompt communication helps maintain engagement and reduces the chances of losing interested individuals due to delayed responses."

Hembara says he also sees greater adoption of clear clinical trial descriptions free of medical jargon. "By using plain language instead of complex medical terminology, we make it easier for potential participants to understand the study's purpose, procedures, and potential benefits or risks," he says. "This transparency builds trust and encourages more people to consider participation."

Bhat says his organization has also seen a dramatic increase in the adoption of the technologies and models

of virtual and decentralized trials by sponsors and contract research organizations (CROs), and that this will continue to shape the future of clinical research. Participants in CISCRP's 2023 Perceptions & Insights study responded favorably to the idea of hybrid trials, which combine remote technology with in-person visits, with 86% being either somewhat or very willing to participate in such studies.

"These models allow participants to engage remotely, break down geographic barriers, and make trials more accessible to diverse participants, particularly those in underserved or rural areas," he says. "By broadening the accessible patient pool, these methods are becoming increasingly essential."

While traditional site-based recruitment methods will remain important, Bhat says the growing emphasis from regulators on diversity requirements and the need to address treatment variability across populations will drive the adoption of technology-enabled, scalable recruitment strategies. "These approaches must prioritize efficiency, diversity, and inclusivity as the new standard, achievable only through a multifaceted approach," he says.

In the future, Hembara says he sees multifaceted recruitment becoming even more patient-focused, with recruiters meeting patients where they are through a combination of channels.

"Personalization techniques — like targeting messages based on individual preferences or behaviors — make outreach efforts more effective," he says. "For instance, sending tailored emails to patients who have shown interest in similar studies can increase enrollment rates."

According to Hembara, there will also be more investment in public education about clinical trials to demystify the process and highlight the value of participation. "This might involve awareness campaigns, partnerships with patient advocacy groups, or educational content shared through various media," he says. "By informing people about how clinical trials contribute to medical advancements, we can foster a more receptive and engaged audience."

As these strategies come to the forefront, some traditional methods may become less prevalent. Hembara says broad, non-targeted mass media advertising may decline in effectiveness as personalized, data-driven approaches prove more successful in engaging potential participants. And while physicians will continue to play a vital role, recruitment strategies are more likely to incorporate additional outreach methods to ensure a wider reach and more diverse participant pool.

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Cover all facets of recruitment with Citeline Connect

The solutions offered by **Citeline Connect** span the spectrum of clinical trial education, engagement, and enrollment across sponsors, vetted recruitment partners, patients, HCPs, and sites. Built on a globally compliant data analytics platform, Citeline Connect provides comprehensive digital experiences and multichannel, multi-vendor recruitment programs for a truly multifaceted recruitment experience that alleviates burden for all involved.

Through Citeline Connect, sponsors can monitor all campaigns, sites, vendors, and studies in a single, central location to gain comprehensive insights into trial performance that help with tracking ROI and making informed decisions.

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Citeline Connect Marketplace allows sponsors to take advantage of multiple partnerships in one place. This industry-leading patient recruitment collective offers over 130 traditional and nontraditional partners who are pre-vetted, precontracted, and poised to help efficiently attract a targeted and diverse pool of potential participants.

Through **HCP Awareness**, sponsors can leverage Citeline's real-world data assets and an opted-in network of more than 1.7 million HCPs to raise awareness of their trials. They can consult these audiences for input on strategic planning and protocol design optimization, or to prequalify new investigators or sites.

Citeline PatientMatch offers a customized algorithm developed by in-house subject matter experts to identify patients who precisely match the sponsor's protocol. It delivers custom-timed alerts to investigators and site staff when relevant patients receive lab or biomarker results that could make them eligible for the sponsor's study — before a treatment plan is finalized.

CITELINE PATIENTMATCH
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The **Trial Portfolio Websites** solution is focused on robust clinical trial education and engagement through a dedicated website built on a compliant platform with input from patients to foster dialogue, community, trust, and participation in a sponsor's clinical trials. Visitors can intuitively find, share, enroll in, or keep in touch about relevant research opportunities, while sponsors can provide patient-friendly education and accurate trial information that empowers patients to do so.

The **Community Portals** solution provides a safe, secure online environment for sponsors to engage and communicate with patients in their clinical trial community as well as those who want to know more about their clinical research. Sponsors can maintain meaningful connections with these stakeholders by providing information customized to each of their needs.

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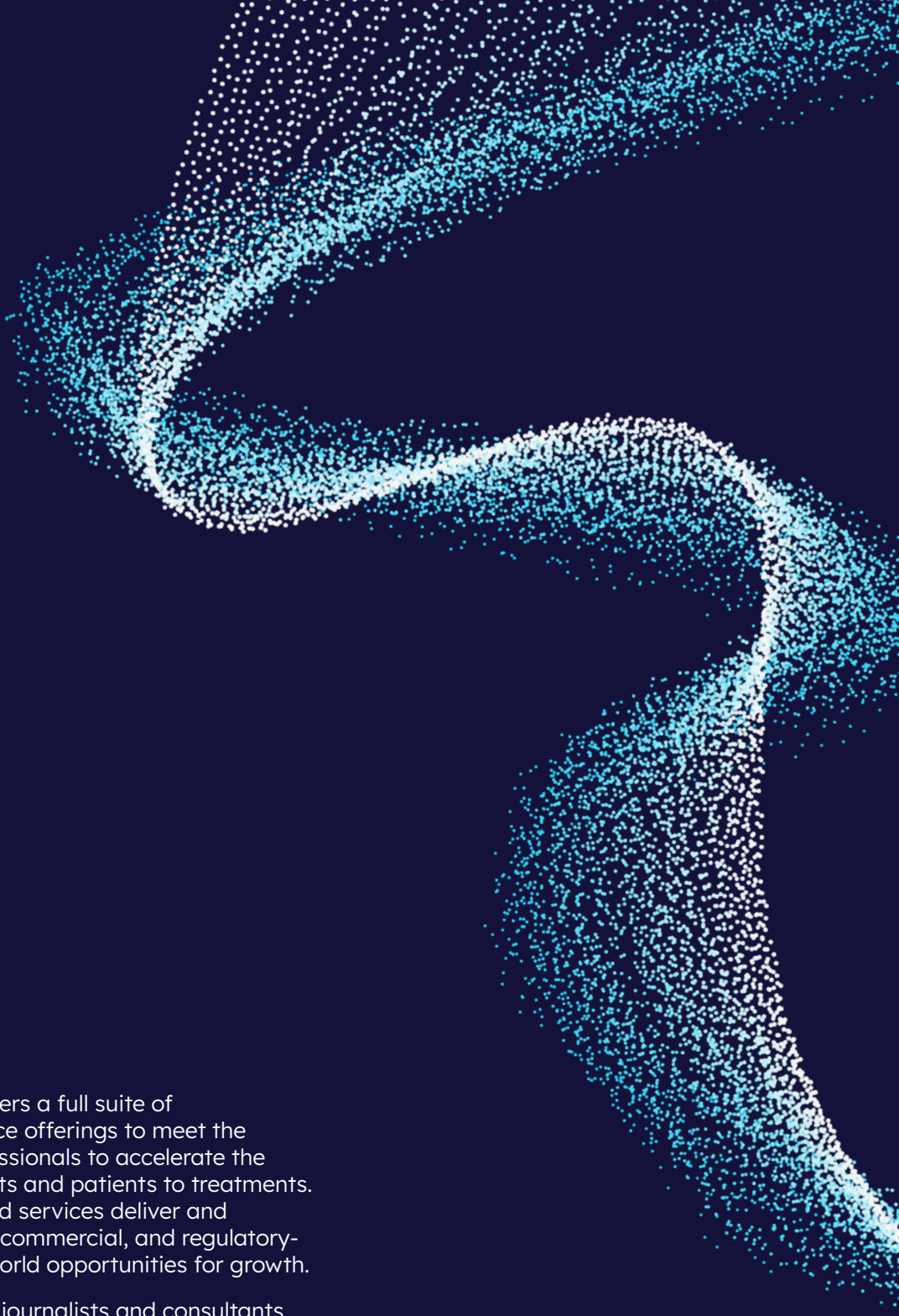

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