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The RIC Recruitment & Retention Materials Toolkit – a resource for developing community-informed study materials

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Abstract

Clinical trials face many challenges with meeting projected enrollment and retention goals. A study's recruitment materials and messaging convey necessary key information and therefore serve as a critical first impression with potential participants. Yet study teams often lack the resources and skills needed to develop engaging, culturally tailored, and professional-looking recruitment materials. To address this gap, the Recruitment Innovation Center recently developed a Recruitment & Retention Materials Content and Design Toolkit, which offers research teams guidance, actionable tips, resources, and customizable templates for creating trial-specific study materials. This paper seeks to describe the creation and contents of this new toolkit.

Introduction

Clinical trials are often plagued by recruitment and retention challenges, with many closing early due to failure to meet projected enrollment goals [1,2]. Barriers to clinical trial enrollment and retention are numerous, well-documented, and multi-faceted [3–5]. Furthermore, underrepresentation of minoritized racial and ethnic populations continues to be a pervasive problem in many clinical trials, with little progress made over the last several decades [5,6].

A study's recruitment materials offer a critical first impression with potential participants and are essential to communicating important details and establishing rapport. While previous work has demonstrated that culturally tailored recruitment materials may increase recruitment and enrollment rates among minoritized communities [7,8], many research teams lack the knowledge, training, and resources to develop professionally designed recruitment and retention materials that also enhance diversity and inclusion in research participation.

The Recruitment Innovation Center

The Recruitment Innovation Center (RIC) [9,10] Recruitment Materials resource line was developed to ensure study teams have resources to develop customized, authentic, engaging, culturally appropriate materials to maximize their impact. Broadly, the RIC works with Clinical and Translational Science Award (CTSA) hubs and their researchers to develop, test, and disseminate a range of innovations and resources to support studies' recruitment and retention needs [11]. The Recruitment Materials resource line offers support for a variety of clinician- and participant-facing tools, including review and consultation on print materials, websites, and social media, as well as custom design, logos, templates, and development of mobile study applications. More recently, the RIC has developed and disseminated several publicly available community-informed tools for investigators and study teams to use when developing recruitment strategies for trials [12]. This paper describes the creation and contents of a new **RIC Recruitment & Retention Materials Content + Design Toolkit**, which offers research teams guidance, actionable tips, resources, and customizable templates for creating trial-specific study materials.

Overview of Toolkit

The RIC Recruitment & Retention Materials Toolkit was created to inform research teams of the benefits of using community-informed recruitment and retention materials and to provide actionable tips and guidance for real-world implementation. While some toolkits exist for creating study materials, there is a gap in publicly available, community-informed tools and resources that offer no-cost, professionally designed templates. This new toolkit contains guidelines, templates, and resources based on design best practices and positions study participants and their communities as the priority audience. The toolkit emphasizes the importance of intentional focus on diversity and inclusion for study materials to reach and engage potential participants from communities historically excluded from and underrepresented in research.

Community-informed Content

A growing body of evidence demonstrates the importance of participant and community engagement in all phases of research to increase both the relevance and overall success of clinical trials [13,14], including the creation of recruitment and retention materials and messaging [15]. This toolkit incorporates in-depth feedback from two community stakeholder groups: (1) the RIC Community Advisory Board (CAB) [10] and (2) Community Engagement (CE) Studio Experts [16]. Table 1 provides a description of each group and how their guidance informed this toolkit.

Description of Toolkit

The toolkit is organized into four main sections as outlined and summarized below. In all sections, call-out boxes are woven throughout the toolkit and categorized according to the following themes: *Notes, tips, and recommendations* to help research teams create recruitment and retention materials, including guidance on content and design, engaging potential participants for feedback, and developing an appropriate budget; *Community expert advice* includes relevant advice and recommendations from CE Studio Experts; *Spotlighted resources* and links to external resources, including tools that address health literacy, readability, and diversity; and *Purpose of recruitment/retention material* offers a description and reasoning for different types of materials to help researchers select the best options for their study.

Introduction: The toolkit opens with an overview and important considerations when developing study materials. It explains how communities were engaged in its development, emphasizes knowing the needs and preferences of a study's primary audience, and offers tips to evaluate the use and effectiveness of study materials.

Content & Design: This section provides guidelines, recommendations, and resources to inform content and key design elements of study materials. Key recommendations center around messaging and language, font, layout, and the use of color and images. Clear, concise, plain-language, personable, and consistent messaging is encouraged across all study materials. Content should be written at a *sixth-grade reading level* to reach individuals with varying levels of educational attainment, and should contain common, simplified medical terms, with limited use of acronyms. Key content to include in recruitment materials is described in detail and includes prominent "call-to-action," language that encourages participants to talk to their health care provider and loved ones about study participation, study contact information, and a statement about the voluntariness of participation. Personalization of study retention materials is also encouraged to increase engagement and retention, such as including the participant's name and a handwritten note. Across all materials, content and messaging should be culturally appropriate and tailored to specific audiences. Photos and images are another critical component to designing culturally appropriate, relevant materials, and should be carefully chosen to resonate with and reflect the diversity of potential recruitment populations. This is especially important for marginalized populations and those historically excluded from research. This toolkit offers tips on selecting images for study materials, such as choosing photographs that are relatable and approachable, and provides examples reflecting participant diversity across demographics such as race, ethnicity, age, gender, and relationships. Resources for free images are also included.

Recruitment material formatting recommendations are also offered, including how to create layouts that make the text easier to review and digest, such as organizing study brochure content in such a way that it tells the "story of the study" and includes details that are important to potential participants. It instructs research teams on best practices in "branding" by using consistent design elements across study materials, such as colors, fonts, and logos. Appropriate use of contrast, color, and whitespace is stressed to ensure study materials are accessible and easy to read.

Typeface plays a significant role in readability, as some fonts are easier to read than others. For instance, Arial font has very narrow lettering, and even when sized appropriately, is often challenging to read. In contrast, fonts like Helvetica and Open Sans have wider typefaces and are better suited for study materials. Styles that are simple, easy to read, and sized in 12-point font or larger will help to reach individuals with visual impairment and varying educational attainment. Once an appropriate typeface is selected, adjusting kerning (the space between individual letters) and leading (the space between lines of text) can also enhance readability.

Lastly, the toolkit provides guidance on using quick response (QR) codes on study materials to allow potential participants immediate access to additional study information. Digital recruitment materials accessible via QR code can be reviewed on a personal phone or tablet to ensure privacy.

Templates: This section includes a set of recruitment and retention material templates created in Canva, (https://www.canva.com/) a free online graphic design tool. The template catalog includes materials used with both research participants and clinicians for study awareness and referrals (Table 2). All templates include unique design elements, examples of watermarked images, and recommendations for content and language (Fig. 1). Templates are accessible via hyperlinks and allow unlimited access and customization by adopting study teams. Canva accounts are available at no cost through Canva.com and allow use and customization of templates with no software dependencies other than an internet browser.

Canva Tips & Tutorials: This section provides user-friendly video tutorials and detailed step-by-step instructions for using Canva to create recruitment and retention materials, study logos, and social media ads.

Dissemination

The RIC Recruitment & Retention Materials Toolkit was finalized in April 2022 and added to the Trial Innovation Network's

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Table 1. Stakeholder engagement in the RIC Recruitment & Retention Materials Toolkit

Stakeholder Group	Description	Feedback incorporated into Toolkit	Examples of feedback
RIC Community Advisory Board (CAB), including smaller working group	Comprised of 12 patient and community advocates/thought leaders who represent diverse, underrepresented populations from various urban and rural areas across the United States. Together they provide meaningful guidance to the RIC in creating innovative strategies and materials which reflect the needs, priorities, and values of the broader community. Established in 2017, this long-standing, well-engaged CAB is aligned with best processes in its development, operation, and maintenance.[17] Working group of six RIC CAB members was convened to provide in-depth feedback on the initial version of content and design guidelines, and templates.	Provided three rounds of feedback on toolkit content, templates, and overall design of toolkit. Recommendations were incorporated into the materials after each round of review. For full transparency, updated versions were shared with the CAB along with a comprehensive list of edits and how they were implemented. Key advice on content and design including messaging, language, font, layout, and imagery; feedback focused on participant-centeredness, health literacy, and cultural humility	• Toolkit should include language about the need for intentionality in creating materials centered around research participants • All participant recruitment materials should include statement of voluntariness of research and right to withdraw • Participant materials should be written at a 6th grade reading level • Materials should include example images of potential participants and loved ones from diverse racial and ethnic groups
Community Engagement (CE) Studio Experts	A consultative method of engagement that allows for meaningful involvement of diverse groups of potential research participants and community stakeholders in the planning and implementation of research. A total of 89 CE Studios were selected based on criteria relevant to the toolkit contents (e.g., recruitment and retention topics, messaging, communications). CE Studio summaries were subsequently reviewed and categorized into actionable recommendations. CE Studio topics represented a broad range of health topics with a wide diversity of patient demographics, totaling feedback from 1,357 community stakeholders residing in 17 states.	Feedback from CE Studios was aggregated and categorized by themes and common elements. Key advice from CE Studio Experts is highlighted throughout toolkit in color-coded call-out boxes to include guidance on messaging, language, imagery, and design. Additional guidance was given on prioritizing retention methods including study newsletters, and birthday and holiday cards.	• Materials should use study names that are clear and easy to understand • Materials should use language that is personable, trust-building, and establishes empathy • Study teams should utilize inclusive communication techniques and culturally-appropriate messaging

CAB = community advisory board; CE = community engagement; RIC = recruitment innovation center.

Table 2. Recruitment and retention materials template offerings

Material type	Recruitment & awareness-raising		Retention
Audience	Potential participants	Clinicians	Enrolled participants
Templates	• Brochures • Flyers • Posters • Study information sheet/consent aid • Flip chart/ presentation	• Flyers • Posters • Clinician study information sheet	• "Thank you" cards • Birthday cards • Holiday cards • "Thinking of you" cards • Newsletters

Toolbox [18], a forum for sharing resources from CTSAs and reputable community health partners. Anyone from the public can freely access this toolkit at *trialinnovationnetwork.org*. To date, the toolkit and templates have been viewed 345 and 621 times, respectively. Other dissemination activities include presentations and webinars to broadly share this resource across the CTSA consortium. While we have not yet engaged in formal evaluation and testing of this resource, preliminary feedback from research teams and CTSA liaisons [9,10] suggests this is a significant and useful resource. Future work includes updating the toolkit with new social media templates and additional community-informed feedback when garnered and deploying an evaluation survey to assess utilization and satisfaction among users.

Discussion

The new RIC Recruitment & Retention Materials Content + Design Toolkit serves as a community-informed resource for research teams to use to develop their own study recruitment and retention materials. Toolkit concepts and material assets were informed by key community stakeholders, a guiding principle of the RIC's work [12], and integrated expertise and best practices in content development, health literacy [19], and graphic design. The templates provided offer research teams easy access to professionally designed, customizable recruitment and retention materials on a no-cost, user-friendly platform. While other clinical trial recruitment material toolkits are publicly available, many do not contain community-informed guidance, or they offer few examples and templates that incorporate professional design elements. To our knowledge, no such toolkit with the aforementioned offerings currently exists.

Intentional and thoughtful design of study materials, messaging, and branding has the potential to increase accessibility, awareness, and enrollment in clinical trials [8]. Utilizing cohesive

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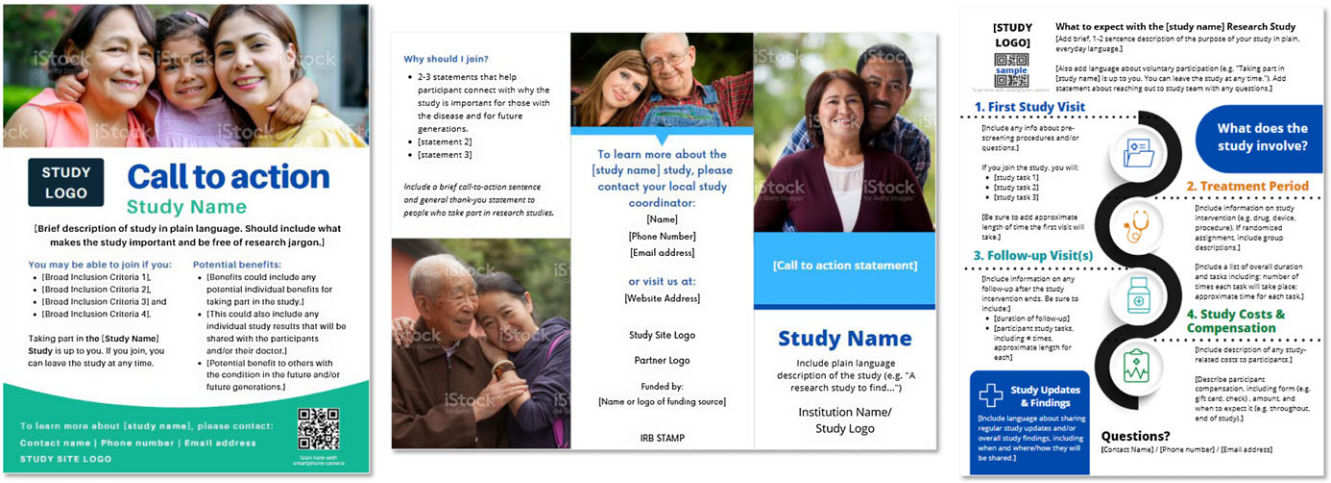


Figure 1. Example recruitment materials templates – flyer, brochure, and study information sheet.

design elements across study materials helps create a study "brand" that builds trust and recognition with potential participants [20]. Previous research shows clinical trial recruitment materials are often written at a high reading level, portray few images of minoritized racial and ethnic groups, contain limited information about study eligibility criteria, and often omit clear "call-to-action" statements [21]. Yet, cultural and linguistic adaptations and tailoring of materials and study messaging also show increased recruitment rates and likelihood to participate in research [8,15]. Researchers are encouraged to use this toolkit resource to design clear, understandable, culturally appropriate materials that promote inclusion and diversity, especially when recruiting populations who have been marginalized or historically excluded from research. As common practice, researchers are encouraged to ask potential participants and community stakeholders for their feedback on study materials, to ensure they are authentically engaging and culturally appropriate. Study teams should also adapt and customize their recruitment materials toward specific populations, rather than using a single "one-size fits all" resource, to have the greatest impact. This could include creating multiple versions of materials that are culturally tailored to different groups and translated into additional languages.

Limitations

Although the toolkit includes templates that are community-informed, participant-centered, and promote diversity and inclusion, it does not include materials tailored to specific marginalized and historically excluded groups. There are many nuances in creating materials for such specific populations and disease conditions, and research teams are encouraged to adapt and customize the provided templates for their study's unique participant demographics. Additionally, this tool is not meant to replace but rather enhance the important work of research teams to authentically engage and build positive relationships with potential participants and community stakeholders. This is especially true with underrepresented communities in health research, where study teams must use culturally and contextually appropriate engagement strategies to build relationships with, demonstrate their commitment to, and show respect for these communities and their stakeholders [22]. Lastly, while the toolkit recommends proactive budgeting for materials, it does not provide detailed guidance on specific budget considerations for creating and disseminating recruitment and retention materials. Study teams should seek guidance and leverage local resources at their institution for developing an appropriate recruitment materials budget.

Conclusion

Recruitment and retention materials are a critical component in the successful enrollment and retention of a diverse, representative study population. Research teams should utilize best practices in content development and design, as well as incorporate stakeholder input, to maximize and enhance their recruitment efforts and completion of their trial. This toolkit offers a centralized resource of aggregated best practices and no-cost, professionally designed, community-informed templates.

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