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Encouraging participation in medical research: what strategies work?

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Recent changes in culture and telecommunication have made it increasingly difficult to achieve high response rates in medical research studies for all study designs (1–3). The study by van Wonderen *et al.* (4) published in this issue of the *Journal of Clinical Epidemiology* demonstrated that neither the use of an official funding agency logo on the study's initial invitation letter nor the rank of the individual signing a subsequent detailed information letter impacted patient participation in an observational follow-up study. This observation adds to the considerable body of data on the effectiveness of recruitment strategies. For instance, we know that offering incentives, contacting potential participants multiple times, and communicating clearly improve recruitment in virtually any study design. But as it has become increasingly difficult to achieve high response rates, researchers find themselves using ever more creative strategies to improve participation, often without knowing the benefit of these alternative methods. Of course we need to improve our understanding of the effectiveness of recruitment strategies, but information is never free, so we must carefully consider how best to obtain this information and where to focus our efforts.

How should we assess the effectiveness of recruitment strategies? Van Wonderen *et al.* (4) use the ideal methodology, a randomized controlled trial. Because there are many factors that influence participation, a randomized controlled trial isolates the effect of recruitment strategy on participation, independent of other determinants of participation. The problem is that conducting a randomized controlled trial to evaluate recruitment strategies requires upfront planning, sufficient sample size, and typically some additional resources. More often, retrospective evaluation of recruitment strategies with quantitative assessment of costs – in terms of both time and money – and recruitment yields is more feasible and provides invaluable information for planning future research studies (5,6). When employing a novel strategy for improving participation, investigators must pilot the new strategy so that an entire study is not halted before it has really begun.

Where should we focus our efforts? I suspect we will gain the most from evaluating the effectiveness of complex or resource-intensive recruitment methods. We need more work like van Wonderen *et al.* (4), but we need it to assess strategies such as the method of contact (e.g., in-person or telephone contact versus mailings or advertisements), number of contacts, and

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type of incentive. As biologic specimens become an increasingly important component of medical research studies, we also need to understand whether the collection of biologic specimens is a barrier to participation, and if so, whether specific recruitment strategies can overcome this barrier.

There are deceptively large barriers to gaining a general understanding of the effectiveness of recruitment strategies, most notably variation in study design and patient populations. Deterrents to participation vary in different research settings, such as randomization or use of placebos in clinical trials, length of follow-up in prospective clinical studies, and length of questionnaire or collection of biospecimens in population studies (2,7–9). In response, appropriate recruitment strategies to overcome these deterrents to participation must differ by study design. Because various sociodemographic factors (e.g., age, sex, race, education) may also be related to participation, the value of a recruitment strategy may also differ by the population under study. Meta-analyses that consider these factors when evaluating the effectiveness of a recruitment method will provide clarity on the value of specific strategies in different settings (2,7–9).

Low participation threatens the validity of medical research studies and the generalizability of their results to the general population, in addition to requiring more and more resources to achieve the same sample size. In an attempt to improve participation, researchers may be tempted to employ every available recruitment strategy. However, the research community will be well-served by thoughtful, systematic evaluations of alternative recruitment strategies, particularly those that are complex and/or resource-intensive, to establish their utility in various research settings before they become widely implemented.

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