ETHICS OF CLINICAL RESEARCH WITHIN A COMMUNITY-ACADEMIC PARTNERED PARTICIPATORY FRAMEWORK

Donna T. Chen, MD, MPH; Loretta Jones, MA; Lillian Gelberg, MD, MSPH

Recommendations for reducing racial and ethnic disparities in health and health care suggest that clinical researchers try community-based participatory research (CBPR). While the body of literature discussing the ethics of CBPR continues to grow, we are not aware of a specific attempt to provide a structure for analyzing the ethics of clinical research using a CBPR approach. We adapt a framework developed by Emanuel, Wendler, and Grady articulating seven requirements for ethical clinical research to clinical research using a CBPR approach. We incorporate findings from the literature on CBPR and identify some of the ethical and practical challenges from our experiences working in CBPR as academics and community members.

We find Emanuel et al's framework easily adaptable for CBPR. Six of the requirements are flexible enough to accommodate the needs of CBPR; they are: social or scientific value, scientific validity, fair subject selection, favorable risk-benefit ratio, independent review, and informed consent. We suggest that the seventh requirement, respect for potential and enrolled participants, be amended to respect for potential and enrolled participants, community, and research partners to acknowledge that separate attention should be paid to relationships on these three levels.

This adapted framework can guide community-academic partnerships as they evaluate whether to proceed with potential clinical research studies and as they work to enhance the ethics of clinical research studies using a CBPR approach. (*Ethn Dis*. 2006;16[suppl 1]:S1-118–S1-135)

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From the Departments of Public Health Sciences and Psychiatric Medicine, University of Virginia Health System, Charlottesville, Virginia (DTC); Healthy African-American Families (LJ) and David Geffen School of Medicine at UCLA, Department of Family Medicine (LG), Los Angeles, California.

Address correspondence and reprint requests to Donna T. Chen, MD; Assistant Professor, Center for Biomedical Ethics; University of Virginia Health System; Box 800758, Charlottesville, VA 22908; dtc6k@virginia.edu

INTRODUCTION

Recommendations for increasing the generalizability, relevance, and utility of clinical research call for pragmatic studies designed to answer specific questions faced by decision makers and for increased public participation in the research process.[1,2] In particular, recommendations for reducing racial and ethnic disparities in health and health care, as well as similar disparities in clinical research participation, suggest that clinical researchers use community-based participatory research (CBPR).[1,3–5] This type of research approach is recognized as particularly appropriate when studying health issues of groups that are traditionally disenfranchised, historically difficult to study, and poorly understood by society at large.[6,7] Congressional-level attention and recent federal funding initiatives guarantee that CBPR approaches to clinical research will be encouraged.[8–10]

CBPR is recognized as particularly appropriate when studying health issues of groups that are traditionally disenfranchised, historically difficult to study, and poorly understood by society at large.[6,7]

CBPR has roots in sociologist Kurt Lewin's action research of the 1940s and the tradition of participatory research arising in the 1970s in Latin America, Asia, and Africa.[11] Minkler defined CBPR in health as "a collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community with the aim of combining knowledge and action for social change to improve community health and eliminate health disparities."[6] As a form of participatory action research, CBPR is inherently pragmatic. Kemmis and McTaggart note that this type of research "emerges in situations where people want to make changes thoughtfully—that is, after critical reflection. It emerges when people want to think realistically about where they are now, how things came to be that way, and, from these starting points, how, in practice, things might be changed."[12] More than seeing research simply as a process for increasing knowledge, CBPR sees research as a way to effect direct change; the goal of CBPR is "research plus."[7,13,14]

Some public health research studies with racial and ethnic minority communities try to incorporate community participation in some form, though not always CBPR. The growing body of literature reflects a range of relationships between academics and community members involved in a variety of research-related activities referred to by many terms, including community collaboration, consultation, participation, and partnership. Different degrees of collaboration and participation among academics and community members will be appropriate in different circumstances. Negotiating through finding the right fit and conducting the work is understandably quite challenging.[13,15]

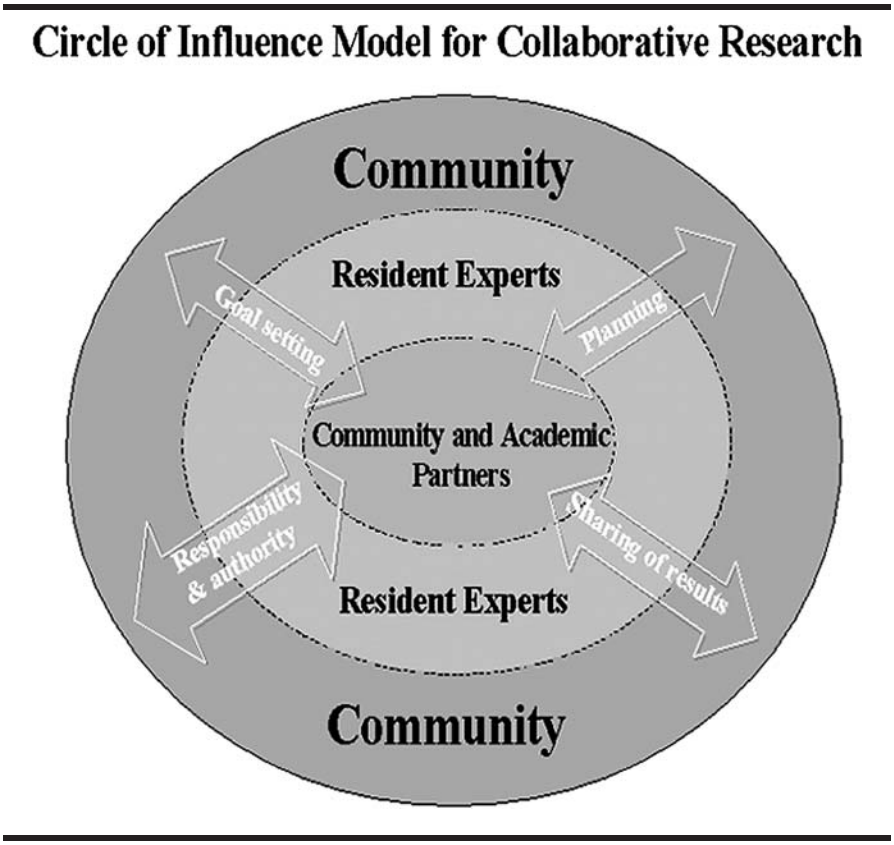
True community-academic partnerships hold the most promise for achieving the ''research-plus'' goals of CBPR.

However, reconceptualizing clinical research to include CBPR in its truest form represents a paradigm shift for the clinical research enterprise. Determining whether and how to incorporate CBPR into the clinical research enterprise will require deep consideration. Broadening the goals of clinical research to include direct social change and redefining the research process to include both community and academic partners requires an adaptation of the definition of valid clinical research that ripples through its design and practice. Since the ethics of research is intimately tied to the goals, design, and practice of research, adopting a CBPR approach also affects our understanding of ethical clinical research.

While the body of literature discussing the ethics of CBPR continues to grow, we are not aware of a specific attempt to provide a structure for analyzing the ethics of clinical research conducted in a CBPR paradigm.[14,16–25] In this article, we adapt a framework articulating the ethics of clinical research to clinical research conducted in a CBPR paradigm. We hope that this preliminary work will spark future deeper work. In the meantime, we suggest that this adapted ethical framework can be used by community and academic partners as they evaluate whether to proceed with potential clinical research studies and as they work to enhance the ethics of clinical research projects conducted by the partnership.

METHODS

We start with a framework for ethical clinical research articulated by Emanuel et al that focuses on seven requirements:1) social or scientific value, 2) scientific validity, 3) fair subject selection, 4) favorable risk-benefit ratio, 5) independent review, 6) informed consent, and 7) respect for potential and enrolled participants.[26] Using this structure, we begin to specify how these seven ethical requirements might look for clinical research conducted using a CBPR approach, incorporating findings from the literature on the ethics of CBPR. We also identify some of the ethical and practical challenges based on our experiences as academics and community members working in CBPR and planning for clinical research that uses a CBPR approach.



Note: Adapted from a model developed by Jones L, Martins DS, Pardo Y, Baker R, and Norris K.

Definition of Terms and Delineation of Scope

For this discussion, we assume the establishment of a long-term community-academic partnership that extends beyond any single research study (see Figure and Wells et al in this issue).[27] We assume that this partnership group determines the range of research conducted under its auspices, providing both leadership and support for the research process.

To indicate the importance we place on true partnership and meaningful participation—as opposed to token partnership or partial participation—we prefer the term community-academic partnered participatory research (CAPPR). Throughout this article, we use CAPPR as a reminder that striving for full partnership and meaningful participation are assumed in our discussion.

We recognize that these are major assumptions. Probably the most difficult model to achieve is a true partnership between academic researchers and community members, even when it seems to be the most appropriate model. Nevertheless, we make this assumption to highlight the fact that even when a true partnership exists, community and academic partners must

grapple with ethical dimensions of conducting clinical research.

We recognize a broad definition of community as populations that may be defined by geography, race, ethnicity, gender, illness, religion, or other health conditions or as groups that have a common interest or cause, such as health or service agencies and organizations, healthcare or public health practitioners or providers, policy makers, or lay public groups with public health concerns.[10] For research aimed at reducing racial and ethnic disparities, it makes most sense to talk about racial and ethnic minority communities; for most of such research, community and academic partners will be in relatively close geographic proximity. Nevertheless, we intend our adapted framework to apply to clinical research with a broad range of communities. Lack of fit signals areas for future attention.

In our discussion, we use the term ''community'' to mean anyone who is legitimately representing a community. We recognize the debate over questions like ''Who speaks for community?'' and ''How is community defined?'' and we acknowledge that no community is homogeneous. Nevertheless, for purposes of our discussion, we assume that authentic community representation can be achieved, that there is such a thing as community voice, and that community leaders (in this case community partners in research) have permission to speak for community—though in practice, certainty about these issues is at best difficult to achieve, and in theory, the ability to have certainty about these issues is debated.

By clinical research, we mean any research aimed at improving diagnosis, prevention, and treatment of illness or understanding, maintenance, and promotion of health and well-being. This definition includes treatment or prevention intervention research (examples include efficacy trials, effectiveness trials, and dissemination research) or basic research (examples include epidemiologic research and genetic research). However, not all types of research are amenable to a CAPPR approach, nor are all of them appropriate to conduct with racial and ethnic minority communities. Indeed, deciding about the appropriateness of any potential research study to conduct with a community is one of the tasks that faces community and academic partners who use a CAPPR approach.

Ethics Framework

Social or Scientific Value

As articulated by Emanuel et al,[26] the requirement that research with human participants has social and/or scientific value suggests that clinical research should be undertaken only if designed to answer valuable questions aimed ultimately at improving our ability to diagnose, prevent, and treat illness or to understand, maintain, and promote health and well-being. Because clinical research carries research-related risks, it cannot be justified unless it has the prospect of contributing important knowledge. The ethical requirement that research studies have value rests on the need to avoid exploitation and use scarce resources responsibly.

Adopting a CAPPR paradigm suggests that, in addition to societal and scientific value, a clinical research study should have value to the community. Achieving the ''research-plus'' goals of CAPPR noted above would make research more valuable to community. However, short of this type of paradigmatic change, value of research to community can be enhanced in other ways.

Value is increased when research findings can directly guide community action. As originally articulated, CAPPR starts with questions initiated by community.[20] For example, desire to improve the health of a community and its members can stimulate a community to seek out researchers to help them answer key questions.[18] Recent applications of CAPPR to health research acknowledge that worthy questions may originate outside community, for example with researchers or funding announcements.[17] Nevertheless, increasing the value of clinical research conducted with CAPPR means negotiating research goals. It also means rephrasing and reframing research questions that originate outside a community to include a community perspective, as well as adding additional research questions of importance to community that may not have occurred to academics. It means making research truly the responsibility of community as well as of academics.

Value is increased by processes and studies with potential to transfer knowledge in both directions—academics and community transferring knowledge to each other. Community knowledge, although it may not be academically grounded, has value in this knowledge transfer process. Knowledge transfer is iterative, ideally resulting in research goals, questions, theories, methods, and outcomes that transcend the individual perspectives of academics and community members working separately. However, negotiation and knowledge transfer take time, a major challenge when responding to granting agencies.

When a study has potential to increase community capacity it has increased value to community. For example, when products developed for a research study, like educational materials geared for a particular community, can remain in the community, the value of conducting that study increases. Similarly, a study has increased value if it increases a community's capacity to conduct further clinical research locally, for example with material resources or training community members as research personnel. Since a single study never answers all questions, a study that pays attention to developing an infrastructure for conducting subsequent studies provides more value to a community than a study that does not provide for the possibility of subsequent

work. Over time the research infrastructure and personnel within a community can develop such that a community may be able to work with more than one academic partner, thereby decreasing reliance on a single academic partner for conducting research. Decreasing reliance on any single academic partner helps shift the balance of power between community and academic partners. Development of community capacity is a fundamental principle of CAPPR, and development of community research capacity should be one of the goals of clinical research that uses a CAPPR approach.

Ultimately, some studies with significant scientific and social value that are considered important by academic partners may be rejected by community partners. For example, academic researchers interested in reducing health disparities might want to set a foundation documenting the level of health disparities in a particular community, and funding agencies may request this type of preliminary data. However, community members might feel that they already know that disparities exist because they are living with them on a daily basis, and consequently might not see the value of conducting epidemiologic work that simply documents these disparities. Community members may be concerned that findings could stigmatize them or negatively affect them in some other way. Concern may exist that although an intervention is planned as a next step, the work may stop after initial data collection. Instead, communities might want to go straight to an intervention in attempt to resolve the disparities. Studies using CAPPR must accommodate these various perspectives; for example, research studies may be able to incorporate both data collection for basic research and intervention work.[28]

Taking a CAPPR approach to intervention research might aid uptake of a successful intervention in a community because uptake is facilitated among participants of research that establishes effectiveness.[15,29] Research challenges arise, however, if a community wishes to study an intervention with limited efficacy data or requires that an intervention undergo significant adaptation prior to study. Unless such studies are designed to assess intervention effectiveness, the data generated may not be as valuable to science or society in general. For example, evaluation and case study research can provide information, particularly regarding lessons learned in success and failure, but findings may not be generalizable and therefore may be less interesting to academic researchers and research funders.

On the other hand, studies of an intervention that has proven effective may not be considered valuable to community because the community knows they will not have access to that intervention after the study is over. Sustainability is an important principle of CAPPR, but it remains a challenge in clinical research because of larger problems of poor access to health care. Communities often feel abandoned when a study is completed. If an intervention cannot be sustained, at the least results of a study that shows clear benefit to participants can be used to effect policy changes to support the intervention. Paying attention within the community-academic partnership to the importance of advocacy and policy actions may increase the value of the study to community.

For similar reasons, interventions that do not rely on experts but which can be carried out by community members may be more valuable to community—and more sustainable after the study is over. This fact may in part explain why many CAPPR health research projects rely on educational interventions or self-help interventions.[30] True ''translational'' research—taking efficacious treatments and putting them into practice—may be difficult to carry out in a CAPPR paradigm, particularly if these efficacious treatments rely on expertise and infrastructure that are not available in community. Increasing the value of such studies may require partially adapting interventions to make use of existing community resources.

While sustainability increases the value of any particular study, requiring sustainability of every study is unrealistic. One accommodation may be to view sustainability achieved over time as an endpoint to a group of studies or a particular program of research conducted by a community-academic partnership.[31]

Attending to value as an ethical requirement also means that researchers who use community-academic partnerships to recruit a community as a site in a multisite study must pay careful attention to value from community perspective. Many such uses of a community-academic partnership are likely not to be a true application of CAPPR and may result in ''community placed'' research, unless the community or communities were part of the development of the study early on.[20] Nevertheless, some such studies may hold enough value to a community to motivate serving as a site, even if they were not part of the initial development.

In summary, a CAPPR approach to clinical research considers community value in addition to scientific and social value. One way that a research project can add value to community is through the research-plus goals of CAPPR.

Scientific Validity

According to Emanuel et al,[26] ethical research involving human participants requires design strategies sufficiently rigorous to provide a scientifically valid test of study hypotheses.[26] Like value, validity is justified as an ethical requirement by the importance of using limited resources responsibly and avoiding exploitation.

Different research designs using qualitative, quantitative, and/or experi-

mental methods are used to answer different clinical research questions. Some studies test whether an intervention works, others test whether a known effective intervention can be implemented in a particular setting, and still others are designed to identify problems or study risk factors. While randomized controlled trials (RCTs) are considered the most rigorous intervention study design, clinical research encompasses other intervention designs (eg, quasi-experimental, pre-post assessment, and evaluations of natural experiments), and non-intervention designs (eg, genetic epidemiology studies and observational studies). Similarly, CAPPR does not dictate any particular research design—various methods, from experimental to qualitative, can be used.[12,15] Many CAPPR health studies use multiple methods.[30]

One of the challenges of multi-method studies arises from the different notions of validity that underlie different methods. For example, in addition to internal and external validity (familiar concepts to clinical researchers), theorists suggest that participatory research studies should aim for ''authenticity'' as a type of validity—measured by whether or not participants' attitudes or beliefs change as a result of study participation and/or they adopt a study intervention after the study ends.[31] Debates over what constitutes validity for clinical research conducted in a CAPPR paradigm parallel larger debates in research methodology, epistemology, and philosophy of science.[32,33]

Nevertheless, when clinical research uses a CAPPR approach, community should help decide on research design and methods. Certain designs or methods may not be acceptable to community—even if the alternative is that a study not be done. For example, RCTs are not always acceptable to research participants. Discussion of the rationale for randomization may increase understanding and acceptance rates.[34–37] In communities that do not trust researchers, randomization and other ''gold standard'' clinical trial methods, like use of a placebo or ''no intervention'' arm, and blinding to intervention received, may be seen as taking advantage of research participants.[28,38,39] Nevertheless, RCTs can be successfully implemented in CAPPR studies.[30]

Discussing research design issues with community partners provides an opportunity for community members to alert researchers to aspects of study design that are difficult to understand and/or seem unacceptable. At the very least, this discussion would lay groundwork for the type of explanations and discussions that will be important to the informed consent process for research (discussed below). It also allows partnerships to find designs that are more acceptable to the community. For example, some intervention studies have adopted crossover or staggered-start designs to give all participants access to study interventions.[28,40] However, broadening access to an intervention limits the types of studies and interventions that can be considered. Community-academic partners should be careful not to confuse a research study with provision of an intervention that has proven effective. The primary purpose of intervention research is to answer the question of whether an intervention is effective (and sometimes whether it is safe) for a particular population; the study is being done because the answer is not known. To portray an intervention as having more evidence of effectiveness than it really does would be misleading, as discussed in the sections on favorable risk-benefit and informed consent below.

Choosing an intervention to study also has implications for validity. Negotiating though the type of interventions and level of supporting evidence that are acceptable to all partners will help determine how to move forward and maintain validity of the resulting research. For example, focusing on validity may lead academic partners to seem rigid, proposing strict limitations to the type of interventions and/or adaptations they are interested in considering. Challenges to scientific validity can arise when community requests that an intervention undergo significant adaptation before the study or wish to widely disseminate and study an intervention that has limited efficacy data. Even more difficult are situations in which community members prefer an intervention that has proven ineffective in another setting, and they have a strong belief that it might work and should be tested in their community. In these types of situations, trying to understand why the community thinks an intervention might work will be important. Having honest discussions about intervention choice and the implications intervention choice has for community and academic interest in moving forward, research design, and funding potential will be crucial.

These dialogues could serve as a stepping-stone to innovative research design and analytic strategies. Design and analytic innovations are frequently sparked by practical and ethical challenges.[2,41–45] Because community members may be asking different questions or asking the same questions in a different way, community input up front will lead to research designs more likely to provide valid evidence for addressing community questions. Similarly, because CAPPR also focuses on the community as a unit of interest, research design and analytic strategies may need to accommodate both individual-level and group-level factors.[42,46] These issues affect other research designed to answer questions for a group of participants in addition to providing generalizable knowledge; for example, quality improvement research also faces similar challenges.[42]

However, design and analytic innovations take time to develop and even longer to gain acceptance in the scien-

tific community. The added resources (time and money) needed for these steps makes this type of research more costly, and in that way may lessen the value of the research. Moreover, research must meet certain standards of rigor to pass scientific review for funding and publication; thus academics (particularly junior researchers) must be cautious about the types of study designs with which they become involved, a potential disincentive to participating in CAPPR.[47]

If CAPPR increases response rates and participation rates among groups that have been underrepresented in clinical research to date, scientific validity is enhanced. When taking a CAPPR approach increases trust within a community, participation rates can increase.[48,49]

Scientific validity also depends on valid instruments; validity of instruments depends on context and use.[50–53] Instruments may be flawed for work conducted with some communities, in that they may not be attuned to that community's context and culture. Even instruments with published robust psychometric properties may need adjustment,[52–55] particularly when research is conducted with hard-to-reach individuals and/or communities, who likely were not included in the validation studies. Community members can help signal when an instrument lacks face validity and alert researchers that it may not be measuring what the researchers think it is.

If instruments need to be reassessed, community participation would be crucial to recalibrating them. Further, community members can ensure that content most relevant to community priorities is being measured. Thus, community can and should question academics about the content of proposed instruments and whether they have been developed and validated in their population. Researchers then have to be ready to talk with the community about instrument validity, where and with whom they have been used, and how valid they are for research with the community as well as whether content relevant to the community is covered.

The community can also help increase validity of interpretations of findings, particularly in observational and epidemiologic studies.[49,56] Local understanding can contribute greatly to drawing connections that might otherwise be overlooked and to making recommendations with attention to importance as well as feasibility. Incorporating community interpretation also requires academic researchers who are able to embrace the culture of community and are open to and interested in community perspective while at the same time retain the capacity for reflective analysis.

In summary, the need for scientific validity challenges community and academic partners to communicate about issues such as research design, type of intervention, levels of evidence, choice of instruments, and acceptability of compromises for community and academics. Community-academic partnered participatory research (CAPPR) also challenges clinical research to more fully consider ''authenticity'' as evidenced by belief, attitude, or behavior change, as a measure of valid research. Need for adaptation and flexibility to be acceptable to community can conflict with need for rigidity in the name of scientific validity. Challenges offered by CAPPR offer potential for innovation in research design and analysis.

Fair Subject Selection

As articulated by Emanuel et al,[26] selection of participants for clinical research should be fair so that vulnerable or disadvantaged groups are not exploited. Fair subject selection is relevant to choice of comparison groups, inclusion and exclusion criteria, and recruitment strategies. Decisions regarding which groups should constitute the pool from which the research sample is drawn should be based primarily on scientific goals. Groups should not be excluded without good scientific rationale or high susceptibility to research risk that justifies their exclusion. In general, groups and individuals who bear the risks and burdens of research should be in a position to enjoy its benefits. Decisions about subject selection can affect the relation between research risks and potential benefits, thus ethical analyses of fair subject selection and weighing risks and potential benefits (discussed in the next section) are interdependent. Fairness as an ethical requirement rests on the principles that equals should be treated similarly and that burdens and benefits generated by activities requiring social cooperation, such as clinical research, should be distributed fairly.

When clinical research is focused on a particular racial or ethnic group, the rationale for doing so should be transparent and fair. Corbie-Smith et al[57] propose three justifications for appropriate inclusion of a particular racial or ethnic group in research: 1) to test specific hypotheses about differences by race/ethnicity; 2) to generate hypotheses about possible differences by race/ethnicity; and 3) to ensure the just distribution of benefits and burdens of research participation, regardless of whether differences in outcome are expected by race/ethnicity; for example, participants should be selected such that results can be generalized to affected populations.[58] Another potential justification for focusing on a particular racial or ethnic group in research derives from Rawls' notions of justice as fairness. Such theories of justice support giving priority to improving the opportunities of those who are most disadvantaged and could support the choice to focus research on a particular racial or ethnic group that experiences health disparities as a matter of justice.[59,60] Similarly, selection of a particular community over others serves to advance justice and can be considered fair, if the community was chosen under principles

of justice as fairness and key aspects of CAPPR (eg, increasing community capacity) are followed. While the community with which research is to be conducted is dictated in part by the makeup of the community-academic partnership, the type of research studies chosen should meet criteria for fair subject selection, and the selection process should involve both community and academic partners and be transparent.

Community members can contribute to fair subject selection in other ways as well. Community partners can help define what is considered fair with regard to how research is distributed within the community. For example, they may know that several research projects about youth violence are being conducted and alert researchers that another such study may not be acceptable at a particular time. Or, a proposal to focus a depression awareness study on women may be perceived as unfair, particularly if several other recent projects have focused on women's needs. Such feelings of injustice can occur even when the choice meets criteria for fairness based on scientific grounds (eg, depression is more common in women than men) or if the choice was made for practical reasons (eg, availability of funds for such projects). Listening to these feelings of injustice can allow further thought to be given to making a project more inclusive, if possible. Similarly, community might have opinions about selection of a comparison group; depending on the comparison group, results of the research will make the community look resilient or filled with deficits.

Nevertheless, these types of decisions need to be made. Open discussion about such decisions and their rationale among community and academic partners must occur and acceptable resolution reached over fairness concerns before moving forward. Both community and academic partners must be able to defend their choices publicly to peer review committees and to funding agencies. Otherwise, research studies will not be funded. Similarly, they must be able to defend their choices publicly to the community. Otherwise recruitment and retention will be negatively affected, and community partners risk being perceived as co-opted by the research enterprise and lose permission from the community to serve as its advocate. For similar reasons, community input is critical on whether incentives or rewards for research participation ought to be used, and if so, what would be fair and acceptable.[61]

Community partners can also signal when processes for recruitment and enrollment may not be set up to be fair, even though they seem to be. For example, a study can have broad inclusion criteria, but to keep research costs down be conducted in a manner that is convenient to academic researchers (eg, conducted at university settings during work hours). Such a process will systematically exclude segments of the community and therefore cannot claim to be representative. Furthermore, while research costs might be less with such a design, some of the costs are shifted to participants—for example, time and travel to research sites. Conducting research close to the community and during hours when community members are available will enhance representativeness and fairness.

However, simply conducting research in community settings with community members may not address the diversity that exists within community. Research must take community diversity into account when assessing for fairness. Community members are likely to know the various subgroups and cultures that are important to consider in any particular research project. For example, community members may know that if a project is conducted in one part of the community, whole subsections of the community will, in effect, be excluded, because individuals would not cross the informal boundaries dividing the areas. However, community input is not a panacea; community members can also exclude subsegments, either consciously or unconsciously. Academic partners or other community members may be able to serve as a check against this.

Finally, recruitment and enrollment should be monitored for fairness in practice. Research regulations require enrollment monitoring according to prespecified criteria (eg, gender, age, race/ethnicity) to assess representativeness of a sample. Enrollment monitoring can also be used to encourage fairness.

Community can also help with monitoring recruitment and enrollment. For example, consciously or unconsciously held stereotypes may influence interactions between researchers and potential research participants, just as similar stereotypes influence healthcare provider and consumer decisions and actions.[4] Having community partners assist in monitoring these research processes can identify an early signal that participants are included or excluded in a manner that is inappropriate or unfair. For example, community partners may notice when outreach workers tend to avoid certain types of individuals. Similarly, they may be the first to hear that transportation or childcare needs are keeping potential participants from being able to participate. Community members may lose trust in researchers and the research if steps are not taken to address such barriers and the stated reasons for lack of representative participation ends up blaming the individuals for being ''missed.'' Community members can see through phrases commonly used in research articles to explain why a sample missed certain types of individuals, such as ''they were not available.''

Hiring and training community members who are qualified to carry out research functions, such as outreach, recruitment, and data analysis, may help

increase fairness. Identifying researchers who reflect the cultural and ethnic background of the community would also help. However, increasing the role of community members in the process of ensuring fairness in subject selection is not a cure-all; community members are not immune to stereotypes, bias, and community politics either.

Being prepared to address substantive issues of fairness, along with other issues that arise during the research process, requires determining a fair process for joint decision-making among community and academic researchers. In addition, both community and academic partners need to keep hard questions of what counts as fair—both substantive and procedural—on the table in an explicit manner.

In summary, in CAPPR with communities that experience disparities, fairness in subject selection takes into consideration issues of justice as well as science. In addition, it requires a fair process for joint decision-making among community and academic partners. While not all challenges to fairness can be resolved, identifying such concerns early in the process would allow further consideration by both community and academic partners on how to overcome them and/or whether the research ought to go forward if they cannot be resolved.

Favorable Risk-Benefit Ratio

Clinical research is considered to have a favorable risk-benefit ratio when risks are minimized and can be justified by the potential benefits to participants, if any, and the anticipated knowledge to be gained. As discussed by Emanuel et al,[26] the ethical requirement to have a favorable risk-benefit ratio draws on the principles of nonmaleficence, beneficence, and avoiding exploitation. The ethical principle of nonmaleficence means that one must not inflict harm on others; in practice, this principle is carried out by working to minimize risks associated with research. The principle of beneficence means that one must act for the benefit of others; in practice, this principle is carried out by enhancing the potential benefits of the research. The principle of avoiding exploitation is carried out by working to ensure that the potential benefits of research outweigh the risks.

Adopting a CAPPR paradigm suggests that community should play a role in determining what counts as a risk posed by research, a benefit of research, and an appropriate balance between the two. These are not easy determinations for research in general.[62,63] For research with communities that experience disparities in health and health care, these determinations have additional levels of complexity.

Traditional guidance suggests that research risk to individual participants be justifiable by potential benefit to the participant and/or by potential benefit of the research findings to the community or society. Recent debates in multinational research ethics argue over whether more benefit should accrue to participants and communities than traditionally considered necessary, particularly when research is conducted by researchers with power and resources in communities that have much less of both.[64–66] As described above, with its commitment to research-plus, CAPPR holds with the theory that suggests that benefits other than knowledge are important goals of research. One challenge to the CAPPR paradigm lies in determining how research resources should be distributed between the research and the ''-plus'' aspects of any particular project.

Research can pose risks to communities that are quite separate from the risks to individuals. For example, the community as a whole can be at risk for stigma or discrimination that might result from research findings.[67,68] For some communities, requiring a CAPPR approach is a direct response to such harms. Community partners should identify risks to the community and make sure that such risks are taken into consideration.

With all of the attention paid to community-level decision-making, that the actual research participants (subjects) bear the risks of the research must be kept in mind. Even when conducted in a CAPPR orientation, the community members who participate in a resulting research project as research subjects may not be the same community members who engaged in the design process. Research risks can be physical, psychological, economic, or social in nature. In addition to minimizing risks, burdens associated with research participation—such as travel to research sites, childcare for research visits, and large amounts of data collection—should also be minimized.

Determining whether an appropriate balance exists between potential benefits and risks of research for the individual research participants remains an important step. Again, the context of health and healthcare disparities adds complexity to this determination.

For example, questions arise regarding appropriate levels of risk and potential benefit for the individual research participants when studying a disease for which availability of affordable treatment or access to services to treat that condition is limited. Negotiating through acceptable levels of risk and benefits has major implications for the types of studies and the types of research designs that will be acceptable.

For example, as discussed previously, an epidemiologic study or needs assessment generally does not provide benefits to the research participants (ie, treatments are not offered as part of the research). Benefits of the research are more indirect and include providing evidence of disease to inform and change policy and lay groundwork for developing accessible services; indirect benefit to participants include opportunities for health education and referral to services. Referral becomes ethically

problematic when services are not accessible. It raises concern over whether identifying an illness may carry risk for harm (eg, stigma, psychological distress associated with knowing about an illness for which treatment is inaccessible, employment discrimination, etc), for which the indirect types of benefits described above are not sufficient. Providing access to services and/or treatments within research that are not easily accessible within a community raises other ethical concerns. For example, it raises concerns that individuals will participate in research that they would not otherwise, simply to get services, as discussed below. It also raises concerns over what to do about lack of continued services after the research project is completed. Community partners can help identify available resources for referrals and/or suggest ways to use community networks to try to attain additional resources. However, in many cases, providing additional resources and continued services will not be possible, at least in the short term. As noted above, these types of issues are hotly debated in the context of multinational research.

Determining how to proceed in these situations is not easy. In CAPPR, the community and academic partners must decide whether to abandon such a study and forego even the indirect benefits that could accrue or negotiate a change in the project. As discussed earlier, CAPPR partners may prefer to study interventions that they know can be sustained with available community resources, rather than spending a lot of time and energy trying to sustain an intervention that requires a lot of additional resources. Some CAPPR projects have found a way to conduct basic research in a manner that also brings some benefit to individuals from intervention work.[28] However, doing so also has implications for research resources and types of expertise required for a project. These dilemmas also underscore the importance of advocacy and policy change as part of the research-plus goals of CAPPR.

As discussed above, increasing the value of research to a community automatically increases the potential for a community to benefit from a research study. Nevertheless, research value should not be weighed against research risks. For example, defining capacity development as a value of clinical research conducted with a CAPPR approach (rather than as a benefit of research[65]) lessens the temptation to trade off the "benefit" derived from capacity development for research risks.

When clinical research uses a CAPPR approach, community and academic partners together should identify and balance risks and potential benefits of research for the community as well as potential participants. Together they should monitor for adverse effects of research on the community as a whole and on individual research participants. And together they should develop and carry out appropriate methods for dealing with adverse effects.

Community-academic partnered participatory research (CAPPR) partners must be prepared for the difficult conversations and negotiations that finding a favorable risk-benefit ratio will present. Community and academic partners must be careful not to accept too much risk or be too protective on behalf of community members. Community partners must take care to stay within the bounds of the role they are given permission by community to play. Community partners who overstep these formal and informal bounds risk losing the ability to serve as gatekeeper and caretaker for community. While community and academic partners make many decisions on behalf of the community about acceptable levels of risks and value of potential benefits, both community and academic partners must take care to avoid being overly protective or overly permissive.

In summary, when clinical research is undertaken using a CAPPR approach, community partners should help identify and balance risks and potential benefits of research for the community as well as potential participants. This process is difficult in most clinical research but is particularly complex for research with communities that experience disparities in health and health care. Both community and academic partners must be prepared for the difficult conversations and negotiations that finding a favorable risk-benefit ratio will present.

Independent Review

To enhance the protection of human research participants, clinical research should be reviewed by people not otherwise involved with the research and approved before being implemented. As articulated by Emanuel et al,[26] the justification for independent review as an ethical requirement rests on the values of public accountability and minimizing the influence of potential conflicts of interest.

In the United States, independent reviews of research are conducted by multiple different committees (eg, scientific review committees, institutional review boards (IRBs), data and safety monitoring boards, etc). These reviews focus on scientific and ethical issues. An independent community review board could also review research projects for issues that affect the community and for ethical content and human subjects' protections from a community perspective. It could also review for adherence to the principles of CAPPR. As mentioned above, community review serves a gatekeeping function for community-placed research that has not been designed according to CAPPR principles yet warrants community consideration for potential participation.

Nevertheless, even projects truly developed in the spirit of CAPPR stand to benefit from independent community review—whether such review is conducted by a committee or in a more public community forum. For example,

in Witness for Wellness, a community-academic partnership developed to address depression in the south Los Angeles community (for details, see Bluthenthal et al in this issue)[69] in which two of the co-authors are involved as a lead community partner (LJ) and ethics consultant (DTC), formal independent community feedback on project work plans was sought in a public community forum at an interim ''report back'' and at a one-year review. Goals of such activities include sharing with community how to review research and for community and CAPPR partners to participate in a shared exchange of views and reviews of the research risks and potential benefits. This process also gave the CAPPR partners guidance regarding which project ideas would have broader community support in moving forward.

Both community and academic partners become invested in a research project as it develops, and human nature is to have blind spots. Independent community review would increase accountability to community as well as help point out blind spots and help minimize potential conflicts of interest on the part of both community and academic partners. However, community review presents challenges if some community members object to what other community members feel is justified and important to do. Dealing with issues of who speaks for the community and figuring out how to handle these types of conflicts is a well-described challenge with community review.[70–72]

Another challenge stems from the fact that community members would likely be donating time for such activities, which they would be taking on in addition to their regular jobs. Just as it can be difficult for academics to devote the time and energy to serve on such review committees (even so, it is done within the context of their job description), consideration must be given to how community members can realistically participate in independent review. This challenge is compounded by the fact that research developed in a CAPPR approach evolves in an iterative manner; thus community review may need to happen at multiple stages of the process.

To summarize, in addition to independent scientific and ethical review, CAPPR projects benefit from independent community review. Such processes can provide educational opportunities for community members but face challenges of respecting community members' time and input.

Informed Consent

Informed consent is one of the most well-recognized requirements of ethical research. In the informed consent process for a study, research participants, when appropriate, should receive a thorough and understandable disclosure of the purpose of the research, the procedures that will be administered, the risks and potential benefits of research procedures, and information regarding the voluntary nature of research participation, alternatives to research participation, and the ability to withdraw from research. As explicated by Emanuel et al,[26] the requirement for informed consent in clinical research embodies the ethical value of respecting persons and their right to make autonomous decisions that are consistent with their own values, interests, and preferences.

The requirement for informed consent for research in CAPPR efforts can be complicated by the difficulty of deciding what parts of the effort are research and what parts are non-research activity and action. Indeed, one of the fundamental principles of CAPPR is to break down barriers between research and action. However, different legal and ethical requirements pertain to activities that are research as compared to community development, community advocacy, or other ''actions''; the legal requirement for informed consent is one that differs between research and these other activities. Trying to untangle research from other activities for purposes of obtaining research informed consent ultimately may not be worth the effort, however, as is the case with some public health activities.[73] Informed participation in any activity conducted by the community-academic partnership shows respect for participants, and if activities are undergoing process evaluation, written consent may be necessary regardless. However, for definable research activities, getting research informed consent from research participants for that research activity is necessary, unless the legal requirement for informed consent is waived by an IRB or its designate.

In preparing for the informed consent process for intervention studies, the research team should know that many people mistakenly believe that clinical care received in the context of clinical research is no different from regular medical care. This misconception, termed the ''therapeutic misconception,'' is not uncommon.[74,75] However, even studies designed within a CAPPR paradigm that strive to attain more local value or benefits for research participants than traditional clinical research can differ from regular medical care in crucial ways. Treatment alternatives may be randomly assigned, participants and the research team might be blinded to which alternative is received, placebo or no treatment arms might be used, and protocol-driven limitations may be placed on the types and doses of interventions. Furthermore, as discussed above, participants may not be able to continue getting the research intervention after the research study ends, even if it seems to be working for them, because it is not otherwise accessible. Some individuals who participate in a research study to get access to care that they could not get otherwise, perhaps because they lack health insurance, may once again not be able to get any care once the study ends. If a study is designed with these features, it is crucial

that participants are aware of them from the beginning.

Providing sufficient information about these issues is important in all research. However, in research conducted by community-academic partners, assuring adequate appreciation on the part of individual participants of these research constraints takes on a particular urgency; the trust placed in their community leaders who are research team members to completely protect them and inform them may lead participants to pay less attention to these types of issues for themselves. These concerns are similar to those that arise when patients' trust that their physicians have considered their best interests in advising them about research lead them to pay less attention to the research informed consent process.[76]

Issues of voluntariness can also be particularly acute for research conducted with communities that experience significant healthcare disparities.[77–79] Community partners can help determine ways to ensure that refusing to participate in research would not keep an individual from getting care they would get otherwise, as well as ways of ensuring that community members understand that they have a right to refuse to participate in research.

The federal regulations governing informed consent for research state, "The information that is given to the subject or the representative shall be in language understandable to the subject or the representative."[80] Written consent forms are generally a required part of the research informed consent process, though in some cases oral consent is allowed. Despite vigorous efforts to ensure that consent forms are written in language that is easy to understand (see for example, guidance from the Centers for Disease Control and Prevention, www.cdc.gov) these forms are notoriously difficult to comprehend.[81,82] Even forms written at the commonly accepted standard of an 8th grade reading level may have little meaning in communities with high levels of illiteracy and innumeracy.[83,84] For example, 48% of US adults, and 84% of adults in south Los Angeles, cannot read well enough to use a bus schedule[85]—what is the meaning of a written consent form for these individuals? Community partners can help design innovative methods for informing community members about research that are consistent with community norms around communication.[86,87] Checklists and pictorials, in addition to oral methods, for imparting information developed conjointly by community members and academics can be used during the consent process to ensure that participants fully understand the important pieces.[81] Advertisements, the first step in the informed consent process, must portray research honestly[88]; community partners can help determine how best to do so. Challenges arise when academic IRBs are not willing to accept innovative, community-developed informed consent procedures. These innovations can, and should be, evaluated.[89,90] Such approaches toward informed consent take significant amounts of time, perhaps much more time than is typically devoted to the process in traditional research.

Informed consent is an ongoing process. In studies carried out with community, both study participants and the larger community must have accurate information about a study and be informed of any new information that would affect decision-making about a study. Community partners can be helpful in accessing community channels for maintaining accurate study-related information within a community. These channels could be important for managing confusion and/or misinformation resulting from news stories that could negatively affect a study. For example, recent news stories about harmful effects of COX-2 inhibitors would raise concerns and engender questions about any studies using these agents.[91] If necessary, community and academic partners could pull together to rapidly develop and disseminate accurate information to study participants and other community members. Similarly, community partners can assist in managing rumors about a research study.[81] Informal sources of information about a study are frequently inaccurate and could negatively affect a study, which would necessitate rumor management. Community partners should keep their ears open for any rumors or other misinformation.

In summary, CAPPR can improve the informed consent process by developing innovative methods that are consistent with community norms around communication. In addition, community partners are able to disseminate information through community channels and help manage misinformation and rumors about research. Community-academic partnered participatory research (CAPPR) partners may need to work with IRBs to implement innovative methods.

Respect for Enrolled and Potential Research Participants

As articulated by Emanuel et al,[26] individuals must be treated with respect from the time they are approached for consideration of research participation (even if they refuse enrollment), throughout their participation, and after their participation ends.

In part, this requirement underlies all the previously discussed ethical requirements. Specific examples include adopting measures to maintain privacy and confidentiality, informing participants of any new information about risks and potential benefits of research procedures, disclosing what has been learned from the study, and carefully monitoring participants' conditions during research participation. Respect for individuals also includes permitting research participants to reconsider and to withdraw from a study without penalty. If participants are diagnosed with a new condition as a result of their

participation in research, the researchers should refer them for appropriate treatment and services. To recognize research participants' contributions, a mechanism should be in place to inform them of what was learned from the research, if so desired by the participants.

Conducting research with communities that experience disparities in many arenas related to racial, ethnic, and socioeconomic factors highlights specific challenges with regard to respect. For example, researchers working with communities that lack access to quality health care may feel pulled toward trying to build extra medical care into research projects. While the pull to take such actions is motivated in part by respect for research participants as persons and desire to respond to their human needs, both community and academic partners must remember that while clinical care may be received within the context of a clinical research study, the primary purpose of a clinical research study is not and should not be to provide medical care. Research resources and funds are not unlimited, and using them to provide medical care will very quickly deplete them. For example, referral lists and assistance in gaining access to needed services for problems not related to the research might be considered reasonable to provide in the context of a study, even though actual medical care for such problems may not be reasonable to provide in the study. Respect should also be a reminder to the research team that advocating for needed medical care is an extension of their ethical responsibilities within a CAPPR paradigm.

Another area of respect for participants pertains to data collection. Academics frequently try to collect all information in one study. The traditional view is that participant recruitment and enrollment is the most costly part of the research, and to make research worthwhile for the funder and researcher, as much information should be obtained from each participant as possible. However, the community may feel drained by long data collection and feel that their time is not being respected. Community may favor shorter, more frequent studies, understanding that community change takes place slowly and incrementally. In addition, data collectors—whether community members or academics—must respect the research participants they are working with. If they have negative stereotypes about participants, these could come through and affect the quality of data collected.

In another example, maintaining confidentiality of research participants, whether or not the information collected is considered sensitive, is a part of respecting research participants as persons. Mechanisms for maintaining confidentiality include use of codes, rather than names or other identifying information, when storing data and limiting access to individual identifying information to a select few on the project. Maintaining confidentiality of research participants is somewhat easier when no overlap in social circles exists between the research participant and research team members. In CAPPR, for example, maintaining confidentiality of research data can be tricky when community members collect and analyze research data as part of the research team, particularly in tight-knit communities. For example, some pieces of information may be enough to enable another community member to recognize a research participant, even if the information has been stripped of identifying information. In another example, research studies sometimes collect "locator guides"—contact information of family and friends for use in locating a research participant for follow-up. Even this information may have different meaning and different ramifications when other community members can access this information as members of the research team. Limiting access to information collected as part of research may be perceived as unfair or disrespectful of community research partners. Open discussion and education about the importance of respecting and maintaining confidentiality in research is crucial for all members of the research team—both academic and community. In addition, defining what this means within a CAPPR context and developing mechanisms for appropriately maintaining confidentiality of research data will require input from academic and community partners.

As mentioned earlier, the need to draw firm boundaries at times between research and action might be particularly difficult in clinical research conducted within a CAPPR paradigm, since the general orientation of CAPPR is to break down such boundaries. In addition, for community partners who are walking the line between community advocate and member of the research team, drawing such boundaries may leave them at risk for being perceived as having "sold out" and failed the community. Thus, both academic and community partners must talk openly about these types of decisions, understand the rationale that underlies various choices and concerns raised by them, be transparent about the decision-making process, be able to explain their choices and the rationale that underlies them, and be prepared to support each other as these difficult decisions are carried out.

Since CAPPR also recognizes community as a unit of identity, some activities necessitated by respect for participants should also extend to the community. For example, just as research participants should be informed of what was learned from research, in CAPPR, research results that are of importance to the community should be disseminated to the community. This principle of CAPPR rests on the same ethical value of respect for persons. Just as researchers must protect the welfare of participants, attention should also be paid to protecting the welfare of

community. As described above, this is accomplished in part by attending to community risks when designing and evaluating clinical research studies. Another way to show respect for community is to hire and train community members who are qualified to carry out research functions, such as outreach, recruitment, and data analysis, to be part of the research team. Identifying researchers who reflect the cultural and ethnic background of the community may also help. However, simply hiring community members to be part of the research team and/or identifying researchers who reflect the cultural and ethnic background of the community does not ensure respect for community or for research participants.

Reaching the stage within a CAPPR partnership in which conducting a clinical research study becomes possible requires much groundwork. One crucial aspect of this groundwork is mutual respect among partners based on trust and trustworthiness. While respect among research partners is not technically a form of ''respect for research participants,'' it is a critical underpinning for ethical CAPPR. In the context of the traditional clinical research enterprise, respect among research team members is an implicit value. For clinical research conducted with CAPPR, explicit attention to developing mutual respect and trust among the community and academic partners becomes critical. As articulated by Emanuel et al,[26] respect as an ethical requirement for clinical research is described primarily in terms of the relationship between the research team and the research participants. For CAPPR, we suggest amending this requirement to include respect for research partners.

Academic researchers are welcomed to partner with community only if they establish that they can be trusted.[40] Trust and respect must be earned; they cannot be assumed. Trust and respect develop if academic researchers respect community—its informal networks, its expertise from experience, its knowledge of its own inner workings, etc. Community partners should not be made to feel inferior if they do not have formal education or an advanced degree. Respect should be given to life experiences as well as university degrees, for the different types of knowledge and experience they provide.

For clinical research conducted with CAPPR, explicit attention to developing mutual respect and trust among the community and academic partners becomes critical.

Additionally, gaining entrance to the community requires openness and honesty. Academic researchers must not portray themselves as only giving to the community and not taking, because the community knows that it is not true. Being open and honest about what the academic researchers' needs and goals are—for example, the need to publish and the need to adhere to certain standards of scientific rigor—will allow open discussion and negotiation. Trust and respect developed by one group of researchers does not automatically extend to their colleagues; each researcher must establish his/her own credibility with the community.[40] A researcher can be welcomed by and feel included in a community, but only with trust. Once trust is lost, a researcher can find him/herself unwelcome very quickly. Similarly, community partners also must establish that they can be trusted. Academics may prefer community consultation models over CAPPR approaches in part because they worry that community partners might lose interest or not follow through during more mundane aspects of research. Working in a partnership with CAPPR provides a set of principles which, if embraced, go a long way toward laying the groundwork for mutual trust and respect.

Mutual trust and respect also depend on paying explicit attention to differences in culture and life experience among the various partners. Differences in cultural norms and misunderstandings can lead to a sense of disrespect when none was intended. Stereotypes, formed and reinforced by our culture, influence how we think and behave.[4] Our life experiences affect what we perceive. Respect for cultural differences means explicitly acknowledging the impact of racial, ethnic, and gender diversity within the research partnership and between the research team and study participants. In particular, this respect means developing an openness toward addressing the potential for institutionalized, personally mediated, and/or internalized racism/sexism or perceptions of racism/sexism to enter into the dynamics of the partnership and/or the research study at any point.[92] Community-academic partnered participatory research (CAPPR) partners should also remember that academia is a culture unto itself, and misunderstandings and conflicts can result from clashes between community culture and academic culture, quite separate from other types of cultural differences. In some ways, the constant attention to process and observation of self and others that accompanies participation in a CAPPR effort is akin to that accompanying the research technique of participant-observation, which requires an understanding of the effects that participation and observation have on the processes being observed.[93] The ability of the partners to explicitly acknowledge that conflict is inevitable and define a process together for handling conflict when it arises will be crucial to the long-term success of the partnership.[20]

Recognizing the capacity for resiliency and supporting resiliency of both community and academics are also aspects of respect. For communities,

the challenge is for the partnership to attend to a community's strengths rather than just its deficits. Focusing on deficits appeals to funders of research but exaggerates the weakness of the community and diminishes its strengths. Respect also requires acknowledging the strengths of the community that could be enhanced if particular interventions were put into place.

Both community and academic partners also need recognition and support of their resiliency in conducing CAPPR. When academics come to a community, they have to be given support to bounce back when the community challenges their worldview or when interactions with the community are difficult. Academics need encouragement not to give up, not to go back to traditional models, but rather to stick with the CAPPR process and find solutions to conflicts. This adherence is particularly important because significant institutional disincentives prevent academics from engaging in CAPPR. Academic promotion is not yet prepared for CAPPR,[47] and CAPPR takes more time and more money than traditional research. The seven-year ''publish or perish'' rules of academic promotion may not be flexible enough to allow for the great length of time CAPPR takes. Academics may have to place their career advancement on hold to put in the extended hours required to build the trust and long-term community relationships through which dialogue and partnership can happen. The novelty of CAPPR research methods might not be valued in the academic promotion process by academic peers trained in traditional methods. Thus, CAPPR is higher risk for academics than is traditional research.

Along these same lines, that CAPPR requires much community time and effort should not be forgotten. As mentioned above, many community members donate time and effort for these activities separate from their regular jobs. When community members donate time and effort to facilitate research, respect suggests that academics should also give back to community. As discussed above, achieving the ''-plus'' goals of CAPPR is one way to do this. In another example, academics can work with community to write a research grant to conduct a project of its own or a service grant to help bring needed services to the community.

Several community-academic partnerships that used a CAPPR approach have developed guiding principles.[24,25,27,28] Jointly developed by community and academic partners, they provide a venue for working through aspects of procedural justice as they are establishing guidelines for the future. Nevertheless, many situations arise that guiding principles have not anticipated. In these cases, open communication and mutual respect are crucial to maintenance of trust among partners.

In summary, the ethical requirement of respect as articulated by Emanuel et al[26] is described primarily in terms of the relationship between the research team and the research participants. In CAPPR, the community and research partners must also be approached with respect. Negative prior experience with research, or knowledge about prior unethical research, has left some communities feeling vulnerable and distrustful of researchers. Researchers have also had experiences with communities that have left them feeling unappreciated. Community and academic partners must be willing and prepared to handle these types of situations. Thus, for CAPPR, we suggest amending this requirement to incorporate respect for research partners in addition to respect for enrolled and potential participants, as well as respect for the community.

SUMMARY AND CONCLUSION

Community-academic partnered participatory research (CAPPR) has potential to be an exciting and enriching approach to clinical research. Emanuel et al's[26] framework articulating seven requirements for ethical clinical research is easily adaptable for CAPPR (see the Table). In adapting this framework, we find that six of the requirements are flexible enough to accommodate the needs of CAPPR to view the community as a unit that is more than the sum of its individual members. Thus, we do not rename these requirements; they remain: (1) social or scientific value, (2) scientific validity, (3) fair subject selection, (4) favorable risk-benefit ratio, (5) independent review, and (6) informed consent. We suggest that the seventh requirement, respect for potential and enrolled participants, be amended to ''respect for potential and enrolled participants, community, and research partners'' to acknowledge that separate attention should be paid to relationships on these three levels.

As with any ethics framework, suggested actions and decisions will conflict at times. When this happens, those involved must talk about how to balance the various ethical values and how to make the necessary trade-offs. However, not all conflicts are ethical conflicts; miscommunication and misunderstanding underlie many seemingly ethical conflicts. Ethics consultation can help by teasing out various contributors to seemingly ethical conflicts, identifying when true conflicts among ethical values exists, and helping to weigh and balance conflicting values within a situation.

While we present examples of how these ethical requirements might look in a CAPPR context, we do not suggest that our discussion represents anything more than broad applications. Furthermore, we have no pretense of being definitive. Each partnership must determine more specifically for each clinical research study they propose to undertake how to meet these ethical requirements and how to prioritize conflicting values. In addition, deeper

Seven Requirements for Ethical Clinical Research Adapted for CAPPR* Approaches†

	EXAMPLES OF ETHICS APPLICATIONS AND CHALLENGES OF CAPPR APPROACHES TO CLINICAL RESEARCH
Social or Scientific Value	• Research questions should have scientific or health decision-making value • Research questions should have value to the community • ''Research-plus'' goals of CAPPR increase value of research to community • Research that develops community capacity increases value to community • Sustainability increases value to community and research • Challenges when studies that have value for community are not considered valuable from scientific or societal perspective • ''Research-plus'' has implications for distribution of research resources
Scientific Validity	• Research must be scientifically valid to be ethical • Community should have a role in deciding on research design • Certain designs may not be acceptable to community—even if the alternative is that a study not be done • Scientific validity is enhanced when response rates and participation rates increase among groups traditionally underrepresented in clinical research • Community can identify when an instrument lacks face validity • Community can ensure that content most relevant to community priorities is being measured • Community input can increase validity of interpretations • Ethical and practical challenges can ultimately lead to research design and analytic innovations • Academic promotion may not be ready for designs with less rigor but more community acceptance
Fair Subject Selection	• Subject selection should be based primarily on scientific goals • Focus on particular racial/ethnic groups and focus on particular community may be justifiable as fair when chosen for reasons of justice • Important to consider how research is distributed within the community • Community might have opinions about selection of comparison groups—depending on comparison group, results of research will make the community look resilient or filled with deficits • Simply conducting research in community settings with community members may not address the diversity that exists within community—processes for recruitment and enrollment may not be set up to be fair, even though they seem to be • Community can help with monitoring for fairness of recruitment and enrollment. • Community input critical on whether incentives or rewards for research participation ought to be used, and if so, what would be fair and acceptable • Hiring and training community members to carry out research functions, such as outreach, recruitment, and data analysis, may help increase fairness
Favorable Risk-Benefit Ratio	• Research risk to individual participants must be justifiable by potential benefit to the participant and/or by potential benefit of the research findings to the community or society • Since CAPPR attends to community as a unit of importance, risks and potential benefits to community should be considered • Challenge to determining appropriate risks, benefits, and risk-benefit ratio in communities that lack access to healthcare services
Independent Review	• Independent review for scientific and ethical aspects of research is important to enhance public accountability and minimize influence of potential conflicts of interest • Independent community review enhances transparency and accountability to community • An independent community review board could also review research projects for issues of impact on community and community protection as well as importance, ethical content, and human subjects protections from a community perspective—covering the six other elements of ethical clinical research as described in this paper, as well as ensuring adherence to the principles of CAPPR
Informed Consent	• Informed consent respects research participants' rights to make autonomous decisions that are consistent with their own values, interests, and preferences • Community can help design innovative ways to enhance informed consent (eg, checklists, pictorials) • Community partners can help manage misinformation and rumors • Community channels can be used to rapidly disseminate important new information to community • Challenge when IRBs not willing to accept community developed innovative informed consent procedures • Challenge created by overlap between research activities and practice activities • Challenge if trust in community partners leads some research participants to pay less attention to risks for themselves

Table. Continued

EXAMPLES OF ETHICS APPLICATIONS AND CHALLENGES OF CAPPR APPROACHES TO CLINICAL RESEARCH	
Respect For Potential and Enrolled Participants, Community, and Research Partners	• CAPPR incorporates respect for research partners in addition to respect for enrolled and potential participants and respect for community • Just as research participants should be informed of what was learned from research, in CAPPR, research results that are of importance to community should be disseminated to community • Community members and academics should support one another doing CAPPR • Neither academics nor community are immune to stereotypes, biases, and politics • Jointly developing a process up front for dealing with conflict that arises down the road is important • Guiding principles and agreements should be developed jointly by community and academic partners • Trust and trustworthiness are important

* CAPPR, Community-Academic Partnered Participatory Research.
† Adapted from Emanuel EJ et al. , Wendler D, Grady C.[26]

consideration of the ethical challenges that CAPPR presents to the clinical research enterprise is essential.

We believe that our adapted framework can serve to structure the research ethics discussion during the period of rapprochement between the clinical research and CAPPR enterprises. We suggest that community and academic partners can use the table as a tool for working through the seven requirements for their own projects, using our examples as a springboard for developing specifics that are important to their partnership and their project. As the field gains more experience with conducting clinical research that uses CAPPR approaches and tests the utility of ethical frameworks like this one, constructive critiques and new ideas will emerge. We welcome the conversation and dialogue that ensue.

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REFERENCES

1. Sung NS, Crowley WF Jr, Genel M, et al. Central challenges facing the national clinical research enterprise. *JAMA*. 2003;289(10): 1278–1287.
2. Tunis SR, Stryer DB, Clancy CM. Practical clinical trials: increasing the value of clinical research for decision making in clinical and health policy. *JAMA*. 2003;290(12): 1624–1632.
3. Syme SL. Social determinants of health: the community as an empowered partner. *Prev Chronic Dis*. 2004;1(1):A02.
4. Smedley BD, Stith AY, Nelson AR. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: Institute of Medicine, National Academy Press; 2003.
5. Corbie-Smith G, Moody-Ayers S, Thrasher AD. Closing the circle between minority inclusion in research and health disparities. *Arch Intern Med*. 2004;164(13):1362–1364.
6. Minkler M, Wallerstein N. Introduction to community-based participatory research. In: Minkler M, Wallerstein N, eds. *Community-Based Participatory Research for Health*. San Francisco, Calif: Jossey-Bass; 2003:3–26.
7. O'Toole TP, Aaron KF, Chin MH, et al. Community-based participatory research: opportunities, challenges, and the need for a common language. *J Gen Intern Med*. 2003;18(7):592–594.
8. Minority Health and Health Disparities Research and Education Act of 2000. 42 USC 202, 2000.
9. Department of Health and Human Services (DHHS). *NCMHD Community Participation in Health Disparities Intervention Research (RFA-MD-05-002)*. Vol 2005. Bethesda, Md: DHHS; 2005.
10. Department of Health and Human Services (DHHS). *Community Participation in Research (PAR-05-026)*. Vol 2005. Bethesda, Md: DHHS; 2005.
11. Wallerstein N, Duran B. The conceptual, historical, and practice roots of community-based participatory research and related participatory traditions. In: Minkler M, Wallerstein N, eds. *Community-Based Participatory Research for Health*. San Francisco, Calif: Jossey-Bass; 2003:27–52.
12. Kemmis S, McTaggart R. Participatory action research. In: Denzin NK, Lincoln YS, eds. *Handbook of Qualitative Research*. Thousand Oaks, Calif: Sage Publications; 2000:567–606.
13. Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: assessing partnership approaches to improve public health. *Annu Rev Public Health*. 1998;19:173–202.
14. Israel BA, Schulz AJ, Parker EA, et al. Critical issues in developing and following community-based participatory research principles. In: Minkler M, Wallerstein N, eds. *Community-Based Participatory Research for Health*. San Francisco, Calif: Jossey-Bass; 2003:53–76.
15. Green LW, Mercer SL. Can public health researchers and agencies reconcile the push from funding bodies and the pull from communities? *Am J Public Health*. 2001; 91(12):1926–1929.
16. Brugge D, Cole A. A case study of community-based participatory research ethics: the Healthy Public Housing Initiative. *Sci Eng Ethics*. 2003;9(4):485–501.
17. Corbie-Smith G, Ammerman AS, Katz ML, et al. Trust, benefit, satisfaction, and burden: a randomized controlled trial to reduce cancer risk through African-American churches. *J Gen Intern Med*. 2003;18(7):531–541.
18. Farquhar SA, Wing S. Methodological and ethical considerations in community-driven environmental justice research: two case studies from rural North Carolina. In: Minkler M, Wallerstein N, eds. *Community-Based Partici-*

patory Research for Health. San Francisco, Calif: Jossey-Bass; 2003:221–241.
19. Green LW. Ethics and community-based participatory research: commentary on Minkler. *Health Educ Behav*. 2004;31(6):698–701.
20. Minkler M. Ethical challenges for the "outside" researcher in community-based participatory research. *Health Educ Behav*. 2004; 31(6):684–697.
21. Minkler M, Fadem P, Perry M, et al. Ethical dilemmas in participatory action research: a case study from the disability community. *Health Educ Behav*. 2002;29(1):14–29.
22. Wing S. Social responsibility and research ethics in community-driven studies of industrialized hog production. *Environ Health Perspect*. 2002;110(5):437–444.
23. Fadem P, Minkler M, Perry M, et al. Ethical challenges in community-based participatory research: a case study from the San Francisco Bay Area disability community. In: Minkler M, Wallerstein N, eds. *Community-Based Participatory Research for Health*. San Francisco, Calif: Jossey-Bass; 2003:3–26.
24. Macaulay AC, Delormier T, McComber AM, et al. Participatory research with native community of Kahnawake creates innovative Code of Research Ethics. *Can J Public Health*. 1998;89(2):105–108.
25. Potvin L, Cargo M, McComber AM, et al. Implementing participatory intervention and research in communities: lessons from the Kahnawake Schools Diabetes Prevention Project in Canada. *Soc Sci Med*. 2003;56(6): 1295–1305.
26. Emanuel EJ, Wendler D, Grady C. What makes clinical research ethical? *JAMA*. 2000;283(20):2701–2711.
27. Wells KB, Staunton A, Norris KC, et al. Building an academic-community partnered research network: The Community Health Improvement Collaborative (CHIC). *Ethn Dis*. 2006;16(suppl 1):S1-3–S1-17.
28. Parker EA, Israel BA, Williams M, et al. Community action against asthma: examining the partnership process of a community-based participatory research project. *J Gen Intern Med*. 2003;18(7):558–567.
29. Aaron KF, Stryer D. Moving from rhetoric to evidence-based action in health care. *J Gen Intern Med*. 2003;18(7):589–591.
30. Viswanathan M, Ammerman A, Eng E, et al. *Community-Based Participatory Research: Assessing the Evidence*. Rockville, Md: Agency for Healthcare Research and Quality; 2004. AHRQ Publication 04-E022-2.
31. Holkup PA, Tripp-Reimer T, Salois EM, Weinert C. Community-based participatory research: an approach to intervention research with a Native American community. *ANS Adv Nurs Sci*. 2004;27(3):162–175.
32. Bradbury H, Reason P. Conclusion: broadening the bandwidth of validity: issues and choice-points for improving the quality of action research. In: Reason P, Bradbury H, eds. *Handbook of Action Research: Participative Inquiry and Practice*. Thousand Oaks, Calif: Sage Publications Inc; 2001:447–456.
33. Park P. Knowledge and participatory research. In: Reason P, Bradbury H, eds. *Handbook of Action Research: Participative Inquiry and Practice*. Thousand Oaks, Calif: Sage Publications Inc; 2001:81–90.
34. Featherstone K, Donovan JL. Random allocation or allocation at random? Patients' perspectives of participation in a randomized controlled trial. *BMJ*. 1998;317(7167): 1177–1180.
35. Featherstone K, Donovan JL. "Why don't they just tell me straight, why allocate it?" The struggle to make sense of participating in a randomized controlled trial. *Soc Sci Med*. 2002;55(5):709–719.
36. Kerr C, Robinson E, Stevens A, et al. Randomization in trials: do potential trial participants understand it and find it acceptable? *J Med Ethics*. 2004;30(1):80–84.
37. Robinson EJ, Kerr C, Stevens A, et al. Lay conceptions of the ethical and scientific justifications for random allocation in clinical trials. *Soc Sci Med*. 2004;58(4):811–824.
38. Corbie-Smith G, Thomas SB, St George DM. Distrust, race, and research. *Arch Intern Med*. 2002;162(21):2458–2463.
39. Freimuth VS, Quinn SC, Thomas SB, et al. African Americans' views on research and the Tuskegee Syphilis Study. *Soc Sci Med*. 2001;52(5):797–808.
40. Ammerman A, Corbie-Smith G, St George DM, et al. Research expectations among African-American church leaders in the PRAISE! project: a randomized trial guided by community-based participatory research. *Am J Public Health*. 2003;93(10):1720–1727.
41. TenHave TR, Coyne J, Salzer M, Katz I. Research to improve the quality of care for depression: alternatives to the simple randomized clinical trial. *Gen Hosp Psychiatry*. 2003; 25(2):115–123.
42. Wells KB. The design of Partners in Care: evaluating the cost-effectiveness of improving care for depression in primary care. *Soc Psychiatry Psychiatr Epidemiol*. 1999;34(1):20–29.
43. Diamond GA, Kaul S. Prior convictions: bayesian approaches to the analysis and interpretation of clinical megatrials. *J Am Coll Cardiol*. 2004;43(11):1929–1939.
44. Lilford RJ. Ethics of clinical trials from a bayesian and decision analytic perspective: whose equipoise is it anyway? *BMJ*. 2003; 326(7396):980–981.
45. Brown CH, Liao J. Principles for designing randomized preventive trials in mental health: an emerging developmental epidemiology paradigm. *Am J Community Psychol*. 1999; 27(5):673–710.
46. Susser M. Does risk factor epidemiology put epidemiology at risk? Peering into the future. *J Epidemiol Community Health*. 1998; 52(10):608–611.
47. Nyden P. Academic incentives for faculty participation in community-based participatory research. *J Gen Intern Med*. 2003;18(7): 576–585.
48. Corbie-Smith G, Thomas SB, Williams MV, Moody-Ayers S. Attitudes and beliefs of African Americans toward participation in medical research. *J Gen Intern Med*. 1999; 14(9):537–546.
49. Leung MW, Yen IH, Minkler M. Community-based participatory research: a promising approach for increasing epidemiology's relevance in the 21st century. *Int J Epidemiol*. 2004;33(3):499–506.
50. Beaton DE, Bombardier C, Katz JN, Wright JG. A taxonomy for responsiveness. *J Clin Epidemiol*. 2001;54(12):1204–1217.
51. Hyland ME. The validity of health assessments: resolving some recent differences. *J Clin Epidemiol*. 1993;46(9):1019–1023.
52. Alegria M, McGuire T. Rethinking a universal framework in the psychiatric symptom-disorder relationship. *J Health Soc Behav*. 2003;44(3):257–274.
53. Chodosh J, Buckwalter JG, Blazer DG, Seeman TE. How the question is asked makes a difference in the assessment of depressive symptoms in older persons. *Am J Geriatr Psychiatry*. 2004;12(1):75–83.
54. Muehlenkamp JJ, Gutierrez PM. An investigation of differences between self-injurious behavior and suicide attempts in a sample of adolescents. *Suicide Life Threat Behav*. 2004;34(1):12–23.
55. Dutton GR, Martin PD, Rhode PC, Brantley PJ. Use of the weight efficacy lifestyle questionnaire with African-American women: validation and extension of previous findings. *Eat Behav*. 2004;5(4):375–384.
56. Minkler M. Using participatory action research to build healthy communities. *Public Health Rep*. 2000;115(2–3):191–197.
57. Corbie-Smith GM. Minority recruitment and participation in health research. *N C Med J*. 2004;65(6):385–387.
58. Corbie-Smith G, Miller WC, Ransohoff DF. Interpretations of 'appropriate' minority inclusion in clinical research. *Am J Med*. 2004;116(4):249–252.
59. Daniels N. Justice, health, and health care. *Am J Bioeth*. 2001;1(2):2–16.
60. Halpern J, Johnson MD, Miranda J, Wells KB. The partners in care approach to ethics

outcomes in quality improvement programs for depression. *Psychiatr Serv*. 2004;55(5): 532–539.
61. National Institutes of Health (NIH). *NIH Policy and Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research — Amended*. Bethesda, Md: NIH; October 2001.
62. Kimmelman J. Valuing risk: the ethical review of clinical trial safety. *Kennedy Inst Ethics J*. 2004;14(4):369–393.
63. Weijer C, Miller PB. When are research risks reasonable in relation to anticipated benefits? *Nat Med*. 2004;10(6):570–573.
64. Glantz LH, Annas GJ, Grodin MA, Mariner WK. Research in developing countries: taking ''benefit'' seriously. *Hastings Cent Rep*. 1998;28(6):38–42.
65. Moral standards for research in developing countries: from ''reasonable availability'' to ''fair benefits.'' *Hastings Cent Rep*. 2004; 34(3):17–27.
66. Arras JD. Fair benefits in international medical research. *Hastings Cent Rep*. 2004;34(3):3.
67. Weijer C, Emanuel EJ. Ethics. Protecting communities in biomedical research. *Science*. 2000;289(5482):1142–1144.
68. Weijer C, Goldsand G, Emanuel EJ. Protecting communities in research: current guidelines and limits of extrapolation. *Nat Genet*. 1999;23(3):275–280.
69. Bluthenthal RN, Jones L, Fackler-Lowrie N, et al. Witness for Wellness: preliminary findings from a community-academic participatory research mental health initiative. *Ethn Dis*. 2006;16(suppl 1):S1-18–S1-34.
70. Juengst ET. Groups as gatekeepers to genomic research: conceptually confusing, morally hazardous, and practically useless. *Kennedy Inst Ethics J*. 1998;8(2):183–200.
71. Foster MW, Sharp RR, Freeman WL, et al. The role of community review in evaluating the risks of human genetic variation research. *Am J Hum Genet*. 1999;64(6):1719–1727.
72. Sharp RR, Foster MW. Community involvement in the ethical review of genetic research: lessons from American Indian and Alaska Native populations. *Environ Health Perspect*. 2002;110(suppl 2):145–148.
73. MacQueen KM, Buehler JW. Ethics, practice, and research in public health. *Am J Public Health*. 2004;94(6):928–931.
74. Appelbaum PS, Roth LH, Lidz CW, et al. False hopes and best data: consent to research and the therapeutic misconception. *Hastings Cent Rep*. 1987;17(2):20–24.
75. Lidz CW, Appelbaum PS, Grisso T, Renaud M. Therapeutic misconception and the appreciation of risks in clinical trials. *Soc Sci Med*. 2004;58(9):1689–1697.
76. Chen DT, Miller FG, Rosenstein DL. Clinical research and the physician-patient relationship. *Ann Intern Med*. 2003;138(8):669–672.
77. Roberts LW. Informed consent and the capacity for voluntarism. *Am J Psychiatry*. 2002;159(5):705–712.
78. Nelson RM, Merz JF. Voluntariness of consent for research: an empirical and conceptual review. *Med Care*. 2002;40(suppl 9):V69–V80.
79. Pace C, Miller FG, Danis M. Enrolling the uninsured in clinical trials: an ethical perspective. *Crit Care Med*. 2003;31(suppl 3):S121–S125.
80. Department of Health and Human Services (DHHS). *Code of Federal Regulations, 45CFR46.116*. Rev ed. Washington, DC: DHHS; November 13 2001.
81. Woodsong C, Karim QA. A model designed to enhance informed consent: experiences from the HIV prevention trials network. *Am J Public Health*. 2005;95(3):412–419.
82. Federman DD, Hanna KE, Rodriguez LL. *Assessing the System for Protecting Human Research Participants*. Washington, DC: Institute of Medicine, National Academy Press; 2003.
83. Williams MV, Parker RM, Baker DW, et al. Inadequate functional health literacy among patients at two public hospitals. *JAMA*. 1995;274(21):1677–1682.
84. Noah BA. The participation of underrepresented minorities in clinical research. *Am J Law Med*. 2003;29(2–3):221–245.
85. Literacy Network of Greater Los Angeles and United Way of Greater Los Angeles. *Literacy @ Work. The LA Literacy Workforce Project*. Los Angeles, Calif: United Way; 2004.
86. Calderon JL, Beltran RA. Pitfalls in health communication: healthcare policy, institution, structure, and process. *Med Gen Med*. 2004;6(1):9.
87. Strauss RP, Sengupta S, Quinn SC, et al. The role of community advisory boards: involving communities in the informed consent process. *Am J Public Health*. 2001;91(12):1938–1943.
88. Miller FG, Schorr AF. Advertising for clinical research. *IRB*. 1999;21(5):1–4.
89. Lavori PW, Sugarman J, Hays MT, Feussner JR. Improving informed consent in clinical trial: a duty to experiment. *Control Clin Trials*. 1999;20(2):187–193.
90. Sachs GA, Hougham GW, Sugarman J, et al. Conducting empirical research on informed consent: challenges and questions. *IRB*. 2003;5(suppl 25):S4–S10.
91. Lenzer J. FDA advisers warn: COX 2 inhibitors increase risk of heart attack and stroke. *BMJ*. 2005;330(7489):440.
92. Jones CP. Levels of racism: a theoretic framework and a gardener's tale. *Am J Public Health*. 2000;90(8):1212–1215.
93. Jackson P. Principles and problems of participant observation. *Geografiska Annaler, Series B, Human Geography*. 1983;65(1): 39–46.