

Background paper: The ethics of health research priority setting¹

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Overview

Health research is a vital component of efforts to improve health worldwide. But the available resources and existing research infrastructure are unable to answer all important research questions in a timely manner. Since which research is conducted affects which populations ultimately benefit from the knowledge generated by the research, the question of how to allocate limited health research resources is an ethical question, not just a technical one.

At present, many governmental and non-profit funders still treat the allocation of much of their research funding as a primarily technical question. For example, untargeted grant funding is largely allocated on the basis of the quality of the science, not on the basis of disease burden or whether it addresses the outcomes patients care about.² Meanwhile, existing market incentives mean that for-profit funders mostly aim to develop drugs and devices for wealthier patient populations. When funders do explicitly set priorities for which health problems or types of research they will fund, the methods used for setting those priorities are often opaque. Nor are funders the only parties who affect what research gets carried out. Individual researchers, university officials, advocacy organizations, policy-makers, and many others make decisions about research priorities, even when they do not label themselves as engaged in “priority setting.” The lack of coordination among all these actors makes it likely that resources are globally misallocated and exacerbates the problem of wasteful research.³ Overall, it is unlikely that research priorities are currently being set in an ethically optimal way.

The importance of research priority setting became especially salient during the COVID-19 pandemic, but, as a global issue, it pre-dates and post-dates the pandemic.⁴ The perpetual scarcity of resources for research requires ongoing, difficult decisions about what should be prioritized, who should benefit from research outputs, and who gets to decide these matters. By promoting a global discussion on the ethics of research priority setting, the Global Forum on Bioethics in Research (GFBR) aims to move the debate beyond identifying injustices and move

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² Pierson, Leah, and Joseph Millum. “Health Research Priority Setting: Do Grant Review Processes Reflect Ethical Principles?” *Global Public Health* 17.7 (2022): 1186-1199.

³ Chalmers, Iain, et al. “How to increase value and reduce waste when research priorities are set.” *The Lancet* 383.9912 (2014): 156-165.

⁴ Commission on Health Research for Development. *Health research: essential link to equity in development*. Oxford University Press, USA, 1990.

towards solutions that are ethically informed, sensitive to context and pay attention to the real-life constraints the different actors involved in research face.

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1. Definitions and scope

For the purposes of this meeting, health research priority setting will be interpreted broadly. The exact issues covered by the meeting will depend on the proposals that GFBR receives in response to the open call for applications (see below). For the moment, the following are preliminary definitions and corresponding statements of the scope of the meeting topic.

Health research

Health research uses scientific methods to generate data with the aim of better understanding, protecting, or promoting individual or population health. This includes, but is not limited to, research on the social determinants of health, as well as basic science, epidemiology, translational research, and health policy and systems research.

Priority setting

Priority setting occurs any time someone makes a decision or recommendation about how to allocate a scarce resource. In the context of health research, it is not only research *funds* that are scarce, but also the time of expert personnel, infrastructure, places for trainees, eligible research participants, and so forth. Priorities can be set for the allocation of all these resources.

As described below, various groups carry out formal “research priority setting exercises” and the GFBR certainly aims to engage with those. However, many other actors make decisions that affect which health research is carried out and thereby predictably affect who benefits from health research. For example, funders set the criteria used by their reviewers to score grant applications that largely determine how untargeted funds are allocated, researchers themselves have considerable leeway regarding what studies to carry out even when applying for targeted grants, and journal editors affect what research gets done through their views about what is most important to publish. These decisions might not be labeled as “priority setting,” but they do involve allocating scarce research resources on the basis of value judgements. They therefore fall within scope. Further discussion of the different forms priority setting takes is given in Section 3.

2. Case studies: themes and questions

This paper is being published with the call for case studies. Case studies may relate to the themes below or other issues that present ethical challenges related to health research priority setting. They should be relevant to research in low- and middle- income countries (LMICs) and could address (but are not limited to) one or more of the following questions:

Inclusion and fair processes

- Who should be included or represented in the process of setting research priorities? How should they be involved (e.g., surveys, deliberative panels, etc.)? At which stage of the process?
- If priority setting exercises should be constrained by specific substantive criteria, who should decide on the criteria? Do some groups have, due to their knowledge or lived experience, any special authority regarding the values that apply?
- What are good models for sharing power with patients, carers, or community members in research priority setting exercises? How do we ensure that there is real shared decision making and move away from tokenistic approaches?
- How can decision-makers remove power imbalances and inequalities that may impact the ability of certain groups to participate fully in research and benefit from its outcomes?
- Who ought to make decisions about what research gets done?
- How do we ensure that the needs of neglected populations are taken into account in decisions about what research is conducted?
- How transparent do priority setting exercises need to be? What form should this transparency take?

Criteria and goals

- Should research priority setting take account of the implications of research for health care costs (e.g., in the development of expensive new technologies)?
- Given that innovation often occurs unexpectedly (especially for basic research), should funds always be allocated according to research priorities?
- How should priority setting take into account conditions and diseases which disproportionately affect neglected populations, which do not have the potential to generate lucrative markets for treatment?
- Should research priority setting take account of the environmental implications of research (e.g., by giving lower weight to projects with a big environmental footprint)?
- Should research priority setting take gender into account? If yes, how?
- Should the nature of a funding body (e.g., national, regional, global, public/private) affect which populations it prioritizes?
- Is it appropriate to provide incentive schemes to encourage privately-funded research to have a fairer research agenda (e.g., encouraging private funding research into rare diseases)?

- Some organizations provide or fund care as well as conducting research. How should resources be allocated between the provision of care and the collection of data? To what extent should resources be allocated to ancillary care, at the expense of conducting research?
- How should comparative judgments be made about the social value of research (e.g., likelihood, magnitude, distribution of potential health benefits)?
- How should we take account of benefits of research beyond those that result from the information generated (e.g., research capacity building)?

Global and local

- Sometimes the priorities of health research funders do not align with the priorities that have been set in a national priority setting exercise. How should such conflicting priorities be resolved?
- What form should the decolonization of health research take in health research priority setting? How should the legacy of colonialism in health research be recognized and addressed?
- How should unfair power dynamics between high income countries (HICs) and LMICs in research priority setting be reduced (e.g., lack of representation, control over funding, exploitation of research participants)?
- What role should local governments (especially in LMICs) play in funding health research and aligning health research with national priorities?
- How does injustice related to knowledge (e.g., the unjust exclusion of certain agents from the production or dissemination of knowledge) affect priority setting and how can its effects be mitigated?

Governance

- How should health research funders coordinate their global efforts?
- What alternatives to evaluating grant applications through peer review exist? Can these alternatives be shown to be more efficient or more equitable?
- Which approach for research priority setting would be most appropriate to strengthen regional priorities and optimize resources in favour of common interests and neglected populations within a region?
- How should potential conflicts of interest be managed in priority setting?
- How can the success of health research priority setting be evaluated?
- How much time and resources should individuals and organizations put into priority setting?

3. Priority setting in practice

As noted above, priority setting occurs any time someone makes a decision or recommendation about how to allocate a scarce resource. In practice, research priority setting takes very different forms, which can be described along several dimensions.

First, it is helpful to distinguish *explicit* from *implicit* priority setting. Many actors make decisions that affect what research gets done. Relatively few of these decisions are made on the basis of an explicit set of priorities. Nevertheless, what is important to the actor is revealed by what they prioritize and these decisions can be ethically evaluated.

Second, priority setting may be more or less *direct*. A funder deciding which programs to renew or which grant applications to fund is allocating resources quite directly. On the other hand, a journal that encourages submissions from LMICs or publishes only certain types of study will likely affect what research is done, but only indirectly. Other common examples of indirect priority setting include advocacy by patient groups and lists of research priorities promoted by academic societies.

Third, the *scope* of priority setting varies tremendously. The scope may be geographical (e.g., global, national, sub-national), topical (e.g., disease area, scientific discipline), or both. It may involve making decisions among individual trials (e.g., which trials to close in a waning epidemic) or at an individual institution (e.g., when trials compete for participants or participants compete for trials). It might be intended to apply universally or it might be directed at a specific actor or type of actor (e.g., a particular funder).

Finally, priority setting may take place at different levels of granularity. For example, within a funding organization, decisions about strategic priorities or types of grants programs may be made by high-level decision-makers. Specific, more granular decisions about exactly which applications are funded also involve priority setting, which is likely to be carried out by different individuals within the organization.

These differences regarding the forms of research priority setting mean that it is hard to generalize about the ethical considerations involved. Different ethical issues arise in different circumstances. When and how research priority setting should be done is therefore liable to depend on contextual factors.

Some explicit research priority setting is conducted through formal *priority setting exercises*. These exercises are commonly organized by international organizations, national bodies (mostly governmental), or academic groups.⁵ The scope of such priority setting exercises is generally delineated in terms of either geography, topic, or both. For example, a priority setting exercise

⁵ McGregor S, Henderson KJ, Kaldor JM (2014) How Are Health Research Priorities Set in Low and Middle Income Countries? A Systematic Review of Published Reports. *PLoS ONE* 9(10): e108787; Yoshida, Sachiyo. "Approaches, tools and methods used for setting priorities in health research in the 21st century." *Journal of global health* 6.1 (2016).

might aim to set national research priorities for a specific country. Alternatively, an exercise might be global in scope but aim to set priorities for research by disease or discipline, such as tuberculosis, antimicrobials, or emergency medicine. Some exercises do both—they try to set regional or national priorities for a specific topic.

Several documents lay out best practices for priority setting exercises.⁶ These include recommendations for planning an exercise, carrying it out, disseminating and implementing the results, and monitoring and evaluation afterwards. There are now several structured methods available for use in research priority setting exercises, with detailed guidelines and a wealth of experience in application. These include the Child Health and Nutrition Research Initiative (CHNRI) method, the combined approach matrix (CAM), the Essential National Health Research (ENHR) strategy for priority setting, and the James Lind Alliance (JLA) framework. Many research priority setting exercises do not use a method designed for that specific purpose, but use a Delphi method with a group of experts and/or stakeholders.⁷ In addition, it is common for the organizers of priority setting exercises to borrow elements from various structured methods to create a methodology that suits their particular context and resources.⁸

The structured methods for research priority setting exercises differ in terms of how they identify candidate research priorities, what criteria are used to rank those priorities, and who they recommend involving in the exercise and how. Some, like the CHNRI method, are primarily focused on synthesizing expert opinion. Others, like the JLA framework, focus on eliciting the perspectives of those who have direct experience with a health condition. It is noteworthy that all of them are designed to be flexible, so that the organizers of a priority setting exercise can adjust the method to their specific needs, context, and resources. For example, most of the methods are non-directive about exactly which stakeholders should be included and most leave it up to the organizers to decide what substantive criteria should be used by participants to rank candidate priorities.

Brief summaries of four common structured methods for research priority setting exercises are given in the Appendix.

⁶ Okello, David, and Pisonthi Chongtrakul. A manual for research priority setting using the ENHR strategy. COHRED, 2000; Terry et al. A systematic approach for undertaking a research priority setting exercise. Guidance for WHO staff. Geneva: World Health Organization (2020); Viergever, Roderik F., et al. "A checklist for health research priority setting: nine common themes of good practice." *Health research policy and systems* 8.1 (2010): 1-9.

⁷ Yoshida, Sachiyo. "Approaches, tools and methods used for setting priorities in health research in the 21st century." *Journal of global health* 6.1 (2016).

⁸ Kapiriri, Lydia, and Pascalina Chanda-Kapata. "The quest for a framework for sustainable and institutionalised priority setting for health research in a low-resource setting: the case of Zambia." *Health research policy and systems* 16.1 (2018): 1-12.

4. Ethical issues in health research priority setting

There is a small but wide-ranging academic literature relating to health research priority setting. In the following, some of the major themes and open questions from that literature are described under the headings of *Inclusion and fair processes*, *Criteria and goals*, *Global and local*, and *Governance*.

4.1. Inclusion and fair processes

It is widely agreed that *who* takes part in health research priority setting is very important. Who has decision-making power? Whose voices are heard? Values like *inclusiveness* and *stakeholder engagement* are widely endorsed. However, in practice, the nature and extent of stakeholder involvement in priority setting exercises and in decisions about the allocation of resources for health research varies very widely.⁹

One key question is who should be involved—that is, who counts as a stakeholder. A non-exhaustive list of possible stakeholders might include: patients, patients' families, carers, communities, health service providers, researchers, university officials, policy makers, professional associations, NGOs, pharmaceutical companies, donors, and international agencies. Some guidance documents recommend maximal inclusiveness;¹⁰ others are more selective so as to emphasize the perspectives of specific groups, such as patients and clinicians.¹¹

Just as important as who should be involved is *how* stakeholders should be involved. Those who are engaged in priority setting need to guard against tokenism and inclusion without genuine representation.¹² As Bridget Pratt puts it:

Engaging communities that are considered disadvantaged and marginalized in priority setting is essential to making their voices and concerns visible in global health research projects' topics and questions. However, without attention to power dynamics, their engagement can often lead to presence without voice and voice without influence.¹³

Pratt and colleagues describe three dimensions of inclusion: breadth, qualitative equality, and high-quality non-elite participation.¹⁴ *Breadth* refers to who is included in priority setting. It

⁹ Kafiriri, Lydia. "Stakeholder involvement in health research priority setting in low income countries: the case of Zambia." *Research involvement and engagement* 4.1 (2018): 1-9; Reveiz, Ludovic, et al. "Comparison of national health research priority setting methods and characteristics in Latin America and the Caribbean, 2002-2012." *Revista Panamericana de Salud Publica* 34.1 (2013): 1-13;

¹⁰ Montorzi, G., S. De Haan, and C. IJsselmuiden. "Priority Setting for Research for Health: a management process for countries." Geneva: Council on Health Research for Development (COHRED) (2010).

¹¹ James Lind Alliance. *The James Lind Alliance Guidebook, Version 10* (2021).

¹² Bhaumik, Soumyadeep, et al. "Ethics and equity in research priority setting: stakeholder engagement and the needs of disadvantaged groups." *Indian J Med Ethics* 12.2 (2015): 110-113.

¹³ Pratt, Bridget. "Towards inclusive priority setting for global health research projects: recommendations for sharing power with communities." *Health Policy and Planning* 34.5 (2019): 346-357, at 346.

¹⁴ Pratt, Bridget, Maria Merritt, and Adnan A. Hyder. "Towards deep inclusion for equity-oriented health research priority setting: a working model." *Social Science & Medicine* 151 (2016): 215-224.

includes both the spread of roles and characteristics of participants (*range*) and the number of participants from each category (*mass*). The goal is to achieve sufficient representation of relevant perspectives and ensure that no group is over- or under-represented. For example, having only one patient representative is unlikely to yield a comprehensive picture of patient experiences; it is also liable to leave that single patient's contributions overpowered by other voices. *Qualitative equality* refers to equality in the ability of participants to influence the priority setting process—for example, without power imbalances silencing some voices and elevating others. The *quality of non-elite participation* lies on a spectrum from full partnership involving shared decision-making in each stage of the priority setting process through to forms of consultation that elicit information or feedback without sharing power.

Both the question of who should be involved and the question of how they should be involved may be helped by reflection on the functions that including stakeholders is supposed to play in setting priorities: *why* should they be involved? Some of the reasons given for including stakeholders are *instrumental* reasons. These include building trust with patients and communities, and getting buy-in from clinicians, donors, or governmental officials, so that the priorities are more likely to be acted upon.¹⁵ There is also a vital information gathering role for stakeholders to play. It is widely claimed that the potential users and beneficiaries of research—such as patients and clinicians—are a key source of information about what really matters for improving care.¹⁶ Similarly, researchers and other subject matter experts are essential to identifying where we need more knowledge to address a health problem and what research programs could be carried out to fill those knowledge gaps.¹⁷ Stakeholder groups are also sometimes used to decide on the criteria or values that will be used in priority setting exercises.¹⁸ Arguments for why the stakeholders at a meeting are thought to have special authority regarding what values are most important have yet to be filled out.

In addition to these instrumental reasons, there are also *intrinsic* reasons for including stakeholders in health research priority setting. For example, where a national body is setting research priorities, its citizens may have a right to be consulted and included in decision-making.¹⁹ Social justice might also require—for intrinsic *and* instrumental reasons—that marginalized and disadvantaged populations have a genuine say in decisions that affect them, whether the research is supported by public or private actors. The legacy of colonialism may also be relevant here. There is a long history of those with power dictating to those who lack it,

¹⁵ Goold, Susan Dorr, et al. "Members of minority and underserved communities set priorities for health research." *The Milbank Quarterly* 96.4 (2018): 675-705.

¹⁶ Goold et al. 2018; Lomas, J., Fulop, N., Gagnon, D., & Allen, P. (2003). On being a good listener: setting priorities for applied health services research. *The Milbank Quarterly*, 81(3), 363-388; Pratt, Bridget. "Sharing power in global health research: an ethical toolkit for designing priority setting processes that meaningfully include communities." *International journal for equity in health* 20.1 (2021): 1-11.

¹⁷ Rudan et al. 2006.

¹⁸ Okello and Chongtrakul 2000.

¹⁹ Pratt 2019: 46; Resnik, David B. "Setting biomedical research priorities: justice, science, and public participation." *Kennedy Institute of Ethics Journal* 11.2 (2001): 181-204.

including through the generation and use of knowledge. Deliberate sharing of power over decisions that affect health may be vitally important to avoid repeating these moral errors.

Questions about sharing decision-making power with regard to what research gets done are not limited to whether and how to share power with the users and beneficiaries of research. They also arise between researchers. For example, LMIC scientists who collaborate with HIC scientists may have fewer funds, institutional resources, and connections to research sponsors. This can exacerbate power disparities and lead to unfairness.²⁰ LMIC researchers report finding themselves excluded from important decisions about research or included in tokenistic ways.²¹ They may judge that they have been, “relegated to the role of ‘a glorified field worker’ ... That is, of being seen as responsible for providing samples but being excluded from the creative, interesting and ‘scientific’ features of the collaboration.”²² Some good models exist of genuine power-sharing among research groups, but they require considerable planning and effort to avoid reverting to the status quo.²³ Similar dynamics are described at the country level, where the research priorities of wealthy research sponsors—such as pharmaceutical companies—may take precedence over those that have been set as priorities by national bodies.

In addition to these questions regarding the inclusion of stakeholders there are other ethical issues relating to the *processes* of setting priorities—or allocating scarce resources—for health research. In the context of allocating health *care* resources, Norman Daniels and James Sabin proposed the *accountability for reasonableness* framework (A4R).²⁴ They argued that in pluralist societies there would likely be reasonable disagreement about how health care resources ought to be allocated. Rather than looking for an unattainable agreement on principles for allocation, it is therefore preferable to implement a fair process for making allocation decisions. Daniels and Sabin lay out the components they think constitute such a fair process. They write:

To hold decision makers accountable for the reasonableness of their decisions, we have argued that the process must be public (fully transparent) about the grounds for its decisions; the decision must rest on reasons that stakeholders can agree are relevant; decisions should be revisable in light of new evidence and arguments; and there should be

²⁰ Horn, Lyn, et al. “The Cape Town Statement on fairness, equity and diversity in research.” *Nature* 615.7954 (2023): 790-793.

²¹ Ward, Claire Leonie, et al. “Defining Health Research for Development: The perspective of stakeholders from an international health research partnership in Ghana and Tanzania.” *Developing world bioethics* 18.4 (2018): 331-340.

²² Parker, Michael, and Patricia Kingori. “Good and bad research collaborations: researchers’ views on science and ethics in global health research.” *PloS one* 11.10 (2016): e0163579.

²³ Chu, Kathryn M., et al. “Building research capacity in Africa: equity and global health collaborations.” *PLoS medicine* 11.3 (2014): e1001612; Kok, Maarten Olivier, et al. “Towards fair and effective North–South collaboration: realising a programme for demand-driven and locally led research.” *Health Research Policy and Systems* 15 (2017): 1-17.

²⁴ Daniels, Norman, and James Sabin. *Setting limits fairly: can we learn to share medical resources?* Oxford University Press, 2002.

assurance through enforcement that these conditions (publicity, relevance, and revisability) are met.²⁵

A4R has been very influential in discussions of health care priority setting and several attempts have been made to implement it.²⁶ Its principles are also sometimes cited in discussions of *research* priority setting,²⁷ but its implications have not been much developed in that context, nor has it been demonstrated that transparency, publicity, relevance, and revisability are necessary or sufficient for a fair research priority setting process. It should also be noted that the A4R framework for healthcare priority setting has come in for considerable criticism since its inception, including on the grounds that it implicitly endorses substantive values,²⁸ that the discussion of substantive disagreements cannot be avoided,²⁹ and it does not take account of power dynamics.³⁰ The appropriate relationship between substantive ethical and procedural criteria remains a key question for healthcare and research priority setting.

4.2. Criteria and goals

In addition to asking whether a priority setting process appropriately includes stakeholders and is otherwise fair, we may judge it according to substantive ethical criteria or the goals at which it aims. To illustrate, as discussed in the following section, the global allocation of research resources has been widely criticized for focusing disproportionately on interventions for diseases that primarily affect wealthier patient populations. This criticism is based on a *substantive* view about what would be a just distribution of global resources, independent of what processes led to the misallocation.

The literature reveals considerable agreement about two overarching goals at which health research priority setting should aim: to maximize benefits to patients and populations, and to reduce inequity.³¹ Some version of these two goals is generally taken as axiomatic, even by writers who believe that the criteria used to rank research ideas should be decided through

²⁵ Daniels, Norman, and James E. Sabin. "Accountability for reasonableness: an update." *Bmj* 337 (2008): a1850.

²⁶ See, e.g., Bukachi, Salome A., et al. "Healthcare priority setting in Kenya: a gap analysis applying the accountability for reasonableness framework." *The International journal of health planning and management* 29.4 (2014): 342-361; Maluka, Stephen, et al. "Implementing accountability for reasonableness framework at district level in Tanzania: a realist evaluation." *Implementation Science* 6.1 (2011): 1-15; Moosa, Mohammed Rafique, et al. "Use of the 'accountability for reasonableness' approach to improve fairness in accessing dialysis in a middle-income country." *PloS one* 11.10 (2016): e0164201.

²⁷ Tomlinson, Mark, et al. "A review of selected research priority setting processes at national level in low and middle income countries: towards fair and legitimate priority setting." *Health Research Policy and Systems* 9.1 (2011): 1-7.

²⁸ Rid, Annette. "Justice and procedure: how does "accountability for reasonableness" result in fair limit-setting decisions?" *Journal of Medical Ethics* 35.1 (2009): 12-16; Lauridsen, Sigurd, and Kasper Lippert-Rasmussen. "Legitimate allocation of public healthcare: beyond accountability for reasonableness." *Public Health Ethics* 2.1 (2009): 59-69.

²⁹ Friedman, Alex. "Beyond accountability for reasonableness." *Bioethics* 22.2 (2008): 101-112.

³⁰ Pratt et al. 2016.

³¹ Nuyens, Yvo. "Setting priorities for health research: lessons from low-and middle-income countries." *Bulletin of the World Health Organization* 85 (2007): 319-321.

stakeholder consultation.³² However, the exact content of the goals is not always spelled out. There is room for disagreement over what benefits count, who the relevant beneficiaries are, how to conceptualize inequity, and how to balance the goals when they come into conflict.

First, are the benefits that ultimately matter primarily health benefits for the individual who receives a proven safe and effective intervention? Or might other benefits count too? This question implicates two related but distinct issues. One is about health versus non-health benefits. For example, if an experimental treatment for arthritis reduces patients' pain and increases their mobility, this is clearly a health benefit. But for working-age patients, it might also have the benefit of permitting them to return to work. Having a job contributes to someone's well-being. Is the prospect of such a benefit a reason in favor of prioritizing a research project?

The other issue concerns indirect benefits—those that redound to individuals other than the recipients of a health intervention. For example, a research project might lead to environmental benefits that are experienced by a whole population or reduce disease transmission even among those who don't receive an intervention themselves. Or consider the implications of different types of research for health system costs. Some research aimed at developing new technologies might, if successful, add to the health system's costs (since they will be made available for patients). Other research—e.g., some comparative effectiveness studies—might be likely to save money overall. Do these benefits speak in favor of the latter? Other indirect benefits that are often mentioned are improved local research capacity and the economic growth stimulated by that local research. How should they be balanced against the direct health benefits that generating new knowledge may provide?³³

Second, should decision-makers give higher priority to some populations over others? Knowledge is a non-rivalrous good. Outwith the artificial barriers constructed by intellectual property laws, journal charges, and the like (see Section 4.4), everyone could make use of the same piece of information without loss to anyone else. However, even in the ideal case, the knowledge generated by research is more likely to benefit some patient populations than others. Research into the genetics of colon cancer is more likely to benefit patients with colon cancer than patients with diabetes; research investigating barriers to accessing care among rural populations in Brazil is more likely to benefit Brazilians than French people. Does it make a

³² See, e.g., Working Group on Priority Setting. "Priority setting for health research: lessons from developing countries." *Health policy and planning* 15.2 (2000): 130-136.

³³ The question of which benefits count has spawned a small literature in health care priority setting. See, e.g., Brock, Dan W. "Separate spheres and indirect benefits." *Cost effectiveness and resource allocation* 1 (2003): 1-12; John Broome, 'Measuring the burden of disease by aggregating well-being' in C.J. Murray et al. (eds), *Summary Measures of Population Health: Concepts, Ethics, Measurement and Applications* (Geneva: World Health Organization, 2002): 91-113; Persad, Govind, and Jessica du Toit. "The case for valuing non-health and indirect benefits" in Norheim, Ole F., Ezekiel J. Emanuel, and Joseph Millum, eds. *Global health priority setting: beyond cost-effectiveness*. Oxford University Press (2019): 207-222.

difference who the decision-maker is? For example, should a government official prioritize the national population?³⁴

Third, how should equity be conceived? People can be disadvantaged in multiple ways, including in virtue of their health conditions, economic status, gender, race or ethnicity, and so forth. These are all sources of inequity that might be taken into account. There is general agreement in the literature that these multiple dimensions of disadvantage matter for health research priority setting and that taking them into account is a matter of social justice. Greatest priority should be given to populations that are among the worst off, or as Jonathan Wolff and Avner De-Shalit put it, those who experience “clustering” disadvantage.³⁵ Beyond that generalization, can we be more precise about degrees of disadvantage and can we operationalize our conception of equity in a way that is useful for research priority setting?³⁶

Fourth, how should the twin goals of maximizing benefits and reducing inequity be balanced? These goals can come into conflict. For example, populations who have access to good quality health care may be more likely to benefit from new technologies, but they are also populations that are generally better off. Studies of public preferences show that most people agree that both the magnitude of benefits and the levels of disadvantage of the beneficiaries matter when it comes to allocating scarce resources.³⁷ There is not consensus on how these considerations should be balanced. This is an issue for both health care and health research priority setting, but not one that has received much sustained attention as yet.

Other substantive criteria are also sometimes evoked in discussions of how research resources are distributed. Some involve different conceptions of fairness in the distribution of research resources.

One concerns “orphan diseases,” meaning diseases for which the expected return on R&D is not expected to incentivize private investment. Such diseases fall into two categories. The first is diseases that are *rare*. For example, Alkaptonuria (AKU) is a recessive genetic condition that affects only 1 in 250,000 people worldwide.³⁸ Research into rare diseases may not be expected to produce sufficient population-level benefits to justify it—there just are not enough potential beneficiaries. Nevertheless, some argue that not investing in research is unfair to people who are unlucky enough to have rare disease.³⁹ Several jurisdictions, including the European Union,

³⁴ Pierson, Leah, and Joseph Millum. “Health research priority setting: The duties of individual funders.” *The American Journal of Bioethics* 18.11 (2018): 6-17.

³⁵ J. Wolff & A. De-Shalit, *Disadvantage* (Oxford: Oxford University Press, 2012).

³⁶ For one attempt to conceptualize disadvantage more precisely, see Sharp, Daniel, and Joseph Millum. “Prioritarianism for global health investments: identifying the worst off.” *Journal of Applied Philosophy* 35.1 (2018): 112-132.

³⁷ Shah, Koonal K. “Severity of illness and priority setting in healthcare: a review of the literature.” *Health policy* 93.2-3 (2009): 77-84.

³⁸ Alkaptonuria Society. *Alkaptonuria explained*. Available at: <https://akusociety.org>.

³⁹ Gericke, C. A., Annette Riesberg, and Reinhard Busse. “Ethical issues in funding orphan drug research and development.” *Journal of Medical Ethics* 31.3 (2005): 164-168. For a wide-ranging discussion of the ethics of

Japan, and the United States, have legislation designed to incentivize private sector investment into these diseases. For example, the US Orphan Drug Act of 1983 granted sponsors of approved drugs for orphan diseases seven years of market exclusivity, as well as generous tax credits and grants.⁴⁰

The second category comprises diseases that are under-researched by the for-profit sector because their burden falls primarily on poorer populations. If patients with a disease cannot afford new treatments then for-profit entities have little incentive to develop them. This category includes “neglected diseases,” such as dengue, snakebite, and leprosy.⁴¹ For these diseases, the *ethical* case in favor of more research is much more straightforward. The practical questions of how to encourage companies and funders from high-income countries remain pressing.

Above, the discussion of the benefits of research and equity was focused on the outcomes of research—i.e., what are the expected health benefits of a research program and what are its potential effects on inequality in health? Some discussions focus instead on fairness in the distribution of inputs. For example, public funders are sometimes criticized on the grounds that their allocations of funding across disease areas are not proportional to the relative burdens that can be attributed to those disease areas.⁴² A related critique is that the distribution of research funds within a disease area is skewed. For example, Krahn and Fenton criticize the way that Canadian funding for autism spectrum disorder (ASD) research is overly focused on biomedical and clinical research for children to the detriment of, for example, research on health services for adolescents and adults with ASD.⁴³ More broadly, it may be questioned whether there is an excessive emphasis on disease-specific research, rather than on health systems and the social determinants of health.

In thinking about the criteria used for allocation, it is important to remember how uncertain most of the benefits of research are at the point when allocation decisions are made. With a few exceptions—for example, some comparative effectiveness research—we cannot be sure that research into any particular topic will in fact yield any benefits at all. Precision in estimates of the quantity of benefit or effects on equity is also likely to be illusory. The history of medical

allocating resources for rare diseases, see Largent, Emily A., and Steven D. Pearson. “Which orphans will find a home? The rule of rescue in resource allocation for rare diseases.” *Hastings Center Report* 42.1 (2012): 27-34.

⁴⁰ For an assessment of its effects, see Department of Health and Human Services, Office of Inspector General. *The Orphan Drug Act: Implementation and Impact*. May 2001. Available at: <https://oig.hhs.gov/oei/reports/oei-09-00-00380.pdf>.

⁴¹ For data on R&D for neglected diseases, see Policy Cures Research. *G-FINDER*. Available at:

<https://www.policycuresresearch.org/g-finder/>.

⁴² See, e.g., See, e.g., Gillum, Leslie A., et al. “NIH disease funding levels and burden of disease.” *PLoS one* 6.2 (2011); Xu, Gelin, et al. “NSFC health research funding and burden of disease in China.” *PLoS One* 9.11 (2014): e111458. For discussion, see Millum, Joseph. “Should health research funding be proportional to the burden of disease?” *Politics, Philosophy & Economics* 22.1 (2023): 76-99.

⁴³ Krahn, Timothy M., and Andrew Fenton. “Funding priorities: Autism and the need for a more balanced research agenda in Canada.” *Public Health Ethics* 5.3 (2012): 296-310. See, also, Pellicano, Liz. “A future made together: new directions in the ethics of autism research.” *Journal of research in special educational needs* 14.3 (2014): 200-204.

research tells us that inquiry driven by curiosity and serendipity plays important roles in scientific breakthroughs.⁴⁴ This supports the idea that scientists should be allowed some room to simply conduct research on what interests them without thinking too much about the utility of the results. Equally, this point should not be overplayed. Research successes are not entirely random. It is still true that we can say something about which groups are *more likely* to benefit from a particular research investment. And the more resources expended on a topic, the more likely success becomes.

Finally, how resources are allocated for research will also be affected by constraints on what research can permissibly be conducted. For example, some research programs might be expected to yield substantial health benefits to a population, yet the studies involved would be illegal or unethical. Here, traditional research ethics (regarding when research with human or non-human animal subjects is permissible) intersects with the ethics of research priority setting.

4.3. Global and local

Questions relating to the global and local arise often enough that they merit separate discussion, even though some of the issues discussed in this section have already been touched upon.

Health research is a global enterprise: research networks stretch across national borders, clinical trials have sites in multiple countries, and the data gathered in one location is often relevant to the health problems in others. Viewed globally, the distribution of research resources also looks very unjust. Back in 1990, the Commission on Health Research for Development identified what came to be known as the “10/90 gap”:

“a gross mismatch between the burden of illness, which is overwhelmingly in the Third World, and investment in health research, which is overwhelmingly focused on the health problems of the industrialized countries.”⁴⁵

Though the distribution of disease—particularly the burden of non-communicable diseases—has shifted since then, the basic problem remains: the global allocation of research resources favors research into conditions that predominantly affect wealthier patient populations. Moreover, that research is itself skewed in favor of the development of novel pharmaceuticals and other marketable technologies. A focus on vertical, disease-specific programs may itself be problematic. In many cases, it is argued, poorer populations would benefit not just from more

⁴⁴ Hanna, Michael. “Matching taxpayer funding to population health needs.” *Circulation research* 116.8 (2015): 1296-1300.

⁴⁵ Commission on Health Research for Development. *Health research: essential link to equity in development*. Oxford University Press, USA, 1990: xvii.

research into neglected health conditions but from research designed to develop affordable solutions, improve health systems, and address the social determinants of health.⁴⁶

The current unjust distribution of research resources and their benefits can also be viewed through a historical lens. The majority of health research is funded by HIC institutions or companies based in them. These countries are also—in the majority of cases—countries with a long history of dominating others through war, colonization, forced trade, the extraction of resources, and the imposition of their own majority cultures. Many historical global power relations remain in a similar form today. They are reflected in the misallocation of resources described in the previous paragraph. But they are also frequently reflected in the ways that health research is planned and carried out. For example, much of the health research that is carried out in LMICs is funded by HIC entities. Even when it involves collaboration, it is often individuals from HICs who make the major decisions about the research and whose interests have greatest weight.⁴⁷ As described in Section 4.1., LMIC scientists sometimes reflect that they are treated as junior partners in research conducted in their own countries and the national priorities of those countries are ignored in favor of the priorities of the research funders.⁴⁸

Intertwined with these concerns about justice in the distribution of resources are questions of epistemic justice.⁴⁹ Scientific concepts used in health research—such as what counts as a disease and how it should be classified—generally reflect Western views of the world.⁵⁰ The individuals whose testimony is regarded as trustworthy or valuable are those who have status as knowers within the status quo hierarchy. Patients and community members sometimes report that their views and their understanding of local health problems are often ignored or given lip-service, even when researchers are supposed to be including them.⁵¹

Note that these problems are not unique to international research. It is also true within countries that certain ways of understanding the world and the testimony of certain individuals are prioritized. Domestic injustice undermines fairness in setting and carrying out research agendas, just as global injustice does. In both cases there are obligations on those who make decisions about research to remedy imbalances in power. This may require, for example, schemes to share decision-making with communities, patients, or LMIC scientists, and it may be a further reason to build local research capacity. Some good models for this exist and others are needed.⁵²

⁴⁶ Mohindra, K. S., et al. “Towards the next generation of public health research in India: a call for a health equity lens.” *J Epidemiol Community Health* 66.9 (2012): 839-842; Pratt, Bridget, and Adnan A. Hyder. “Fair resource allocation to Health Research: priority topics for bioethics scholarship.” *Bioethics* 31.6 (2017): 454-466.

⁴⁷ Tucker, Tim J., and Malogapuru W. Makgoba. “Public-private partnerships and scientific imperialism.” *Science* 320.5879 (2008): 1016-1017.

⁴⁸ Ward et al. 2018.

⁴⁹ Fricker, Miranda. *Epistemic injustice: Power and the ethics of knowing*. Oxford University Press, 2007.

⁵⁰ Besson, Emilie S. Koum. “How to identify epistemic injustice in global health research funding practices: a decolonial guide.” *BMJ Global Health* 7.4 (2022): e008950.

⁵¹ Groot, Barbara, et al. “What Patients Prioritize for Research to Improve Their Lives and How Their Priorities Get Dismissed again.” *International Journal of Environmental Research and Public Health* 19.4 (2022): 1927.

⁵² Chu et al 2014; Kok et al. 2017.

Decisions that affect what health research is conducted are made by multiple actors and all of them may have priorities. But their respective priorities may clash. For example, international funding agencies may set their priorities on the basis of what they regard as globally most important. But what is regarded as globally most important may not be the same as what is highest priority for an individual country. Where a country has set national health research priorities, should these trump the priorities of outside organizations? Or, are there circumstances where there should be a compromise? One view is that research priority setting should usually be “bottom-up”—meaning that institutional or other sub-national priorities should direct national priorities, which should, in turn, direct global priorities.⁵³ In any case, the existence of such clashes suggests the importance of processes that can help different actors to understand why others have the priorities they do and facilitate reconciliation.

A distinct global versus local issue concerns what types of knowledge generation should take priority. Some information is highly localized. For example, a behavioral study of factors driving uptake of circumcision for HIV prevention would likely be very sensitive to context. Other research could be carried out and is relevant almost anywhere in the world. For example, research into the cellular basis for aging, the effects of vitamin deficiency, or the effectiveness of novel chemotherapy for cancer is assumed to be applicable to humans wherever they are.⁵⁴ Some writers detect a bias towards the “universal” in decisions about what research to fund or what results to publish.⁵⁵ Yet, they argue, often what is needed to generate benefits to disadvantaged and marginalized populations is research that is attuned to their specific context.

4.4. Governance

This section briefly surveys two areas where issues concerning ethics and governance have received substantial attention: the practices of funders, and the legal regimes governing marketing approval and intellectual property. A further pertinent governance issue, which has not yet received sustained attention, is the monitoring and evaluation of research priority setting itself.

We can divide major funders of health research into *governmental*, *non-profit*, and *for-profit* organizations. Though precise estimates are hard to obtain, approximately 30% of global health research funding comes from governments, 10% from non-profit organizations, and 60% from the private for-profit sector.⁵⁶ Each type of funder faces different constraints on their actions. For example, government agencies may be accountable to citizens and are sensitive to political

⁵³ Pratt, Bridget, Mark Sheehan, Nicola Barsdorf, and Adnan A. Hyder. “Exploring the ethics of global health research priority setting.” *BMC medical ethics* 19, no. 1 (2018): 1-11.

⁵⁴ Whether this assumption is justified is another matter. See Miller, Jennifer, and Joseph Millum. “Ethical considerations in international clinical trial site selection.” *BMJ Global Health* 7.4 (2022): e008012..

⁵⁵ Abimbola, Seye. “The uses of knowledge in global health.” *BMJ Global Health* 6.4 (2021): e005802. See, also, discussion and citations in Kok et al. 2017.

⁵⁶ Røttingen, John-Arne, et al. “Mapping of available health research and development data: what's there, what's missing, and what role is there for a global observatory?” *The Lancet* 382.9900 (2013): 1286-1307.

considerations;⁵⁷ for-profit organizations pursue lines of research that they expect to yield substantial returns on investment. Further, the practices of all these funders can be assessed on the basis of ethical considerations.⁵⁸ This includes private funders: as the flourishing field of business ethics attests, simply because one is a private actor, one is not absolved from criticism on the basis of justice or other ethical principles.⁵⁹

Many of the ethical issues relating to the actions of funders have already been discussed above. However, in addition to evaluating how individual funders set research priorities, some commentators raise more global critiques. One of these concerns the global distribution of research resources, as we saw above in the discussion of the “10/90 gap.” Another concerns coordination among funders. As the many duplicative or underpowered studies of Covid-19 treatments showed, failure to coordinate research efforts has significant costs in terms of wasted resources.⁶⁰ Research resources that are wasted are resources that could have been expended on other important health problems. Inefficiency is therefore a matter of ethics. Various organizations now exist that aim to coordinate research funders—at least in the public and non-profit sectors. These include *ESSENCE on health research*,⁶¹ *Ensuring Value in Research (EViR)*,⁶² and the Heads of International Research Organizations (HIROs).⁶³

Public and non-profit funders provide a substantial proportion of their funding in the form of competitive grants that are evaluated through expert peer review. This way of allocating resources has come in for some criticism in recent years. One concern is that grant applications are largely scored on the basis of the perceived likelihood that they will meet their scientific aims, i.e., the scientific merit of the application, qualifications of investigators, institutional support, and the like. Considerations like disease burden or impact on health equity are often not considered. This may skew grant-funded research away from the distribution that would be ethically optimal.⁶⁴ Another concern is that, even by its own standards, the system does a poor job of identifying the best applications.⁶⁵ Given how much time and effort is spent by scientists on writing and reviewing grant applications this seems like a considerable waste of resources. A variety of alternative methods for awarding funding have been suggested—from directly

⁵⁷ Callahan, Daniel. “Shaping biomedical research priorities: the case of the National Institutes of Health.” *Health Care Analysis* 7.2 (1999): 115-129; Resnik 2001.

⁵⁸ Pierson, Leah, and Joseph Millum. “Health research priority setting: The duties of individual funders” *The American Journal of Bioethics* 18.11 (2018): 6-17.

⁵⁹ For discussion, see, e.g., Heath, Joseph, *Morality, Competition, and the Firm: The Market Failures Approach to Business Ethics*, Oxford University Press, 2014

⁶⁰ Glasziou, Paul P., Sharon Sanders, and Tammy Hoffmann. “Waste in covid-19 research.” *Bmj* 369 (2020).

⁶¹ TDR, the Special Programme for Research and Training in Tropical Diseases. *Essence on health research*. Available at: <https://tdr.who.int/groups/essence-on-health-research/>.

⁶² Ensuring Value in Research (EViR). *Ensuring Value in Research (EViR)*. Available at: <https://evir.org>.

⁶³ Viergever, Roderik F. “Aid alignment for global health research: the role of HIROs.” *Health research policy and systems* 9.1 (2011): 1-3.

⁶⁴ Pierson, Leah, and Joseph Millum. “Health Research Priority Setting: Do Grant Review Processes Reflect Ethical Principles?” *Global Public Health* 17.7 (2022): 1186-1199.

⁶⁵ Graves, Nicholas, Adrian G. Barnett, and Philip Clarke. “Funding grant proposals for scientific research: retrospective analysis of scores by members of grant review panel.” *Bmj* 343 (2011).

funding excellent scientists,⁶⁶ to having peers vote on who should receive funding,⁶⁷ to lotteries among applications that meet a minimum bar of quality.⁶⁸

The legal regimes that govern the development and marketing of medical technologies also have an enormous effect on what health research is conducted and who benefits from it. First, in order to receive marketing approval and so to be sold and prescribed to patients outside of clinical trials, new drugs and other technologies must meet certain standards of safety and efficacy. Second, and more important for what research is conducted, are the laws governing intellectual property protection. Drugs and devices that meet certain criteria—novelty, inventiveness, and utility—can be patented. A patent gives the holder the exclusive right to decide who may manufacture and sell the drug or device for a limited period of time. Since the World Trade Organization’s Agreement on Trade-Related Aspects of Intellectual Property Rights (the TRIPS agreement) came into effect most countries in the world now grant patent terms of twenty years.⁶⁹ The TRIPS agreement has come in for heavy criticism.⁷⁰ Its strong patent protection incentivizes research and development by for-profit entities into technologies that are patentable and expected to be profitable. This leads to them prioritizing drugs and devices to treat common conditions that affect wealthy populations. In Section 4.2, we discussed how this leads to “orphan diseases”—health conditions that are either too rare or affect people who are too poor to incentivize much research. It also leads to a focus on developing new technologies that may be non-optimal, since other research that could benefit patients more does not lend itself to patenting. This includes some health services research, comparative effectiveness research, and behavioral research.

These legal regimes are not the primary focus of this GFBR, but it is important to acknowledge the effect that they have on research priorities, as well as the fact that they are societal constructions that can be critiqued on ethical grounds.

⁶⁶ Ioannidis J. More time for research: fund people not projects. *Nature*. 2011; 477(7366):529–31.

⁶⁷ Barnett, Adrian G., et al. “Using democracy to award research funding: an observational study.” *Research Integrity and Peer Review* 2 (2017): 1-9.

⁶⁸ Fang, Ferric C., and Arturo Casadevall. “Research funding: The case for a modified lottery.” *MBio* 7.2 (2016): e00422-16; Roumbanis, Lambros. “Peer review or lottery? A critical analysis of two different forms of decision-making mechanisms for allocation of research grants.” *Science, Technology, & Human Values* 44.6 (2019): 994-1019.

⁶⁹ World Trade Organization. *Overview: the TRIPS Agreement*. Available at: https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm.

⁷⁰ Banerjee, Amitava, Aidan Hollis, and Thomas Pogge. “The Health Impact Fund: incentives for improving access to medicines.” *The Lancet* 375.9709 (2010): 166-169.

5. Appendix: Four structured methods for research priority setting exercises

This appendix briefly describes the four most common structured methods for research priority setting exercises.⁷¹ The methods are quite different in terms of how they are structured and how directive they are with regard to the stages of priority setting. To help comparison, the following key questions are answered with respect to each method:

1. How are candidate priorities—i.e., the research options to be prioritized among—identified?
2. What criteria are used to rank the candidate priorities?
3. Who is involved in the exercise and what is their role?

The Child Health and Nutrition Research Initiative (CHNRI) method⁷²

The CHNRI method was originally developed by researchers looking to set priorities for research into child health and nutrition but has been used widely outside that context.⁷³ A technical working group defines the context for the priority setting exercise (space, time, target population, target disease burden). They survey a large number of subject matter experts to generate an exhaustive list of relevant research ideas. This list is consolidated and duplicates removed. The experts are then asked to score each research idea using the priority setting criteria. CHNRI provide five standard criteria: (i) answerability, (ii) effectiveness, (iii) deliverability, (iv) maximum potential for disease burden reduction, and (v) effect on equity. These can be amended as desired. They can also be weighted according to the value placed on each criterion. The method recommends obtaining weights through consultation with stakeholders from the wider community. The result is a ranking of all the research ideas according to how they score on the priority setting criteria.

1. *How are candidate priorities identified?* Surveying experts (usually researchers).
2. *What criteria are used to rank the candidate priorities?* Five standard criteria are used to rank the priorities, though different exercises may select different priorities.
3. *Who is involved in the exercise and what is their role?* Funders or government bodies may be involved in setting up the priority setting exercise, deciding on its parameters, and possibly deciding the criteria to be used. Subject matter experts identify the

⁷¹ Not described here because they are currently less commonly used are the method described by the WHO's *Ad Hoc Committee on Health Research Relating to Future Intervention Options* (World Health Organization. *Investing in health research and development: report of the ad hoc committee on health research relating to future intervention options*. No. TDR/GEN/96.1. World Health Organization, 1996), *Listening for Direction* (Lomas, J., Fulop, N., Gagnon, D., & Allen, P. (2003). On being a good listener: setting priorities for applied health services research. *The Milbank Quarterly*, 81(3), 363-388), the adaptation of the *Choosing All Together* (CHAT) exercise to health research (Goold, Susan Dorr, et al. "Members of minority and underserved communities set priorities for health research." *The Milbank Quarterly* 96.4 (2018): 675-705), and value of information analysis (Fleurence, Rachael L., and David J. Torgerson. "Setting priorities for research." *Health policy* 69.1 (2004): 1-10.).

⁷² Igor Rudan, Shams El Arifeen, Robert E. Black A Systematic Methodology for Setting Priorities in Child Health Research Investments (2006): 5.

⁷³ Rudan, Igor, et al. "Setting health research priorities using the CHNRI method: VII. A review of the first 50 applications of the CHNRI method." *Journal of global health* 7.1 (2017).

candidate priorities and rank them. Other stakeholders are involved only through providing relative weights for the criteria.

The combined approach matrix (CAM)⁷⁴

CAM is primarily a tool for organizing the information needed for setting research priorities which can then be used by the participants in a priority setting exercise. It involves the individuals carrying out the exercise populating a matrix in two or three dimensions: *public health, institutional, and equity*. The public health dimension captures information on disease burden, determinants of disease, the present level of knowledge about disease, the cost and effectiveness of existing interventions, and current resources flows. The institutional dimension assigns the public health information to different levels: individual, household, and community; health ministry and other health institutions; non-health sector; and governance. The equity dimension involves assessing whether there are differences between social groups, such as gender and income groups. Completing this matrix allows knowledge gaps to be identified, which might themselves be research priorities, as well as presenting all the relevant information relating to a priority setting process in a systematic way.

1. *How are candidate priorities identified?* Typically identified by experts (e.g., through consulting groups of subject matter experts or desk reviews of the literature).
2. *What criteria are used to rank the candidate priorities?* Not specified, though implicitly they include potential reduction in disease burden, cost, and equity.
3. *Who is involved in the exercise and what is their role?* Not specified, so only the involvement of experts during the creation of the matrix is dictated by the method.

The Essential National Health Research (ENHR) strategy for priority setting⁷⁵

The ENHR strategy for priority setting was developed by the Council on Health Research for Development (COHRED) to assist countries setting research priorities at the national level. The method centers around a workshop at which a national research agenda is agreed upon by participants who represent the various groups who have an interest in what research gets done in the country. These include researchers, government officials, health service providers, community members, representatives from the private sector, donors, and international agencies. Prior to this workshop a smaller working group of stakeholders carries out a situation analysis to gather relevant data and uses that analysis and stakeholder inputs to generate a list of research ideas. They then agree upon criteria for evaluating the ideas and the method for scoring them at the workshop. No specific criteria or scoring method is required by the ENHR method, though its manual provides suggested criteria under the headings of *appropriateness, relevancy, chance of success, and impact*.

⁷⁴ Ghaffar A, Collins T, Matlin SA, Olifson S. The 3D combined approach matrix: an improved tool for setting priorities in research for health. Geneva: Global Forum for Health Research (2009).

⁷⁵ Montorzi, G., S. De Haan, and C. IJsselmuiden. "Priority Setting for Research for Health: a management process for countries." Geneva: Council on Health Research for Development (COHRED) (2010).

1. *How are candidate priorities identified?* Through the working group's situation analysis and inputs from stakeholders.
2. *What criteria are used to rank the candidate priorities?* The criteria used to rank candidate priorities are decided on by the working group. The ENHR manual suggests 28 possible criteria.
3. *Who is involved in the exercise and what is their role?* A small working group of stakeholders is involved in designing the process to be used and a larger group in scoring the candidate priorities. The method emphasizes being as inclusive as possible.

The James Lind Alliance (JLA) framework⁷⁶

The JLA's priority setting partnerships (PSPs) aim to identify the research topics that patients, carers, and clinicians regard as most important for their condition. The PSPs therefore involve only those who have direct experience of the condition (so exclude, for example, researchers who are not also clinicians, patients, or carers). The JLA method begins with the organizers of the PSP gathering uncertainties from patients or service users, carers, clinicians, and existing guidelines and systematic reviews. After eliminating overlap, out of scope uncertainties, and questions for which there are already answers, a long-list of "indicative questions" remains. An interim priority setting exercise is conducted through a stakeholder survey to reduce this long-list to 20-30 questions. Survey responses are analyzed such that all stakeholder groups (e.g., patients, carers, clinicians) are given equal weight irrespective of the numbers responding. A workshop with 25-30 participants finally takes this short-list and generates a consensus-based top-10.

1. *How are candidate priorities identified?* Surveys of patients or service users, carers, clinicians, and examining existing guidelines and systematic reviews.
2. *What criteria are used to rank the candidate priorities?* They are ranked by the patients, clinicians, and carers involved.
3. *Who is involved in the exercise and what is their role?* The PSP is led by a steering group which includes patients, carers, clinicians, and a JLA Adviser. Surveys, interviews, and workshop participation is restricted to patients, clinicians, and carers.

⁷⁶ James Lind Alliance. *The James Lind Alliance Guidebook, Version 10* (2021).