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Characteristics of research review boards in the context of community-academic settings: A scoping review

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Review Article

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Abstract

Community advisory boards (CABs) have traditionally been formed in the context of discrete projects and served to support community protections within the confines of the associated investigation(s). However, as funding bodies increasingly prioritize health equity, CABs have shifted – evolving into long-running organizations with broader scope and value. An emerging cornerstone of these project-independent boards (PICABs) has been the formation of "Research Review Boards" (RRBs). While unified in their goal of promoting community protection and representation in health research, it is unknown to what degree RRBs differ on key features including membership, leadership, service reach, and – crucially – impact. A scoping review was conducted according to PRISMA-ScR guidelines to analyze current practices for RRBs. Of screened articles ($n = 1878$), 25 were included, corresponding to 24 unique RRBs. Findings indicated overlaps in the stated missions, funding structures, and processes of most RRBs. Differences in membership composition, location, service-reach, leadership structures, evaluation procedures, and perceived impact were evident. Where data is available, RRBs receive positive endorsement from both internal members and external users. Standardization of evaluation procedures is needed to fully quantify impact. Additional challenges to sustainability, communication, and conflicts (e.g., of interest, commitment, and power differentials) merit further consideration.

Introduction

In the context of clinical and public health research, community engagement (CE) represents a spectrum of practices designed to engage communities in the process of health science advancement and discovery [1]. Community advisory boards (CABs) [2–4] are a critical tool for navigating this continuum, elevating the community voice to: 1) center community concerns and culture in research; 2) build community-academic trust through transparent communication; 3) address power dynamics and positionality through acknowledgement of lived experience; and 4) leverage complementary member strengths into a collective partnership serving equity in health science [5,6].

Though modern CABs are utilized in diverse contexts, their origins rest in the health sector where they have long served as sources of disease-specific community consultation, notably in the context of the HIV epidemic [4]. In the decades since, these health science CABs (HSCABs) have expanded in reach and now represent crucial liaising mechanisms for an array of community-academic partnerships – each with unique structures and attendant goals. These structural elements include the respective service frameworks of each HSCAB, which may range from consultative services to community-based participatory research (CBPR). Consultative HSCABs, which align more closely with historical board mandates, typically provide on-demand feedback to those with decision-making power (e.g., to medical researchers, practitioners) [7]. However, the recent enactment of more equitable configurations – through modern CBPR-empowered HSCABs – have shown the potential to amplify impact and have reshaped scientific expectations around the active engagement of community experts in health research [8].

Reflecting this shift, funding bodies (e.g., NCATS, PCORI) now increasingly require CE activities of their grantees [9,10]. CABs have emerged as the most common means of fulfilling

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Table 1. Internal index of terms

Acronym (if relevant)	Terms	Definition
CAB	Community Advisory Board	A formal group of community members, often established in collaboration with an academic institution or representative, to provide direct input on research design to ensure community protection, respect, equity, and representation.
CE	Community Engagement	A collaborative process which prioritizes working with people directly to address barriers to health and well-being. CE is an umbrella term capturing an array of efforts to establish and elevate community–practitioner partnership, with CABs representing one application of CE principles.
CBPR	Community-based Participatory Research	A paradigm of community-engagement in which researchers, institutions, and community members actively collaborate on all elements of a research project. Under a CBPR structure, CAB members are experts who engage actively in the scientific decision-making progress.
	Health Equity	A state in which all persons have equal opportunities to pursue optimal health. The RRBs at focus in this review advance health equity by providing a construct to embed community in the research process, ensuring principles of community representation, protection, and cultural competence are centered in the design and execution of all research in their region(s).
HSCAB	Health Services Community Advisory Board	A CAB focused on issues of community equity in health services research. All CABs examined in the current work belong to this subset of CABs and may be referred to as HSCABs or CABs throughout.
NCATS	National Center for Advancing Translational Sciences	One of the 27 institutes of the National Institutes of Health (NIH), NCATS supports the process of turning research observation into health solutions through translational science (TS). The institute funds the national Clinical and Translational Science Awards Program.
PCORI	Patient Centered Outcomes Research Institute	An independent, nonprofit research funding organization that seeks to empower patients and others with actionable information about their health and healthcare choices.
PSCAB	Project-Specific Community Advisory Board	A CAB which has been established to support a specific research project; time-limited (e.g., to the duration of project funding); in the current work, PSCABs are a subset of HSCABs.
PICAB	Project-Independent Community Advisory Board	A CAB which exists outside of a specific research project and its funding; not time-limited, in some cases long-standing. In the current work, PICABs are a subset of HSCAB and are typified by community-based and institution-based (e.g., academic) participants.
RRB	Research Review Board	A defined group of community-based experts, typically housed within a PICAB, who serve as community-academic consultants to ensure community protection and representation in health research. Individual boards may use different terms (e.g., "Community IRB"). For this work, we distinguish RRBs from IRBs based on the focus of their protections (e.g., community vs. individual protections). We also distinguish "institution-based RRBs" (those housed within or funded by an academic institution) and "community-based" RRBs.
TS	Translational Science	A field that uses scientific methods to understand and innovate solutions to address challenges along the translational research pipeline: the process by which the insights of basic science are "translated" to interventions which directly serve public health. Ensuring the community is represented in – and reached by – health research is a core to the translational science mission of advancing more efficient, and more impactful, health solutions.

such mandates [11,12], precipitating an evolution in both the number and nature of HSCABs in operation across the United States [13,14]. Within this expansion, a dichotomy has emerged between HSCABs designed to support project-specific (time-limited) aims and those which have been established to support broader, project-independent (long-standing) goals, with the former being most common. Broadly, project-specific boards (hereafter, PSCABs) are those formed to address a specific research question (often in the context of a time-limited project or grant mandate) and dissolved upon the project's dissolution (e.g., cessation of granted funding) [15]. The services and scope of such PSCABs are aligned to this reality and are typified by generation of a contained, collaborative community-academic entity that is disbanded following consultation on core project deliverables.

By contrast, and in recognition of literature [16] demonstrating the increased equity footprint facilitated by stable community-academic partnerships, project-independent CABs (PICABS) now exist as models for sustained and broad CE across the spectrum of health research. The mission and mandate of these boards are varied, characterized by models of integration and community-academic interaction that reflect their unique context [16]. For example, the Detroit Urban Research Center (Detroit URC) [17] – a board comprised of members from community-based organizations, health and human services agencies, and an academic institution – has been established to offer stable support to select research teams and community partners, outside the bounds of a single project. Other organizations [18], meanwhile, have focused on expanding their offerings to increase new contacts and, by extension, reach and equity impact. Across such entities, one common approach has been the establishment of research review boards (RRB) as a core component in the unified mission of advancing research health equity. Complementing the individual protections at the heart of institutional IRBs [19–22], RRBs exist to center community protections in research (see Table 1), extending the community voice throughout the research process to instill best practices in the work emerging from their host – or collaborative – academic institutions.

Meaningful advancement of equity in research requires the widespread adoption of CE practices; at their most effective, RRBs are positioned to offer, in the time-stable context of PICABs, a novel and effective means for the collaborative promotion and application of these practices [14,23]. However, as an emergent category of CAB service – nested within the recent and rapid proliferation of HSCABs – the extent to which this high-level aim is being realized, in practice, remains unclear. No aggregative effort has yet been undertaken delineating the structural, procedural, and evaluative elements that typify work in this area, and which may underlie trajectories of success, or failure, in the context of RRBs.

Understanding the patterns of best practices, as well as common challenges, experienced by emergent RRBs represents an area of critical study in the domain of translational science – providing a roadmap for refining existing practices, as well as essential guidance for the establishment of new PICABs targeting the advancement of equitable and community-aligned research. To facilitate this knowledge, the present review aims to synthesize the factors that characterize RRBs within the context of PICABs, through summary of the missions, procedures, and impacts demonstrated in the published literature. Due to this emphasis, the current review can be seen as a discussion of the features typifying RRBs operating in collaboration with, and often in the context of, community-academic or community–institutional partnerships. The following questions will guide our discussion:

1. How are RRBs organized and governed?
2. What are their approaches to equity? What are their guiding principles?
3. Who do they represent? How is representation practiced?
4. How are they evaluated? What metrics indicate success?

Methods

A scoping review is a systematic, exploratory process that maps the existing literature on a broad topic to identify key concepts, gaps, and evidence. For our purposes, this methodology was applied to explore and synthesize the range of existing literature on RRB structures, processes, and outcomes. To this end, we undertook a systematic search of PubMed and Web of Science (September 2023–February 2024) following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR; see supplementary materials for checklist) [24]. Search terms for all databases included known and emergent terms for community-engaged boards that review research for equity, starting with "Community Advisory Boards," "Community Ethics Review Boards," and "Community Institutional Review Boards," along with "research" and "equity." The search protocol can be found in the supplementary materials.

The search was restricted to English language articles published between 2008 and 2024 to capture literature published following, and complementing, notable analyses of community review boards and their role in community protections [21,24]. The current review extends this ethics-focused literature through the introduction of an equity lens focused on the emergent phenomenon of RRBs within PICABs. For clarity throughout this manuscript, we have generated an internal index of relevant terminology (see Table 1). The process of article selection is presented in a PRISMA flow diagram [25] (Figure 1). Citations were organized and managed in Zotero.

The searches resulted in a total of 1,878 articles. After duplicate removal ($n = 274$), titles and abstracts were assessed for eligibility by one author (KW). Inclusion criteria retained articles that mentioned the engagement of a community board for a research project. A total of 1,056 articles were excluded. Major reasons for exclusion were: 1) location outside the United States/Canada; 2) no mention of research review; or 3) article was not original research (e.g., reviews, book chapters). The 548 remaining articles were independently read by one author (KW), and 523 were excluded. Inclusion criteria at this stage retained articles that described the board start-up process, a researcher interaction with an RRB, or evaluation of RRB activities. In cases where the fulfillment of criteria was unclear, consultation was undertaken with two authors (JEP, SW), and a collective decision was made regarding inclusion. Exclusion at this step was due to the description of a PSCAB (vs. PICAB), coverage of RRBs established for nonresearch purposes (e.g., program/policy development), and lack of information in articles which mentioned, but did not detail, RRB establishment (e.g., as part of core CE activities) or consultative process. A final data set of 25 articles remained describing 24 entities that review research for equity.

The characteristics of these final studies were then extracted by one author (KW) and summarized by entity type, location, population served, year established, and funding mechanism (see *supplementary materials*). Special attention was paid to purpose, structure (including governance), review process, feedback receipt and incorporation, and, where available, evaluation data. The resulting data offered a comprehensive portrait of each RRB and allowed for comparison across entities, united by a throughline focused on identifying gaps in knowledge and informing future practices in RRB formation and conduct.

Results

Board missions and guiding principles

The centrality of community inclusion

At their foundation, RRBs are groups centered on advancing the voice and protection of the community in academic research. This unifying aim, however, is translated into a multitude of unique missions depending on some basic factors – funding structure, location – influencing both the formation and continuation of each entity. In Tables 2 and 3, a selection of these characteristics, alongside the mission for the associated board, is provided for each of our examined groups (see *supplementary materials* for full details).

Research support in health equity

Evident in our review, and consistent with prior literature, was a distinction between boards initially established to serve a narrow (e.g., study-specific) need, versus those that have their foundations in the provision of broad research review services. While all included HSCABs performed research reviews (RRB), these differences in origin introduced variation in the populations the RRB was intended to serve and the equity-related goals at the root of their charge.

Board settings and structures

Setting and member structure

Most boards were based in a university setting, serving as a centralized resource for their home institution or local region. Exceptions were limited to institution-based boards with statewide reach [26–28] and community-based boards [19,29], which have no direct affiliation with an academic institution and often sit directly within the community – or communities – they have been established to represent. Board type was not found to have a strong relationship to size, with boards ranging widely between 3 and 50 members and averaging roughly 15 attendees per board meeting. In cases of high reported membership numbers (e.g., $n = 50$), a

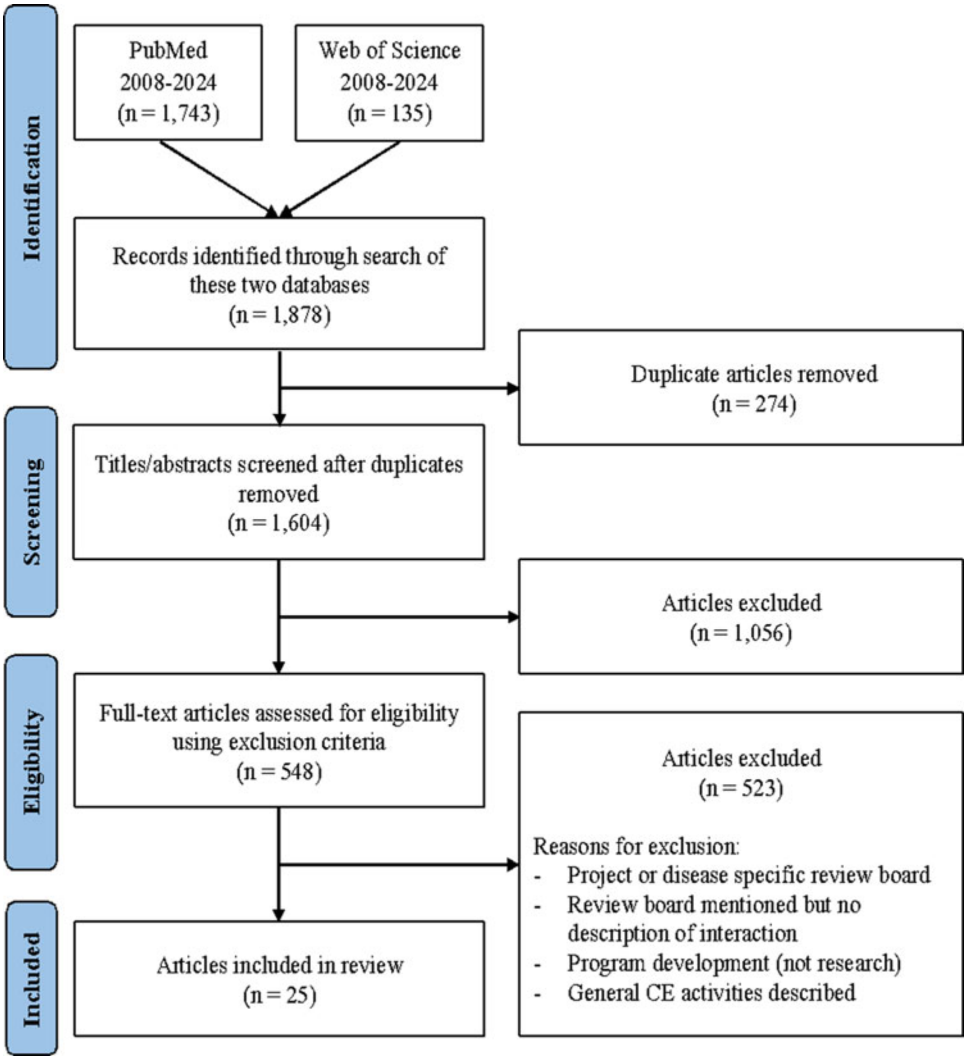

Figure 1. PRISMA flow diagram for eligible article selection.

rotating structure was implemented, with different members meeting on different days, allowing for meeting and review flexibility [30–32].

Regarding composition, roughly half of all Institution-based boards included a mixture of academic and community members, though the constitution of members and distribution of group affiliations varied widely. Members labeled "academic" may, for instance, refer to individuals across ranks – from primary investigators or high-level researchers to graduate or undergraduate students [26–28,30–40]. These individuals were commonly solicited for board participation due to their expertise in an area of direct relevance to the board mission (e.g., public health, nursing, business) [27,36,38], though in some cases academic members were also responsible for board formation or high-level direction [26,28,34–39,41,42]. Within these mixed boards, a figure of minimum representation – e.g., "membership must constitute more than half nonacademic, community partners" – was often set, frequently with the further specification that board make-up must reflect key features of the community, or communities, the board had been established to serve [35]. In such cases, features used to guide member composition typically included demographic markers (e.g., race/ethnicity, age, income, education level) and other relevant metrics of local cultural or geographic diversity. As a result, the member profile of each RRB fluctuated in line with their service area, with state-serving boards [26–28] often showing greater variation than locally-focused entities.

Of note, nearly 75% of institution-based RRBs included in this review – and all community-based RRBs – omitted direct academic membership, with associates instead drawn exclusively from outside the academy. In these RRBs, "community members" were often defined broadly, encompassing unique mixtures of patients [34–36,43–46], caregivers [43], clinical trial participants [43], and other key interested parties in community wellness, alongside representatives from health and social services [26,27,34,41–45], faith [27,33,35,41,43,47], community advocacy [33,43], and other support groups [26,27,34,40,41,46]. Stringent guidance on demographic composition was less common in these community-focused RRBs, with the distribution of viewpoints as the structural cornerstone throughout. Certain subgroups were uniquely represented in such boards, with one board, for instance, opening participation to youth members [48]. Many boards acknowledge the explicit need to engage African American members in their boards to address historical issues of trust in research

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Table 2. Included articles and descriptive features of corresponding review entities

Article	Review entity and name (if different)[a]	Year formed	Member structure	Projects reviewed
Cunningham-Erves et al., 2023	Community Advisory Board (CAB); Recruitment Innovation Center Community Advisory Board (RIC CAB)	2016	12-member group; diverse populations, including patients, caregivers, past trial participants, community organization, and advocacy group members	Not specified
Patten et al., 2019	Community Advisory Board (CAB)	2008 (Site 1), 2012 (Site 2), 2013 (Site 3)	Three boards, consisting of 12, 17, and 25 members, respectively. Membership a diverse mix of patients, community members, community and public health org representatives.	2014–2018: 15–35 presentations to CAB; 46%–80% focused on needs of local communities. Needs varied by site, but included health disparities, chronic disease, nutrition/obesity, immunizations/ preventable diseases, mental health, homelessness, and injury prevention.
Brockman et al., 2021	Community Advisory Board (CAB)	Multisite: 2012, 2013 & 2008	17–25 members representing community stakeholders	2014–2017: 34 total presentations across sites (Mayo Clinic, Arizona, & Florida)
Stewart et al., 2020	Community Advisory Board (CAB)	2017+	Representatives of community and faith-based organizations	Not specified
Hirschey et al., 2023	Community Advisory Board (CAB); Striving to Hold Accountability in Research Equity (SHARE)	2020	Three members; all either cancer survivors or adjacent, identifying as Black/African American	Not specified
Carter et al., 2022	Community Research Advisory Board (CRAB); Helping Everyone Achieve a Lifetime of Health (HEALTH)	2021	10 members; each with a personal or professional connection to the host mission and ability to reflect communities impacted by racial/ethnic disparities	Not specified
Ford et al., 2009	Community Based Research Advisory Board (CRAB)	2001	Majority African American members with diverse education, economic status and exposure to research	2004–2009: 47 research protocols reviewed on topics ranging from basic sciences to chronic disease management
Jones et al., 2022	Community Research Advisory Board (C-RAB)	NA	15 members; male and female community members, aged between adolescence (16) to older adults (78)	Not specified
Evans et al., 2023	Community Research Advisory Council (C-RAC)	2009; redesigned 2020	22 members; patients/research participants, community-based orgs., neighborhood associations, health systems, and HBCUs. Mixture of racial/ethnic groups, sex/gender identities, and ages. Majority ($n = 16$) long-term service (5–7 years).	2009–2016: 28 consultations for 25 researchers
Nanda et al., 2023	Community Research Advisory Council (C-RAC)	2009; redesigned 2020	32 members; per by-laws, >50% nonacademic community partners. Members reflect cultural and geographic diversity, as well as broad stakeholder groups.	2009 +: 28+ projects reviewed over full course of the council
Matthews et al., 2018	Community Engagement Advisory Board (CEAB)	2009	31 members; community (64%) and academic (36%), associated with either the city of Chicago or a specific Chicago neighborhood. Diverse demographic composition.	2009+: 123 consultations provided
Matthews et al., 2018	Community Engagement Advisory Board (CEAB)	2009	31 members; community (64%) and academic (36%), associated with either the city of Chicago or a specific Chicago neighborhood. Diverse demographic composition.	2009+: 123 consultations to UIC investigators and two other Universities
Matthews et al., 2018	Community Engagement Advisory Board (CEAB)	2009	Two standing CEAB groups with 15 members each; diverse expertise (lay community members, org leaders, research staff and researchers)	Not specified
Emmons et al., 2022	Research Coalition; Community Coalition for Equity in Research	2021	14 members; linked by work in healthcare or community orgs/nonprofits, age 25–66, majority Black/Latinx and reside in historically disadvantaged communities.	Six research projects reviewed in first year

(*Continued*)

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Table 2. (*Continued*)

Article	Review entity and name (if different)[a]	Year formed	Member structure	Projects reviewed
Kay, 2017	Community Ethics Review Board (CERB)	2009	Unspecified number of community members with experience in research and prior service on regional/national ethics review committees	Not specified
del Campo et al., 2013	Community-Academic Partnership (CAP); Bronx Community Research Review Board (BxCRRB)	2011	2012 cohort included 14 members and 8 alternates; 65% African American, 18% Latinx, 12% White, and 6% Asian.	Six proposals reviewed March 2011–Feb. 2012
Passarella et al., 2017	Community Advisory Council (CAC); Delaware Clinical & Translational Research (CE-DTR)	2013	15 members from diverse orgs (health coalitions, community orgs., FQHCs, state government, clinical and faith-based orgs.) across three state counties	None; focused on creating connections between academics and community
Jaderholm et al., 2023	Community Research Liaison Model (CRLM); Community Research Advisory	2017	Liaisons (number not specified) are embedded in their community and work with community partners to identify and respond to health-related needs in the region.	Not specified
Horowitz et al., 2017	Community-Academic Partnership (CAP); Community-Academic Research Partnership Board *or* Translational Science Board	NA	Members include researchers, clinicians, funders, public health/policy reps, and patients/health advocates. The Board works to foster communication, collaboration, and transformative research across public, private, and academic sectors.	Not specified
Harrison et al., 2022	Patient & Community Advisory Board (PCAB)	2020	32 members; 5–7 members per consultation	23 sessions conducted June 2020–June 2021
Kost et al., 2017	Community-Engaged Research Navigation (CEnR-Nav)	2007	Two Navigators and a Community Engagement Specialist	2009–2014: 44 preliminary projects pursued through the navigation program
Burns et al., 2022	Community Advisory Board (CAB); Young Mne's Health Matters Program (YMHM)	2019	CAP includes a community-based director, members of the Detroit Community Health Connection, health workers, and healthcare staff. The academic members include undergraduate and graduate students (nursing and a faculty lead.	Not specified
Soto-Santiago et al., 2024	Health Advisory Board; All IN for Health Advisory Board	2018	20 community-based individuals, representing community health orgs and the diversity of local backgrounds, interests, and needs across key counties.	Not specified
Samuel, 2013	Community-Academic Partnership; Community Research Outreach Workers' Network (CROWN)	2009	Nine members; five Community (GOSPEL) partners and four health research scientists. Rules stipulate a nonscientist community member must occupy a leadership position.	Five proposals reviewed at two quarterly meetings
Lebow-Skelly et al., 2011	Community-Academic Partnership; Stakeholder Advisory Board (SAB)	2011	29 members; community org, academic, and government agency reps focused on environmental health and justice in Atlanta region. Diverse sample in keeping with area demographics (e.g., 33% Black)	Not specified

[a] A given review board may be the focus of multiple articles.

[33,34,39,41,46,48,49]. Additionally, others emphasize the need to increase representation within research studies to more accurately include and reflect diverse communities [19,26,29–32,40,42,43].

Across boards, some notable differences emerged around the dynamics of academic inclusion. Institution-based boards with community-only membership were often characterized by more direct relationships with academic affiliates, particularly from the host institution (e.g., faculty, administrators, other institutional liaisons). In some cases, committees comprising a subset of representative board members and academic partners were formally established [26]. Such groups most often served as a forum for sharing board insights with institutional parties to advance essential research or action, thus providing a pipeline through which community-led visions can be translated into

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Table 3. Mission-related characteristics of identified equity-focused community-academic research advisory boards

Entity name	Location	Reach	Funding org.	Research entity mission statement/purpose	Cit.
Recruitment Innovation Center Community Advisory Board (RIC CAB)	Vanderbilt	Local	NCATS/NIH CTSA	Provide meaningful input to ensure that the [research] strategies and materials reflect the needs, priorities, and values of the broader community.	43
Community Advisory Board	Mayo Clinic	Local	CTSA	Provide a forum for Mayo researchers to present an idea or concept for a research project or obtain feedback on a well-developed project or grant submission.	44,45
Community Advisory Board	Meharry Medical College	Local	NIH/NIMHD	Develop and shape research priorities; provide insights into underlying relationship dynamics and foster trust between the community and the Meharry Community Engagement Core; prioritize trust-building activities to lay the groundwork for impactful community academic partnerships	47
Striving to Hold Accountability in Research Equity (SHARE)	UNC	Local	NIH/NIMHD	To work in partnership with researchers at UNC to reduce cancer disparities in Black/ African American communities by informing research and program development; CAB identifies community needs, promotes evidence-based interventions/information, raises awareness about health disparities in communities, and educates researchers.	46
Helping Everyone Achieve a Lifetime of Health, Center for Addictions and Research and Cancer Prevention (HEALTH-RCMI) Community Advisory Board (CAB)[a]	University of Houston	Local	NIMHD	To engage in strategic planning to identify community health needs, barriers, and solutions; to establish a broad network of community partners; to ensure that the activities of each core of the HEALTH-RCMI are aligned with the needs of the community; and to have final approval authority over partnership, implementation, and dissemination activities that affect the community.	33
Helping Everyone Achieve a Lifetime of Health, Center for Addictions and Research and Cancer Prevention (HEALTH-RCMI) Community Advisory Board (CRAB)[a]	University of Houston	Local	NIMHD	To advise investigators through all stages of the research process on how to reach, retain, and impact their target communities. Advises investigators on how potential projects can be designed to reach the relevant community and address identified needs, reviews project materials for lay-friendliness and clarity, provides feedback on research progress that is intended to enhance community participation and impact, facilitates investigators' ability to present their research to lay audiences with maximal clarity and impact, and provides feedback on dissemination materials that will be promoted to the community	33
Community Research Advisory Board (CRAB)	University of Pittsburgh	Local	Multiple Private Foundations; NCMHHD; NIH-NCMHD	To establish a sustainable model to engage community members with researchers, focused on African Americans as a population.	49
Community Research Advisory Board (C-RAB)	University of Cincinnati	Local	NHLBI	Engage researchers to ensure they support the health goals of the community in addition to collecting study data, providing feedback on how to make research easier/ more understandable for local minority communities, and informing what research happens in the community.	48
Community Research Advisory Council (C-RAC)	Johns Hopkins University	Local	NCATS NIH	Mission to achieve diversity, equity, and inclusion (DEI) of stakeholders across the entire research continuum. It has nurtured over a decade of partnership among community and academic stakeholders toward addressing health disparity, health	34,35

(Continued)

Table 3. (*Continued*)

Entity name	Location	Reach	Funding org.	Research entity mission statement/purpose	Cit.
				equity, structural racism, and discrimination. Achieve mission by providing consultation services for researchers who request this service to strengthen community–academic partnerships while enhancing funding prospects.	
Community Engagement Advisory Board (CEAB)	University of Illinois at Chicago	Local		Provide suggestions to consultation recipients on any number of research issues/questions for which the recipient seeks input. Consultations focus on research methods, recruitment/retention plans, culturally appropriate engagement strategies, and identifying/overcoming barriers to participant engagement.	30–32
Community Coalition for Equity in Research	Harvard	Statewide	NCI, NIH NCATS CTSA	Provide feedback on research to promote equity and use of community-engaged research principles.	26
Community-Based Organizations Partners (CBOP's) Community Ethics Review Board (CERB)	Flint, MI	Local	Not Specified	Services include (1) community ethics reviews and critiques of proposals; (2) identifying and assisting in developing a community advisory board for projects, as needed; (3) identifying community partners, research participants, and community research sites; (4) suggesting strategies for community engagement; (5) vetting research ideas; and (6) issuing letters of support for select projects.	19
Bronx Community Research Review Board (BxCRRB)	Albert Einstein College of Medicine & The Bronx Health Link	Local	NIH	The BxCRRB reviews proposals from researchers assessing risks and benefits for the entire community, not just individual study participants. The BxCRRB also reaches out to and educates the community about their rights and the pros/cons of participation in research, thereby creating a feedback loop communities and research institutions.	29
Delaware Clinical and Translational Research (DE-CTR) Accelerating Clinical and Translational Research (ACCEL)	DE-CTR/ACCEL Institutions	Statewide	NIGMS NIH	To expand community engagement across the DE-CTR-ACCEL institutions and across the State of Delaware, specific aims were pursued: (1) Establish a new infrastructure to actively involve the community in setting clinical and translational research priorities; (2) Develop new community–institution partnerships in clinical and translational science; and (3) Identify, educate, and prepare community leaders, healthcare providers, and institutional researchers in the principles and practices of community engaged research.	27
Community Research Advisory	Oregon Health Sciences University	Statewide	NCATS NIH	The purpose of developing the research advisory is to bring local and regional community leaders together with academic partners to collaborate, network, and build local capacity for research and data-driven decision-making to improve health and wellness in the community.	28
Community-Academic Research Partnership Board	Icahn School of Medicine at Mount Sinai	Local	NCATS, NHGRI, CCSG, NIMHD, & NIEHS	Group of clinicians, researchers, patients, and community advocates engaged in collaborative discussions and activities to translate discoveries for diverse communities and generate new ideas for research. Build research collaborations and initiatives and form to integrate equity, engagement, team science, and improving health (with a focus on social determinants	36

(*Continued*)

Table 3. (*Continued*)

Entity name	Location	Reach	Funding org.	Research entity mission statement/purpose	Cit.
				of health) into meeting agendas and operations. Connect stakeholders who represent diverse groups, create a culture of openness, acceptance, respect, generosity, and curiosity to encourage sharing of ideas from within and from outside the board, build capacity of stakeholders, and maintain transparency in decision-making and operations.	
COVID-19 Research Patient and Community Advisory Board (PCAB)	UCSF	Local	PCORI, NCATS NIH, CEAL COVID 19 Program	To facilitate patient and community consultation on COVID-19 research studies and institutional policies. Established and centrally coordinated by the CTSI and designed for access by researchers across the institution.	37
Community-Engaged Research Navigation (CEnR-Nav)	Rockefeller University	Local	NCATS NIH CTSA, AHRQ, & PCORI	Catalyzing relationships between basic scientists and community clinicians at crucial points in protocol development, with the potential for research, clinical, and public health synergy.	38
Young Men's Health Matters Program (YMHM)	Detroit, MI	Local	Detroit Urban Research Center & Edward Ginsberg Center	Community-Academic Partnership (CAP) with the goal of supporting the community-academic team (University of Michigan and Detroit Community Health Connection Inc.) to help identify issues within the community, voice their thoughts to develop future research plans, and apply their community knowledge throughout the YMHM program.	41
"All IN for Health" Advisory Board	Indiana	Statewide	NIH NCATS CTSA	Board participants speak from personal experience and have been active in providing advice on strategic direction and feedback to all efforts while contributing ideas, priorities, and most importantly, accountability.	42
Community Research Outreach Workers' Network (CROWN)	Uniformed Services University for Health Disparities (UCUHD)	Local	NIMHD NIH	Aim to (1) create a community outreach-generated registry of African Americans interested in participating in health research and (2) develop a community research review board that serves to advise research investigation on conducting culturally engaging research.	39
Stakeholder Advisory Board (SAB)	Emory University	Local	NIEHS	The SAB oversees and provides community perspectives for Community Engagement Core (CEC) activities, offers connections to local community, and provides critical guidance to HERCULES toward fulfilling its mission to improve science, environmental health, and justice in the Atlanta metro region.	40

[a] Publication provides coverage of two distinct boards.

actionable, institutional initiatives [33,40–42,44,46,47]. In other cases, particularly among community-based boards, engagement with investigators was less formalized and typically limited to investigators based within – or holding established relationships to – the focal community [19,29].

Funding and leadership structure

Institutional funding and leadership infrastructure. Boards were predominantly housed at universities and funded by large-scale (e.g., NIH) grants (see Table 3). Such funding is most often provided via a project or center grant, which in turn serves to inform the direction of the board work and member composition. Accordingly, across boards, initial direction and structural support were most often provided by a leader or leaders – elsewhere referred to as "navigators,“ "co-directors," "chairpersons," etc [26,30,35,37–39,44]. – working in conjunction with a Principal Investigator (PI) or analogous figure. However, the degree to which individual boards are directly guided by funding structures, or grant PIs, varied.

While leaders are critical for coordination, a core tenant across RRBs was the need to ensure the expertise of leaders is balanced by community voices. The structures emerging to advance this

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balance have been unique across RRBs; in the CROWN board [39] for example, perceptions of competing demands and imbalanced influence among academic members led to the revision of leadership structures to cement a place for community members in senior positions. Similarly, restructuring of the Johns Hopkins Community-Research Advisory Council (C-RAC) – undertaken after 11 years of operations – has resulted in a mandate that the board be comprised of at least 51% of community members [34]. The board has also established an iterative consultancy process to ensure the feedback of community members is meaningfully incorporated [34]. Other RRBs have expanded membership to include private sector partners (e.g., technology, pharmacy) who serve as "accelerators" – bringing in specialist knowledge and introducing opportunities to address questions emerging from the transdisciplinary teams [38]. Only two groups explicitly stated sharing board leadership with the community [35,39].

As noted in prior sections, a small subset of RRBs housed at universities mentioned removing academic affiliates from board participation in acquiescence to a fully community-led structure [26,44]. In such cases, RRB gatherings are both composed of and led by community members, while academic input – where relevant or required – is provided indirectly through exchange with key external parties, typically in the context of a separate meeting. Such is the case for the Harvard Community Coalition for Equity in Research [26], a unique board due to its state-wide reach and institution-based, community-led composition. Here, the RRB is composed of community experts from across the state, tasked with reviewing research for equity. This aim is undertaken during board meetings and later related – along with decisions and points of discussion – to a leadership team that convenes at a separate time and place.

Taken together, these collective efforts reflect the earnest attention paid across all RRBs to creating and sustaining RRB membership structures that enable the respectful and impactful advancement of equity-minded research.

Board member compensation. Consistent with the tenants of respect and balance highlighted above, compensation of board members was noted across nearly all reviewed RRBs. While the transparency of payment particulars was inconsistent, where detailed, member compensation ranged from provision of meals (at time of meeting) [44] to regular monetary installations per meeting [41,44], review [37], or service month [46]. Monetary value also varied, from $25/meeting to $100/month. In some cases, hourly rates [26,42,48] were employed at values ranging $20–$50/hour. Only one RRB cited compensation in the form of gift cards [31] or transit passes [29] to minimize barriers to participation.

Board processes

The research process and review board involvement

RRBs in this review almost universally provided review services at all stages of the research processes, seeking to ensure alignment with best practices, community needs, culture, and priorities. While some organizations emphasized a specific area (e.g., recruitment), the majority were characterized by multifaceted offerings from proposal development through to dissemination (see Table 2). Typical processes related to common research components – question development, recruitment/retention procedures, and dissemination – are summarized below.

Developing research questions

At project inception, investigators who engaged with RRBs often sought guidance in developing research questions deemed relevant, sensitive, and meaningful to their communities of interest [29,36,44]. As part of this process, researchers were typically required to provide board members with a brief project overview, detailing the proposed aims, focal population(s), and potential benefits to community health [45]. From the RRB perspective, the goal at this stage was the collaborative development of research objectives that meet the needs of the researcher (e.g., addressing the project directive), while ensuring the work is rooted in real-world community issues and protections. Intrinsic to this goal is the establishment, from the outset of a project, of a sincere and organic community-academic partnership.

Recruitment and retention

RRBs played a crucial role in the recruitment and retention of study participants, leveraging member's deep understanding of community needs and cultural nuance. From this position, RRBs were positioned to provide informed advice on crafting recruitment materials that would both resonate with and be respectful of the community. Such input has demonstrated the potential to enhance participation, representation, and retention rates, particularly among underrepresented populations [26,29,32,42–45] – essential steps for ensuring institutional research outputs are informed by, and reflect, the community. Where merited (e.g., due to alignment of a project/researcher with priority community needs), select boards also provided researchers with practical advice on routes of local engagement [30,35,38,46–49]. These personalized processes – supported directly through board members and their community of professional contacts – were typically offered in an effort to build trust between researchers and community members for long-term research partnerships.

Dissemination of research findings

Boards also consistently cited engagement from researchers who had completed, or were approaching completion of, a research project and seeking guidance on the dissemination of their findings. In this domain, RRBs prioritized guiding clients towards means of dissemination that were both accessible and actionable for the community – each component being necessary to ensure community benefit from research activities. Support processes ranged from education and consultation [31,33,45] to hands-on generation of lay-friendly reports and presentations [33]. For example, board members have actively contributed stories and profiles for newsletters and have spoken about health projects at public events such as health fairs [42]. Others have served to guide researchers on the best platforms and methods to reach the focal audiences, ensuring that the community benefits from the research insights [33,35,38]. This mindful engagement between researchers and the community is integral for demystifying the scientific process for the public and encourages community members to participate in future research. RRB consultations serve to inform and expedite this process, to ensure sensitive and effective reach of collaborative results.

Community protections and ethics

Review boards can facilitate relationships with communities by helping to identify appropriate partners, highlighting community needs, and developing research agreements. Those RRBs reviewed herein, for instance, played active roles in reviewing ethical considerations, with the aim of ensuring that all community partners and participant rights and interests are protected [19,29]. Boards also served as guardians, reviewing proposals to ensure community risks and benefits are balanced. In the process of critiquing research proposals, RRBs sought to help identify potential community partners and suggest engagement strategies that are ethically sound [19,26–28,30]. In doing so, these organizations consistently served to safeguard community interests and ensure that research does not exploit or harm either its participants, or those who share a community with these participants.

Communication and feedback mechanisms

Effective communication is a priority of any community-academic partnership and emerged in the literature as a cornerstone in many RRB missions. Despite this, the description of feedback procedures (e.g., provision of research critiques) was lacking. Where available, data indicated that feedback was typically shared during or directly following the RRB meeting. Most frequently, boards would provide written minutes or distilled notes back to researchers, ranging from "substantive" (providing learning opportunities regarding relevant communities or cultures) [49] to "economical" (addressing only questions initiated by the researcher) [31]. Alternatively, digital tools (e.g., Zoom) were used to record consultations and minutes were shared with researchers to facilitate transparency and accountability [29,37]. Less commonly, some RRBs developed dedicated tools (e.g., the Health Equity Review Rubric) to provide systematic, comprehensive feedback [26]. Uptake of such standardized processes was, however, low across the reviewed sample.

Evaluation

Less than half of RRBs ($n = 11$) provided detailed evaluation data. Among those presenting such data, evaluation – and, by extension, success of the broader HSCAB or RRB mission – was measured from varied perspectives and characterized by differing metrics. However, while disparate, stated evaluation approaches could be grouped clearly by a focus on either internal member assessment (e.g., board member perspectives) or external user critiques (e.g., academic/user perspectives), and further by an emphasis on either internal board function or external user benefit. Across RRBs, methods for evaluation were also shared and included surveys, focus groups, and individual interviews [29]. An overview of evaluation procedures and outcomes, according to these dichotomized samples and assessment approaches, is provided below.

Evaluation: board member perspective

Where present, efforts to measure success, from the board member perspective, differed in the degree to which they emphasized either: 1) the internal function of the RRB or 2) the RRB's perceived efficacy in benefiting the health equity practices of their user-base.

Internal CAB and RRB function

Internal evaluations tended to prioritize assessment of RRB members' understanding of, and comfort in, their role. However, the depth of these assessments varied, with implications for the emerging portrait. Results from surveys employing simple five-point Likert-scale ratings statements (e.g., "overall satisfaction, ideas taken seriously") [26] were often positive. However, where members were offered the opportunity to expound – whether through open-ended evaluation questions, focus-group discussion, or dedicated interviews – feedback often signaled areas of need or desired change.

For example, interviews conducted by an external evaluator following the first year of the Bronx Community Research Review Board (BxCRRB) [29] – while highlighting positive experiences, including increased engagement with local IRBs among members – also signaled that members "initially lacked a clear understanding of the purpose of the BxCRRB" and had not understood that their role would center on review of research. Other members reported feelings of discomfort with a perceived lack of preparation among their fellow board members and antagonistic or disrespectful treatment by clients. This feedback directly informed RRB practices in future years – elevating the involvement of existing BxCRRB members in member recruitment and ensuring integration of practical suggestions for training workshops (e.g., early distribution of agendas; expanded time for questions) to advance clarity of roles and embed ongoing opportunities to seek support or clarification.

Despite limited examples, select themes were common across reported evaluations leveraging a focus group structure. The presence of tension in RRB meetings, as alluded to in the BxCRRB, was echoed [40] in other settings. The root and results of these tensions differed by organization, with members of the Community Coalition for Equity in Research [26] framing this tension as arising from genuine differences of opinion or experience that were met with respect (75% reported that conflict was handled "well"). Tensions emerging between the board and host institutions were, by contrast, attributed to feelings of continuing distrust; for instance, members of the HERCULES Stakeholder Advisory Board [40] expressed reservations regarding the host university's motivations and commitment to ensuring research insights reach the community. In this setting, the availability of trusted community-engagement (CE) staff served to establish productive dialogue and ensure continuity of partnerships and productivity. The presence of such supports was assessed over time, with high ratings for these staff or structures [26,33].

Self-perceived impact

Mission. As a component of their internal impact evaluations, a subset of CABs asked RRB members to articulate their mission. For example, among affiliates of the University of Illinois at Chicago's Community Engagement Advisory Board (CEAB) [30], respondents "emphasized that they are community representatives, community gatekeepers and protectors, and liaisons between researchers and the larger community." The feeling of serving as a "proxy for the real community" was also expressed, alongside a sense of responsibility to protect served communities from harm (e.g., over-researching; lack of follow-through on promises made). While not framed as a formal component of evaluation processes, where present, such questions demonstrated consistency between members' self-held sense of purpose and alignment with the impact goals of the host organization (see Table 3).

Capability and external impact. Where conducted, internal RRB evaluations consistently indicated that members viewed themselves, and their organizations, as a valuable resource for advancing equity in research. Areas of cited strength included the ability to "explain cultural norms," "anticipate what would be feasible/acceptable to community members," and "discuss the history of abuses associated with research and resultant community mistrust"[30]. However, despite these perceived strengths, evaluations showed variation in the degree to which board members felt equipped to offer research feedback that would prove useful and effective [33,34]. Participants in the Johns Hopkins Community-Research Advisory Council (C-RAC) [34], for instance, suggested that additional, specialized research training would be of benefit, particularly in the areas of research methods, hypothesis formalization, dissemination processes, and grant proposal development. Respondents expressed a willingness to engage in such training at least once per year (up to 4).

Despite this desire for procedural adjustments, available reports consistently indicated that members viewed their research critiques and/or consultations as having a positive impact on resulting projects. Surveys conducted over a period of 6 years, among current and former members of the CEAB [30] ($n = 106$), indicated that 90% of respondents felt their consultations improved the relevant project "always or most of the time," and 98% would recommend a research consultation with their board. Members of other RRBs were similarly positive about the value of their consultations [26,37]. Nonetheless, room for improvement was evident, with some members expressing feeling unheard or unvalued in their consultations [37]. A lack of clarity around the extent to which feedback was ultimately integrated in researcher's work was, likewise, expressed, suggesting a need to ensure the placement of structures to "close the loop" of research communication – not only between the host organization and external community but also with the board itself [30]. Mixed opinions of the perceived "readiness of investigators," to engage communities, were also, notably, reported [32].

Internal benefit to board members. In a few cases, as part of their internal evaluations RRB members were asked to comment on the degree to which their membership had brought personal benefit. Results of these evaluations suggested a range of direct individual and professional benefits due to member's RRB service and affiliation. Members of the CEAB [30], for instance, felt their RRB had facilitated increased knowledge (84%), expanded networks (76%) and establishment of new community relationships (51%). These respondents signaled that their engagement allowed them to learn about the spectrum of research being undertaken in their area (e.g., Chicago) and in turn share this "hard to find" information with their families and communities. Such benefits were associated with high degrees of satisfaction with board participation (98%), with the majority (90%) of members planning to continue their engagement [30]. Members of other RRBs also valued increased research awareness and knowledge [26,34], with some indicating their experience raised their likelihood of research participation or recommendation of participation to others [26]. Research skills cited as tangible benefits included receipt of formal training/certification in human subjects research, exposure to manuscript writing processes, engagement with other (e.g., national) advisory boards, and feeling included on the research teams for which they provided consultation [34]. The value of financial compensation for time spent on the board was also observed across groups.

Evaluation: academic perspective. Efforts to conduct evaluations of the external impact RRBs exerted on their user base were characterized, overall, by systematic approaches that sought to capture two core dimensions: 1) the subjective consultation experience of RRB users and 2) the objective impact of these consultations on their research formulations and output.

Subjective perceptions of value. Among groups with available data, subjective user ratings of services were almost universally positive. Across evaluations, researchers characterized their experiences as "excellent or very good,"[26,37] and endorsed satisfaction with the service provided [33,34]. When asked about their reasons for seeking consultation, respondents offered varied responses, including but not limited to: the desire for feedback on projects prior to grant submission (e.g., to "ensure community input on their proposal"), advice on the formation of a CAB, identification of community partners or methods to leverage existing partnerships, instruction on data collection approaches, and review of study materials (e.g., for accessibility, acceptability) [34,37]. Board members were regarded as knowledgeable across these areas of need [26,31]. Users reported that their consultations were valuable for their projects[33,37] and cited the value of "access to diverse stakeholders with "lived and professional experience."[34]

Regarding implementation, researchers reported altering, or planning to adapt, key elements of research for purposes of equity, including engaging existing community partners with study planning; revising study language and planned activities for inclusivity/accessibility (or developing such activities); soliciting trusted patient advocates and community organizations to facilitate broader recruitment; integrating consideration of community-level social/emotional needs when engaging participants; and building structures to ensure timely sharing of results in a manner that "incorporates the needs, preferences, and values of stakeholders."[26] In evaluations, feedback spurring these changes was characterized as respectful and constructive [33], though some respondents felt the timeline could be improved (e.g., shortening delays between consultation-seeking and scheduling; lengthening the period over which feedback is given) [26,37]. A desire for greater clarity on what to expect from consultations was also articulated by some users [26], though respondents perceived services to be in line with expectation and of a quality suitable for recommendation to collaborators [33].

Objective impact. Examples of objective measurement of RRB impact included the application of the "Community Stakeholder Impact on Research Taxonomy Measure," a validated, semi-structured interview with seven specified items which allow for open-ended expansion on topics related to the influence of boards on research output [45,50]. In their application of this measure, Mayo Clinic researchers asked users of their CAB "In what ways did the feedback you received from our CAB influence your research?"[45] and offered prompts in seven areas of interest informed by the measure taxonomy: 1. Pre-research, 2. Infrastructure, 3. Research design, 4. Implementation, 5. Analysis, 6. Dissemination, and 7. Post-research. Results indicated impacts across these domains, with proportion of endorsements ranging between 6% (analysis) up to 41% (study design, implementation). Crucially, these impacts reflected those experienced by the respondent following their consultation, without reference to their a priori expectations in entering the consultations.

Other objective assessments included quantifying the research impact in terms of the number of research projects modified or impacted by RRB feedback. Information on such assessments was rare, most often consisting of satisfaction surveys and follow-up meetings, used to determine the extent to which the recommendations of the board have been implemented [31,35,45]. For instance, among 14 respondents to a C-RAC researcher survey, 13 indicated they had integrated feedback from their C-RAC sessions into their research [34]. Longitudinal (2009–2014) tracking data generated by Community-Engaged Research Navigation Program (CEnR-NAV) [38] – a collaboration between the Rockefeller University Center for Clinical and Translational Science and the Clinical Directors Network – demonstrated 44 early-stage projects were routed through the navigation service, ending in 25 approved protocols which translated into publications ($n = 11$) or, in some cases, external funding ($n = 7$). Crucially, the resulting protocols were characterized by integration of at least one translational aim (36%), engagement of at least one community partner (76%) and elevation of community representatives as coinvestigators (47%) [38]. In the CEAB [31], one-year follow-up data similarly indicated a high uptake of board recommendations among consultation recipients (87%), with the majority (93%) further indicating that the content of their meetings had "influenced their thinking" as they planned future research. Direct impacts on recruitment, dissemination, and engagement practices were also widely reported in other evaluations [34,37].

Discussion

Ethical research necessitates meaningful engagement of community perspective and experience – a reality reflected by increasing demands from funding bodies to demonstrate substantive CE efforts in translational enterprises. Examination of how CABs have evolved against this shifting landscape is essential for understanding the factors that are associated with sustainable and successful impacts. In this review, we focused on an emerging offering of HSCABs – RRBs – detailing the mission, structures, processes, and impacts that typify these equity-advancing entities. Our synthesis revealed a unity of purpose across RRBs, with variations of execution that reflected a mixture of necessary differences, unique challenges, and opportunities for methodological advancement and alignment. We offer a summary of features typifying current best practices in RRB design, alongside empirically informed suggestions for refinement, in Table 4. The discussion of these elements is provided, in brief, below.

Areas of consistency

The centrality of community inclusion in RRBs is crucial for improving the relevance, quality, and impact of research. These boards are centered on and unified by a mission to enhance the community's role and voice in academic research, with our review indicating that the particulars of their goals appropriately vary to accommodate site-specific factors (e.g., funding structure, local health needs/priorities). In seeking to promote health equity by bridging the gap between researchers and the community, RRBs were further linked by a collective goal to engage the community at every stage of the research process, from question development to dissemination. While the particulars of consultation procedures varied, the infrastructures across RRBs were consistently designed to ensure routes of support for investigators, whether their goals were early stage (e.g., proposal development, recruitment design) or late (e.g., analytic considerations, accessible dissemination approaches).

Areas of Divergence

While aligned in mission and broad process, individual variation in operation was evident across RRBs. One significant point of divergence concerned evaluation and feedback procedures. Within reviewed articles, only a minority of boards provided data regarding either internal (e.g., self-reporting by RRB members) or external (e.g., reporting by RRB users/consultees) evaluations. The absence of such systematic information leaves unanswerable, in many cases, the key question of impact. Among RRBs providing evaluation data, recorded responses indicated a high degree of satisfaction (both among RRB members and users), with clients indicating uptake of RRB feedback in their research and inclination to continue engagement with their respective boards. While encouraging, the absence of comparable data from the majority of RRBs makes it difficult to ascertain the degree to which such positive responses are indicative of the universal value of RRBs, or whether the presence of evaluation procedures is a correlate of high-functioning boards (e.g., characterized by adequate training, receptive institutions, responsive research communities).

Relatedly, the process of providing feedback to researchers varied widely across boards. While some groups implemented iterative processes that encouraged sustained community-academic engagement, others were characterized by divisions in communication and associated concerns about the uptake or implementation of board input. Such issues highlight the importance of open, clear, and systematic communication procedures, to ensure alignment of expectations and pursuit of genuine partnership between all parties.

Additional challenges facing RRBs included differences in funding structures, membership composition, and location. Most reviewed boards were housed in university settings, included both academic and community members, and received Federal or other external funding. However, a subset of RRBs were community-based and received funding from smaller private or foundation grants. These latter entities more commonly cited issues of sustainability, while boards based in academic institutions observed challenges related to academic leadership dynamics [29] or conflicting interests – in some cases leading to tensions and associated modifications of board structures to ensure an equal balance of community-academic voices (e.g., CROWN CAB; Johns Hopkins C-RAC), in others to the development of strictly community-led entities to preserve impartiality and local relevance. Navigation of these dynamics posed challenges across several RRBs, highlighting the need for the solicitation of regular feedback and open communication within RRBs alongside the external provision of research reviews.

Strengths and limitations

Our review sought to distill the literature on long-running HSCABs whose service offerings include an RRB. To ensure replicability and extension of this focus, we limited our literature search to traditional publication routes (e.g., indexed journal articles). We acknowledge that reliance on these routes may have resulted in the omission of relevant organizations whose outputs are confined to the "grey literature" or other paths of dissemination.

Due to the nature of academic publication, it is possible the literature in our review also reflects an overrepresentation of HSCABs with a University base/affiliation, or with a mixture of community and academic members. We further acknowledge that these HSCABs, due to their institutional affiliations, serve communities whose levels of resourcing and areas of priority may differ from the wider fabric of the United States. Adding to a growing body of literature [51], a recent review has, for example, offered insight into a vast infrastructure of Indigenous ethics and

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Table 4. Roadmap of key Research Review Board (RRB) design elements: current state of practice and literature-informed considerations

Design element	Current practice	Considerations
Mission	Community protection is centered in design and practice of the RRB.	Variation in RRB missions – based on location, population, and overarching CAB structures – is expected. Ensure RRB member alignment around board mission.
Member structure	RRBs commonly, though not exclusively, contain both community and academic members. Best practice, for RRBs with mixed membership, include firm guidance for composition (to ensure equal/over-representation of community voices).	Awareness of power dynamics, between community and academic members, is important. While individual RRB needs/scope will guide initial composition, internal communication, evaluation, and reflection should guide long-term structures to ensure community elevation.
Governance	Leadership is critical for RRB coordination and may also be required for external RRB representation (e.g., to host institution, funders, private sector reps, etc.). However, expertise takes many forms, and balance is key to direction.	Governance structures will differ for each RRB, with even institutional RRBs varying in organizational positioning. Effort should be given to ensure community remains active and represented in enclaves of decision-making power, regardless of setting.
Funding (member)	Though a point of broader debate, in our review compensation of RRB members emerged as standard practice. Form of compensation varies, with meal provisions and monetary payments being most common.	Board member compensation should be planned for and clearly delineated. Consideration of the most appropriate form may include consultation with current or prospective RRB members.
Training	Some RRB members have expressed that further training would be beneficial for cementing their understanding of the RRB mission and their role in its execution. Overall, detail on training procedures is sparse in the literature.	Community perspective and lived experience are crucial to a robust and representative RRB. However, the services of an RRB also require knowledge of research best practices (related to community protections) and awareness of academic challenges (e.g., grant structures, timelines). Training should be provided to RRB members, to ensure role comfort and clarity on RRB mandate.
Review processes	Most RRBs offer review services across the spectrum of research (e.g., question formation through to dissemination). Specialization may occur in selected circumstances. Community protections and ethics are central to all review processes, regardless of research stage.	Details on feedback procedures are lacking in the literature, leaving questions regarding the optimal language, means, etc. RRB design should ensure clarity on these procedures to aid in informing best practices associated with uptake of RRB recommendations.
Evaluation	RRBs have unique potential to shape research practice to reflect community needs/protections. Evaluation is key to quantifying the degree to which this potential is being met and identifying factors associated with the greatest impact. Evaluation data is, however, inconsistent and sparse across RRBs.	Evaluation strategies are ideally defined – and attendant practices present – from RRB initiation. Prioritize utilization and, where necessary, development of evidence-based measurement tools. The potential for RRB impact is multilevel. Ensure external evaluations are designed to assess impact broadly: for researchers, the institution, and the community. Internal evaluations are also key for ensuring optimal RRB operation.
Impact (community)	RRB reviews and recommendations are designed to center community protections, directly, in research. These structures inherently serve to protect the community and, in so doing, target measurable impacts. A lack of evaluation, however, leaves unclear the degree of impact.	Evaluation of these impacts requires prioritization. Additionally, there is space to move beyond community protection to community benefit. In line with broader practices (e.g., within Tribal IRBs), RRBs could guide proposals to ensure planned research findings will not only protect communities but actively provide benefit/education. Measurement of such outcomes would offer compelling evidence of sustained CAB and RRB value.

Tribal Research Review Boards [52] – the majority of which did not emerge in our search. Through the widening of search methods, future work in this area could meaningfully expand the portrait of RRB structures and functions offered in the current review.

Such methodological growth would, ideally, be met by investment – on the part of HSCABS – in advancing the recording and dissemination of their board structures and functions. We are aware, for example, of the expansion of “Coalition Boards” (e.g., the Morehouse Community Coalition Board) [18] in the context of Prevention Research Centers, many of which have integrated RRB functions. While such centers were identified in our literature screenings, published information on their establishment and operations was too limited for inclusion in this review. Future work will be positioned to delve further into areas of interest (e.g., RRB power dynamics, issues of positionality within institutions) which received allusion, but minimal coverage, in the examined literature. Increased contributions in these areas – whether through traditional or nontraditional routes of publication – will be crucial for further refining the design and delivery of RRB services.

Summary

Our review indicates RRBs deliver critical insights that enhance the relevance, quality, and impact of research by ensuring study elements align with community culture and needs. By fostering strong partnerships and continuous dialog, these RRBs are positioned to bridge the gap between researchers and communities, paving the way for more inclusive and impactful research outputs. However, this work has also signaled that board effectiveness may be undermined by a lack of systematic evaluation, potential conflicts of interest, unexamined leadership structures, and inconsistent feedback implementation. As RRBs continue to expand, addressing these data gaps will be essential for maximizing the benefit of these boards in their growing service of research health equity.

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