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Addressing health equity during design and implementation of health system reform initiatives: a scoping review and framework

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Abstract

Background Health equity is a commonly asserted goal of health systems. However, there is a limited understanding on how best to promote equity as a part of health system reform initiatives. We conducted a scoping review to (1) identify and characterise strategies that promote health equity during the design and implementation of health system reform initiatives; and (2) determine opportunities to strengthen health equity informed policy design and implementation processes and outcomes.

Method We systematically searched peer-reviewed literature from 2013 to 2022 focussing on four search domains: (1) health equity; (2) implementation; (3) health system; and (4) reform, policy, or theories, and only included papers that represented a population health or system-wide intention. Health equity promoting strategies were categorised into those occurring at national, regional, state, or local levels. Themes common across system levels were mapped, which alongside theory, informed the development of a health equity promoting framework for reform initiatives.

Results The search returned 10,999 articles after duplicates were removed. 384 articles underwent full text review and 68 met the inclusion criteria. Thematic analysis of results identified health equity promoting themes derived from numerous strategies, with a median of 10 strategies (interquartile range 7,15) per article. Accountability, commitment, shared power, and adaptability emerged as some of the most prominent equity promoting themes applicable at all system levels. Across strategies, two *cardinal* conditions were identified: (1) the need for health equity implementation strategies to be made explicit, and (2) the need for alignment and complementarity of strategies. The framework developed demonstrates equity-oriented reform implementation, which embeds broader equity change throughout the system through inclusive and reflexive governance.

Conclusion This review synthesises diverse literature about how health equity has been considered across levels of the health system during reform design and implementation, providing to our knowledge, the first comprehensive multi-level approach to this issue. Our resulting framework presents policymakers, implementers, and researchers a novel cross-scholarship perspective and process to support the implementation of health equity within system reform initiatives. Throughout design and implementation, consistent vision and a coordinated approach for equity

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across system levels, underpinned by reflexive governance, will be vital to ensuring that those most in need of healthcare benefit equitably.

Keywords Health equity, Implementation, Health systems reform, Scoping review

Background

The World Health Organization defines health equity as "*the absence of unfair, avoidable, or remediable differences among groups of people*", and is "*achieved when everyone can attain their full potential for health and well-being*" [1]. Health equity was a foundational concept within the United Nations as part of the World Health Organizations (WHO's) 1948 constitution, and reinforced in the 1978 Alma-Ata declaration [2]. It is central to the 2030 Sustainable Development Goals ratified by 193 countries [3–5]. Health equity is both a goal and a process, requiring continuous action [6], and fairness in delivery [7]. Despite the growing recognition of unique and fundamental healthcare requirements for diverse populations, the evidence base for identifying the appropriate mechanisms to determine and implement equitable healthcare is limited [8–10].

Among tools developed to promote health equity, many are designed to consider and act on potential health equity implications of proposed policies [11, 12], or for evaluation [8]. This is reflected through the large range of health equity frameworks and tools available [13], yet there is limited guidance on the optimal implementation of reform initiatives to ensure equity goals are realised. Similar to Berman [14], we consider reform initiatives as purposeful approaches, with intent for sustained changes to strengthen the health system, including policy, programs, stakeholders, and institutions. Further hindering progress towards health equity is the tendency for equity to be relegated as a secondary consideration, perpetuating health system reform initiatives that are inadequately responsive to diverse user needs [15, 16]. Often, priorities are instead directed towards maximising efficiency and demonstrating overall health and economic benefit [17, 18]. Such de-prioritisation can at times be driven by political pressures to meet commitments [19], or assumptions that health equity will be addressed through whole of population or "universal" approaches [20].

COVID-19 related health system reform initiatives have highlighted the limitations of universal approaches [21, 22], where government policies rarely managed to achieve equitable outcomes [23, 24]. Inequitable responses compounded existing disparities, resulting in reduced case detection rates and higher mortality across a range of metrics including lower socioeconomic status, homelessness, incarcerated populations, migrant populations and underserved ethnic groups [22, 25]. These undesirable outcomes are not limited to COVID-19, and are apparent in many universal reform attempts [26]. Methods that augment universal approaches to ensure that implementation of reform initiatives reach the broader population more equitably are urgently needed [15].

Augmenting universal approaches will require active efforts, as reform initiatives are complex and multidimensional [27], typically occurring at multiple levels of a health system [28, 29], and require management of ongoing interactions across a complex system of feedback mechanisms, actors, structures, and levels [30]. Across phases of reform design and implementation [8, 31, 32], and levels of the health system, exist a plethora of stakeholders [32, 33]. Stakeholders have insights and manage various levers and responsibilities to influence reform initiatives, moderated by power, politics, governance structures, context, and other socially derived hierarchies distributed across various levels of the system [32, 34]. Understanding who is engaged and how they influence reform design and implementation is critical to successful implementation and the achievement of health equity goals [35].

Given reform complexity, stakeholder breadth, and the non-linear, recursive nature of reform implementation, health equity considerations frequently go unaccounted for and lack structured inclusion. While there is growing acknowledgement of the need for a more explicit focus on health equity across the implementation process within scholarly literature [8, 35–40], the range of strategies available to promote health equity at a population level within implementation of complex reform initiatives have not been comprehensively documented, particularly recognising the multiple levels of a health system. Through the process of conducting a scoping review [41], we aim to synthesise the scope of the literature on this important area. Specifically, we aim to (1) identify and characterise strategies that promote health equity during the implementation of health reform initiatives; and (2) determine implications for policy to promote greater consideration of equity.

Method

Study design

Our scoping review followed Arksey and O'Malley's framework [41], reported against the PRISMA extension for scoping reviews (PRISMA-ScR, Appendix 1 in Additional file 1), and addressed equity requirements of the PRISMA-Equity extension where appropriate [42, 43]. Ethics approval was not required. The study protocol is published elsewhere (https://osf.io/v2hy7).

Identifying the research question

The research aim was designed to identify opportunities to address health equity throughout reform initiative implementation, represented by the following research question – How is equity considered within the design, implementation, and adaptation of complex health system [reform] initiatives? Following the design of the main research question, we developed secondary research questions (Table 1), with reference to the typology of determinants that impact on the implementation process and outcome proposed by Nilsen [44].

Nilsen [44] argues that determinant frameworks share five *general types of determinants*, including characteristics of implementation object, adopters, users, context, and strategies. Informed by these broad determinant categories, we adapted and divided our research questions across five types of determinants. These included (1) strategies; (2) context; and (3) partnerships and connections as a combination of adopters and users, and others who may influence the outcomes through the implementation process [45]. For the purposes of this paper, we refer to partnerships and connections as stakeholders, to distinguish stakeholders from governance (4). We focused on data as one of the foundations of evidence, which is a frequently identified determinant within the implementation object by Nilsen [44]. Lastly, we have also made explicit (5) governance and power, representing the "*rules, structures, and institutions that guide, regulate, and control social life, features that are fundamental elements of power*" [46]. Governance and power are often considered determinants, which are described within context as detailed in determinant frameworks summarised by Nilsen and Bernhardsson [47]. In addition to the determinants, we included a secondary question to understand what outcomes were identified.

Table 1 Secondary research questions

Focus	Question
Strategies	What strategies exist to support inclusion of equity considerations within new health reform initiatives?
	How and when do the identified strategies influence program design throughout the implementation process?
Context	What equity related contextual information is considered within the strategies?
	What is the reform context the strategies are sitting within?
Governance	How are governance and power structures considered in relation to equity?
Stakeholders	How are diverse stakeholders included within the implementation process?
	At what points of the process are stakeholders included?
Data	How are routine data utilised within the implementation process to promote equity?
Outcomes	What were the outcomes of the strategies presented?

Identifying relevant studies

The search strategy was refined through a search strategy framework and developed with the support of a medical research librarian, previously validated search strategies, and the published literature. The search strategy consisted of key words, subject headings, and Medical Subject Headings (MeSH) detailed elsewhere (https://osf.io/v2hy7). Terms corresponding to each of the following subject areas were ultimately collated: (1) Implementation [47]; (2) reform theory and practice [48, 49], (3) equity, diverse populations, and marginalised populations [10, 50–53]; and (4) health system.

Terms and subject headings were excluded if, through testing, they were found to not impact the number of results or produce results that exceeded the scope of the review [52, 53]. Terms were also excluded that applied only to narrow population cohorts in respect to data sovereignty. The final search strategy was translated and conducted on 21 June 2022 across EMBASE Ovid, PubMed, Scopus, Cochrane Database of Systematic Reviews (CDSR), CINAHL, PsychInfo and ProQuest-Coronavirus Research databases.

Study selection

Selection criteria were initially developed through research team discussions [54], and further refined as key papers were identified.

Eligibility criteria

We retained a broad approach to the scope of our review, similar to Bullock, Lavis [32]. Papers were included where the health system reform initiative described represented a population health or system-wide intention across the region the governance arrangement has responsibility over. Equity needed to be reflected in the design and or implementation process as a concept through use of synonyms that are reflected in the search criteria, and the strategies addressing equity were analysed or described within the paper [8, 55]. Actors at any level of the system were considered in scope, to ensure appropriate recognition of the interacting contextual environment within which implementation occurs [32]. There was no restriction by study type or geography. This meant that papers that described theories, models, or frameworks relevant to the above criteria were included.

We only considered articles in the peer-reviewed literature with full texts in English. The study period from 2013 to 2022 was selected, to better capture the health equity discourse, which has expanded considerably since the mid-2000, as well as publications from low-and

middle-income countries which have been rising since the early 2010s [56, 57].

Similar to others [58–60], we excluded letters to the editor, perspectives, conference abstracts and presentations, interviews, book reviews, protocols, and editorials. Publications were also excluded if the initiative described was driven by predominantly non-health sectors.

Initiatives designed for specific cohorts and narrow contexts were excluded to restrict focus to broad strategies used to promote health equity. Similar to Amri, Jessiman-Perreault [55] and Paul, Deville [10], publications were excluded where health equity was not addressed in either the reform initiative or the publication. Health equity was not required to be the focus of the reform initiative, but it did need to be reflected in the paper. For example, a paper would be included where it reviewed a Universal Health Care (UHC) reform initiative that included strategies specific to addressing health equity. However, the paper would be excluded if the UHC reform initiative was approached without discussion and consideration of health equity. We recognise that equity is integral to UHC, however, also note that where it is not addressed in UHC, has previously been shown to often result in persistent or increased inequities [10, 61].

Screening process

Ahead of screening, team members increased their familiarity with the topic area through background reading and developing the study design [62].

All search records were exported to bibliographic files and imported into EndNote v20 (Thomson Reuters), which was used to manage and screen initial search results. Following the removal of duplicates, and an initial collection of excluded publication types including conference proceedings, commentaries and letters, the resultant publications were imported into Covidence, for screening management. Ten per cent of titles and abstracts were equally split and double screened to determine inter-screener agreement (TB, SM, TS, PP, DN, GS) [63]. Discussions were held between screeners throughout this process, followed by a training exercise previously used to identify where inconsistencies were occurring [64]. Through this process, overall agreement was brought up to close to 90 per cent amongst screening team members, above 75 per cent, a previously utilised benchmark of acceptable agreement [63, 64]. The remaining titles and abstracts were then single screened (TB, SM, TS, PP, DN, GS).

Full-text articles were double screened by three reviewers (TB, SM, DN), who met weekly to resolve discrepancies. Similar to other scoping reviews, a hierarchical exclusion approach detailed in the protocol was used to exclude articles [65], with a rationale for exclusion documented. Where consensus was not reached, a third, senior researcher made the final decision (GS or DN).

Data charting

We developed a standardised extraction template [66], which was modified after pilot testing [54, 63]. The final extraction template included standard bibliographic information similar to others [65], as well as details on the interventions including aim, scale, and reform focus. Categories and subcategories were captured, reflecting the secondary research questions [66] (Table 1).

Various methods were embedded within the extraction process to systematically categorise health equity promoting strategies. Equity promoting strategies were defined as specific actions within the implementation process to address and promote health equity. First, recognising the multiple levels of governance, such as local, regional, state and national and the interactions between them throughout policy reform implementation [67], articles were categorised based on the highest level of the system the reform initiative was operating at, or the article was addressing. Where it was not possible to designate a system level, these articles were categorised as 'Other'.

We then extracted information for each health equity promoting strategy described in each article. Each strategy was allocated to a governance domain – the domains were adapted from Dadari, Higgins-Steele [68], which were originally derived from the health service coverage framework components proposed by Tanahashi [69]. We modified the domains in order to be maximally applicable to government processes. Our modified domains comprised policy and legislation, budget and expenditure, management and coordination, social norms, resources, and environment.

Analysis and reporting the results

A standard descriptive matrix was created to report key article characteristics [41], and additional thematic matrices were iteratively developed. A thematic analysis was undertaken to identify themes common across articles [54]. Each of the articles was subject to a first stage of deductive coding during data extraction. This resulted in strategies being identified and categorised into one or more governance domains, and level of system reform.

Three researchers (TB, SM, TS) then identified higher-level themes from the strategies via coding conducted in Microsoft Excel. This process was both deductive and inductive, wherein analysis of articles at one level of the health system would inform the process of analysis at another level of the health system to ensure common themes across levels were recognised. The creation of themes enabled mapping of strategy alignments across system levels. Discussions were held regularly to

resolve coding uncertainties and reflect on coding practice. Stakeholder matrices were also built from the information extracted through the data extraction tool. The information in each was refined iteratively through team discussions and literature consultation, to enable clear reporting of the essential findings.

Through our analytic process we reflected on the relations between implementation strategies, which informed the development of an implementation framework. This process entailed team discussions about the emerging findings and their relationship to knowledge and literature from implementation science, health reform and related fields.

Results

Following the removal of duplicates using EndNote 20, the search strategy identified 10,999 potentially relevant articles. After importing into Covidence, 384 articles were considered eligible for full text review, of which 68 articles met inclusion criteria (Fig. 1).

Study characteristics

Of the 68 articles identified, 26 were from North America (22 were from the United States of America, 4 from Canada) and six to eight articles focused on each of the other regions including, Africa, Asia and the Middle East, Central and South America, Europe and UK, and Oceania. Qualitative studies were the most common study type (18), followed by theory papers (12), reviews (11), case

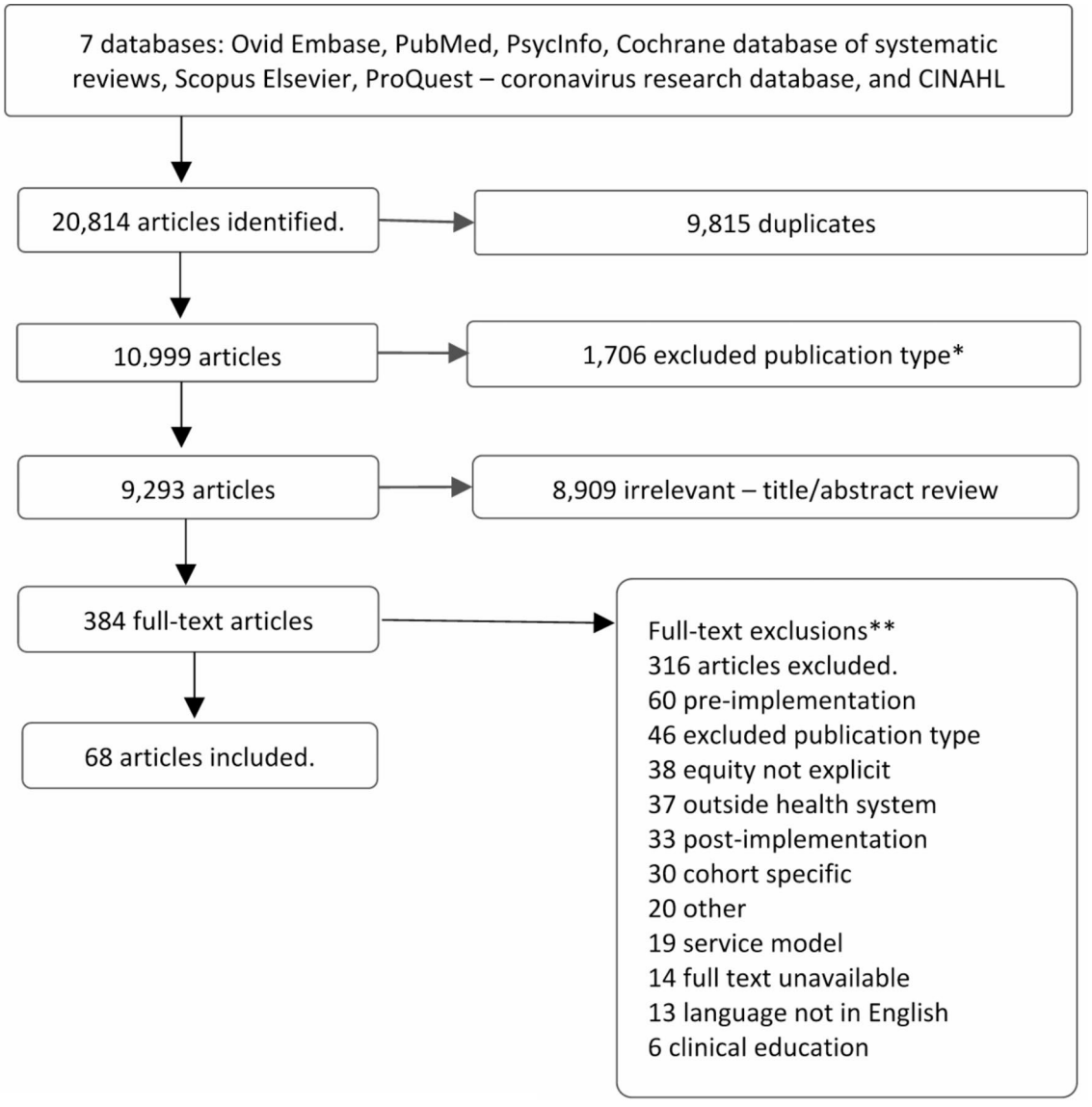

Fig. 1 PRISMA reporting diagram. *Excluded publications include letters to the editor, perspectives, conference abstracts and presentations, interviews, book reviews, protocols, and editorials **See published protocol for full-text exclusion definitions (link to protocol): https://osf.io/v2hy7

studies (9), mixed-method papers (7), and policy analysis (6). There were two randomised control trials, two papers detailing implementation design processes and one scoping review of country specific program reports (Appendix 2 in Additional file 1). There were 30 articles focused on national level reform, eight at state level, eleven regional, twelve community, and seven not targeted at any specific system level, which were classified as other (Appendix 3 in Additional file 1).

Articles covered a range of reform types including general health system reform initiatives i.e., not focused on any specific region or health condition ($n = 32$); reforms focused on particular health condition/s, such as diabetes ($n = 11$); and reforms specific to a region ($n = 6$). Other articles ($n = 19$) were not specific to any reform initiative, comprising multi-country reviews and theory papers (review, multiple initiatives, or frameworks). There was an increasing trend in number of relevant papers per year except for minor outliers in 2013 and 2016 (Appendix 4 in Additional file 1).

Thematic analysis of health equity promoting strategies

Thematic analysis identified two *cardinal* conditions that characterise health equity inclusion in the context of multi-level system reform. The first condition was a requirement for health equity strategies to be made explicit throughout the design and implementation processes. Examples of explicit actions included actively addressing health equity inclusion within policy [70–73], explicit leadership and accountability to address equity [39, 74, 75], health equity designated funding [76], or specific equity requirements and considerations within staff recruitment and responsibilities such as explicitly addressing power in the arrangement of roles and responsibilities [77, 78].

The second *cardinal* condition was the alignment or complementarity of equity promoting strategies across health system levels. Examples of alignment or complementarity included a focus on building strong coordination and ongoing communication between levels of the health system [76], alignment of equity promoting strategies with statewide policy incentives [79], efforts to understand feasibility of equity promoting strategies and address challenges across health system levels [76, 78, 80], and widespread alignment and adoption of equity relevant standards across the system [74, 81]. Both conditions appeared to function to enhance and ensure protection of health equity promoting strategies and were evident at all system levels and across domains.

Alongside the *cardinal* conditions, we identified a vast number of themes derived from a larger pool of strategies (Appendix 5 and 6 in Additional file 1). There was a median of 10 health equity promoting strategies reported per article (interquartile range, 7, 15). Strategies covered a range of actions that promoted health equity throughout reform design and implementation. The volume of strategies captured reflect the diverse scope of strategies reported in the literature, with some being discrete actions, such as establishing a consistent definition of equity, and others entailing more complex longer-term efforts, such as legislating health equity related responsibilities. The distribution of strategies by governance domain varied by level of the reform initiative. For example, at a national level, the management and coordination domain contained 19% of health equity promoting strategies, while at the community level, they made up 34% of the health equity promoting strategies.

Distribution of themes and strategies across governance domains

Derived from the equity promoting strategies, we identified 86 equity promoting themes that were common across multiple levels of the health system. Table 2 provides examples of the equity promoting strategies within each of these cross-level themes. For example, leadership commitment to and vision for health equity was reported in reform initiatives at national, regional, state and community levels. Specific health equity promoting strategies within this theme included political will and commitment to address health equity; strong and active leadership at the state and regional levels; and activating and equipping change leaders at the local level. A detailed list of all themes and their associated system levels is included at Appendix 6 in Additional file 1.

Regarding governance, around half (35/68) of the included articles referred to the role of governance structures in the reform initiative. Many of these included limited details, such as the establishment of a central health organisation to enable promotion of systemwide equity oversight, or simply that governance changes were a factor. No articles provided detailed descriptions of governance structures.

Examples of the governance structures and processes that were identified to promote equity within reform initiatives are included in Appendix 6 in Additional file 1. These comprised legislated requirements for governing bodies to address equality ("legislation and policy"); sub-group representation during implementation ("social norms"); participatory approaches to ensure community perspectives ("social norms"); and strategies that enabled devolved governance ("management and coordination").

We noted a distinction in the relationship between governance, power, and stakeholder, which we had not appreciated initially. When an initiative progresses from decision making to implementation, it is the arrangement of stakeholders both formal and informal, and the power dynamics between them that shape the governance strategies established. An arrangement that aligns closely with

Table 2 Themes common to multiple system levels including example strategies

Domain*	Themes	Examples of strategies
Legislation and policy	Values and clarity [70, 72, 73, 77, 82–85]	*Consistent definition of equity across the system*
	Proportionate universalism [15, 39, 86]	*Universal policies applied proportionally to need*
	Accountability [81, 87–89]	*Legislated community accountability requirements such as community engagement in planning*
	System commitment [68, 74, 80, 83, 90, 91]	*Embed framing to balance efficiency against equity needs.*
Expenditure and budget	Guaranteed and sustained funds [72, 91–97]	*Sufficient and continued financing for equity*
	Financial incentives and supports [8, 39, 68, 71, 76, 88, 97, 98]	*Financial incentives for partners to partake in the equity promoting programs*
Management and coordination	Leadership commitment and vision [72, 77, 79, 82, 90, 92, 94, 97, 99–101]	*Leadership responsibility, buy in and commitment to equity*
	Collaboration and coordinated approach through communication and clear role delineation [8, 12, 74, 76, 77, 90, 98, 101–105]	*Intentionality across project structure to ensure effective equity operations*
	Adaptability [78, 88, 89, 99, 102, 106, 107]	*Adaptation of model to ensure feasibility and sustainability at the local level to meet local needs*
	Multilevel accountability [76, 79, 87, 94, 101, 108]	*Multi-level governance to address fragmentation, recognising the opportunities for devolved governance to address equity*
	Longer timelines [73, 80, 82, 98, 101]	*Timeline adjustments for vulnerable populations to build momentum and address barriers*
Social norms	Shared power and decision-making [68, 72, 76, 86, 90, 91, 96, 97]	*Community and user engagement through formalised governance and at organisation level, with equitable representation in roles*
	Shared understanding and sensitivity to community context [72, 82, 84, 91, 99]	*Creation of two-way channels through which implementers and leadership can communicate in a timely manner and build trustful relationships*
	Inclusive, respectful, equitable, and trust-filled partnerships [73, 78, 80, 95, 98, 101–103, 109–111]	*Build trust based on recognition and respect for cultural values*
Resources	Digital systems [39, 68, 93–95, 110, 112, 113]	*Interoperable electronic health records across services to consistently capture equity domains*
	Monitoring, evaluation and feedback strategies, processes, and resources [8, 74, 83, 106]	*Equity specific monitoring and evaluation (e.g., outcomes, training impact, unmet need)*
	Quality data [39, 76, 77, 89, 97, 98, 103, 106, 109, 114, 115]	*Disaggregated data to reduce invisibility and enable greater tailoring of services*
	Training and awareness [39, 73, 74, 84, 94, 110]	*Tailored educational messaging and information specific to communities*
	Multi-profession representation [84, 91, 108, 116]	*Multi-professional teams*
	Diverse roles and responsibilities [72, 84, 93, 98, 99, 107].	*Specific equality and diversity staff, local health equity champions and lay advocates*
Utilisation and Environment	Community and patient-centred [39, 68, 70, 77–79, 86, 97, 98, 101, 104, 108, 114, 116–119]	*Interventions embedded in social settings to promote accessible services*
	Culturally safe, agile, and flexible services and implementation [39, 74, 81, 97, 99, 104, 105, 108, 117, 120, 121)	*Flexible implementation in response to contextual needs*
	Accessible services that are safe [68, [74, [77, [101, [109, [122]	*Focus on reducing geographical barriers*

*Adapted from UNICEF vaccination Coverage and Equity Assessment determinants of effective coverage method [68]

Burris, Drahos [123] definition of '*nodal governance*'. An example of this was reflected by Bliss, Mishra [90], where, as part of the process to achieve health equity in all policies in Minnesota, USA, the top state health official made use of their position and power to assemble a diverse array of representatives and organisations to constitute the decision-making governance structure throughout implementation of the reform initiative. For this reason, we distinguished power from governance, and consider it a distinct determinant. This distinction recognises power as a determinant that influences governance strategies as a secondary determinant. We also noted that the governance structures feed back into the power distribution and stakeholder engagement dynamics. A simple demonstration of this feedback process is demonstrated by strategies that enable power sharing through community participation and leadership [76]. These structures then again influence stakeholder engagement and power distribution within the implementation process through a recursive process.

Stakeholder inclusion

54% (37/68) of the included articles discussed stakeholder support roles in the implementation process of equity promoting reform initiatives. Inclusion of healthcare providers and professionals was reported most

frequently (24 articles), followed by community members and leaders (17 articles) (Fig. 2).

Engagement of stakeholders was reported in initiatives across health system levels, with community level reform initiatives most frequently reporting stakeholder engagement (Appendix 7 in Additional file 1). State and regional level reform initiatives tended to report a smaller breadth of engagement (fewer types of stakeholders included) than did national and community level reform initiatives. Limited engagement was reported with stakeholders outside the health system, such as social and community workers.

We present stakeholders as determinants, consistent with the broader implementation science literature [44]. However, stakeholders were distinguished from stakeholder engagement methods, which we present as implementation strategies. The included articles described various methods to include stakeholders (Appendix 8 in Additional file 1), and we consider these as health equity promoting implementation strategies. For example, stakeholders were allocated responsibilities such as collaboration on benchmarking health equity progress, to provide a platform for discussion between stakeholders [99, 103]; financial and administrative responsibilities [78, 121]; empowering community-led referrals and engagement [98, 110, 117, 121]; and marketing or training support [79, 86, 121]. Other mechanisms included establishing specific arrangements to enable cross-stakeholder conversations such as providing opportunities for direct communication between health service managers and decision makers [99, 103]; multi-stakeholder deliberative dialogue on equity [90, 124]; co-designing and running workshops [80, 96, 100]; alongside the more regularly mentioned working groups [70, 71], meetings [73, 78, 93, 111, 115, 124], and committees [86, 90, 96, 107, 118, 125]. Few details were provided in the articles on stakeholder inclusion timepoints, milestones, or frequency of consideration or revision of these methods in the course of implementation.

Routine data and context as determinants of health equity

Ten of the included articles described the utilisation of routine quantitative data to promote health equity. Seven of the articles indicated use of administrative health data records for equity promotion, and these were overlayed by census or geographical data in five of the articles [77, 84, 91, 93, 121]. The articles drew various health equity dimensions including ethnicity, socioeconomic status, geographical location, housing needs, social service use and criminal justice related service users. Two articles used quality and outcome data or undertook service need assessments through surveys to inform initiatives [76, 100]. One article cited data as an important element for monitoring and impact evaluation but did not specify data sources [73].

Through our analysis, we noted that like power and stakeholders, data availability informed data driven implementation strategies and adaptations in a recursive fashion. For example, Jean-Jacques, Mahmud [93] detailed that as part of a quality care promoting reform initiative in Maine, USA, the availability of quality data with standardised demographic data fields and interoperability across electronic health records, enabled implementers to determine gaps in the model of care and shift implementation strategies. The author also noted that where quality data were limited, and significant strengthening of data was required, this impacted on future implications of social and financial capital available to encourage maintenance of data systems over time.

In addition to data, we recognise context as an important determinant and outcomes as an important indicator of success. However, it was not feasible to meaningfully synthesise information from the included studies on these dimensions because of substantial diversity in

Stakeholder groups	National	State	Regional	Community	Other	Total
Healthcare providers and professionals	7	4	4	7	2	**24**
Community members and leaders	7	4	2	4	0	**17**
Government departments and policy makers	5	3	2	3	1	**14**
Academic and research institutes	5	1	0	6	1	**13**
Experts, international and national organisations, peak representative groups	6	2	1	0	1	**10**
Consumers and carers	5	0	2	1	1	**9**
Community-based organisations	3	1	1	3	0	**8**
Other relevant stakeholders	2	2	0	2	1	**7**
Decision makers and politicians	2	1	0	3	0	**6**
Social and community health workers	2	1	0	2	0	**5**
Invested interest groups (insurance, donors)	1	0	0	1	0	**2**
Students	0	0	0	1	0	**1**

Fig. 2 Number of articles reporting inclusion of stakeholders by system reform focus level

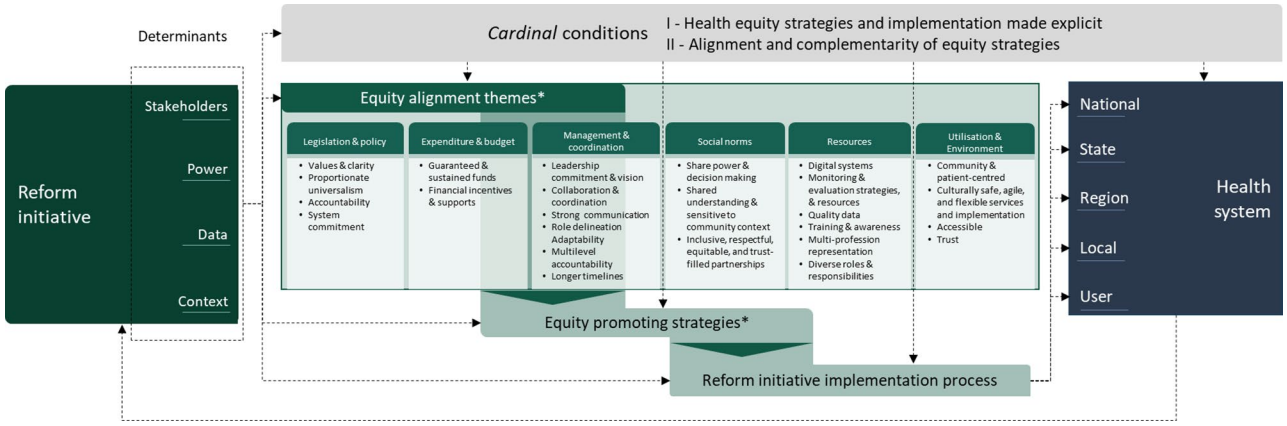

Fig. 3 Health system reform implementation framework to promote heath equity. *For the complete list of themes and associated strategies, see Appendix 6

scope and focus of the reforms reported, the range of settings in which these reforms took place, and wide variation in reporting. For example, in relation to outcomes, one study followed how health equity was addressed at the national level in Türkiye over a ten-year period in alignment with a major reform program, and reported detailed population health changes across the country [99]. Another was set in several communities in Australia, testing an approach to optimise health literacy, and captured pre and post implementation changes in responses to a health literacy questionnaire, and staff interviews capturing perspectives on success [100]. A third study considered equity promoting immunisation strategies across 13 countries, and reported changes in national vaccination rates over time [68]. There were also a wide range of contextual factors reported in different ways, with influences on health equity promoting implementation strategies. For example, Atun, Aydin [99] presented common contextual conditions such as implementation climate and capacity for change as factors that influenced the successful reform of Türkiye's health system towards equitable universal health care.

Health system reform implementation framework to promote Heath equity

The framework we present below represents a unique policy perspective, that articulates how a health equity frame and process can influence health equity across multiple levels of the health system, and potentially beyond the initial reform initiative (Fig. 3).

Recognising the dynamic and recursive nature of implementation [8, 31, 32], our proposed framework sits within the design and implementation phase or the '*active implementation zone*' as Bullock, Lavis [32] proposed in the process model of implementation from a policy perspective. The design of our framework drew heavily on the determinants and process model presented by Bullock, Lavis [32], which similarly presents a policy view.

The framework incorporates the analysis presented earlier, demonstrating the determinants influence on equity promoting policy strategies, which in turn influence determinants in iterative implementation cycles. Through grounding these processes within the health system, and combining this relationship with our other findings, the framework reflects our interpretation of the relationship between each of the elements we have detailed.

The framework progresses from where a *reform initiative* decision has been established, and initial resource allocations confirmed. From this point, we propose that *determinants*, including but not limited to stakeholders, power, data, and context, and the interacting relationships they commonly hold with each other [44], continually influence uptake of and conviction towards the *equity promoting strategies selected*, and *reform initiative implementation*. As an example of this in action, in Türkiye's Health Transformation Program, Atun, Aydin [99] details the arrangement of the health minister meeting with provincial governors and health directors to finalise implementation plans in the region, which promote health equity. While a simple demonstration, it shows how an arrangement of stakeholders, the implicit power distribution, and their characteristics have influence over the final implementation plans, which were intended to reduce inequities across the country.

We also posit that prior to reaching the initial *equity promoting strategy* selection and *implementation*, the determinants, and the relationships they hold with each other, will also influence uptake and conviction towards the *cardinal* conditions and the *equity alignment themes* considered. Given the importance of the *cardinal* conditions towards health equity promoting strategies, which our scoping review findings would suggest, a strong conviction towards the *cardinal* conditions, reinforce actions

towards alignments across equity addressing strategies represented by the *equity alignment themes* (Table 2). As flagged earlier, these present opportunities to identify and strategically select *equity promoting strategies*, which inform the *reform initiative implementation* process. As we identified, the emphasis placed on the *cardinal* conditions provide the continuous influence on the implementation process and health system response to embed health equity actions.

Implementation will progress across and influence all levels of the *health system* relevant to the *reform initiative*. Aligning with other process models [8, 32], the implementation process occurs in a cyclical fashion, and we suggest that this process will influence the relationships between the determinants, in turn modifying the strategies and reinforcing the *cardinal* conditions. We propose that this occurs through the interactions with the *health system*, that will feedback into the *reform initiative*, repeating the implementation cycle. Central to this framework is the concept that reform implementation will have implications for all levels of the system through the feedback cycles even when a level is not immediately engaged.

Discussion

Recognising the complexity of reform initiative implementation across the health system, this review synthesised the scope and coverage of the literature on health equity promoting strategies within the design, implementation, and adaptation of complex health system reform initiatives. A particular emphasis was placed on the multi-level system within which reforms occur, recognising that reform initiatives do not work at any one single level in isolation.

Our review significantly extends existing health equity implementation knowledge through an explicit focus on the responsibilities, interactions, and intentionality to align processes across the multiple system levels. Existing health organisation recommendations presented by the United States Centre for Disease Control and Prevention [126] and the Institute for Healthcare Improvement [127], are broadly consistent with the underlying themes we present. However, to the best of our knowledge, we are the first to present a multi-level health system perspective that captures the interactions across the system and presents opportunities to embed and align health equity strategies across system levels to more effectively ensure diverse population requirements are addressed. We also significantly extend the depth and scope of overarching opportunities and considerations within the policy design and implementation process. To summarise our findings, we present a framework that is dynamic to contextual needs, clear with actions, and recognises the recursive and iterative nature of reform.

Proposing a framework for reform initiative implementation

Our proposed framework presents a process to inform and support implementation of health equity promoting reform policies and initiatives. The framework presents a theoretical approach that like Bullock, Lavis [32], attempts to bring together implementation science and policy implementation research, with the addition of an equity perspective. Our approach also recognises the implications and relationship to complexity science, which reflects the dynamic, iterative and recursive nature in which health system reforms occur [128].

The implementation framework actively draws on determinant frameworks and provides examples of how these can be incorporated with the use of determinants such as stakeholders, power, data, and context. How determinants are considered should depend on the reform initiative, priorities, and context, which has been extensively detailed by others [32, 44, 47]. We also note that strategies are often considered determinants [44]; however, from our findings, strategies appear to be influenced by other determinants initially, and will then in turn, through the implementation process, influence the determinants in a cyclical nature. Thus, we believe distinguishing health equity promoting strategies from other determinants is an important aspect our framework emphasises. We also recognise, that while we argue strategy implementation will influence the shape and relationships of determinants, determinants are active and dynamic [45], and will continually be influenced by factors outside the model.

Within our framework, the health equity implementation process is driven by *determinants*, which have an ongoing influence and impact on implementation [44], and in turn through the health system influence the reform initiative [32]. Implementation and the health system will be continually shaped and influenced by the need to meet both the *cardinal* conditions, providing an avenue to progressively embed health equity considerations and actions. Thus, providing opportunities to embed equity promoting considerations and alignments across the broader health system.

Key to the framework design is the emphasis on opportunities to embed local voices and promote necessary governance structures, ensuring spaces and actions for diverse populations and communities to inform reform initiative implementation. Alongside inclusive and recursive processes, the framework promotes the concept of reflexive governance from sustainability governance theory [129]. As Feindt and Weiland [129] argues, reflexive governance is a process that reduces ongoing structural ignorance of external impacts, in this case, the health system. It occurs when governance include the "*perspectives, values and norms of a variety of actors, which in turn has*

consequences for the interventions of the governance system" [129]. Through the framework we present, implementing explicit equity promoting strategies within an active system, promotes the reflexivity opportunities to identify and overcome inequity promoting outcomes.

Implications for policy and practice

Our comprehensive scoping review identified several important considerations relevant to policy and practice, with emphasis on the *cardinal* conditions. The first, the need for health equity focused policy design and implementation strategies to be made explicit, was frequently addressed across all levels of reform initiative implementation. Explicit approaches promote commitment and justification to overcome perceived tensions with other success measures such as efficiency [12, 17, 18], and will be enhanced through use of strategies within the governance domains. Opportunities to reinforce equity expectations within the overarching policy and legislative framing support safeguard equity promoting processes that are able to consider impact on service delivery and who they reach [130], and provides opportunity to inform and embed monitoring and evaluation. In addition to incorporating equity principles and consistent definitions, introducing framing such as proportionate universalism, establishes foundations to mitigate the pressures to maximise efficiencies at the cost of equity. The application of proportionate universalism has also demonstrated health inequities reductions [15], by responding to population need through a gradient response [131].

In addition to being explicit, policy makers and implementers should strategically consider the implications of the second *cardinal* condition, alignment of health equity strategies across the system. The strategic alignment or complementarity of health equity promoting strategies with those already embedded in the system, help promote shared understanding, clarity, consistency, and can reinforce each other through a range of potential mechanisms succinctly articulated by Weiner, Lewis [132]. The mechanisms enable the strategic combination and dependency of multiple strategies to augment and enhance uptake and outcomes.

While all strategies should be considered and selected to align with local requirements, the themes identify strategies common across system levels, such as accountability, commitment, shared power, and adaptability. The promotion of these strategies enable two-way sharing of information between decision-makers and local organisations [99], and embeds a vision to bring workforces and organisations onboard [90].

Expanding stakeholder integration and engagement

While the reforms detailed in the included articles all had an equity agenda, structures to appropriately manage and engage diverse stakeholders were not well described – this may indicate an implementation gap that requires attention by policy makers and implementers. Despite the equity agendas of each of the reforms we covered in our review, our results indicated that many implementers and policy makers still need to promote structures to appropriately manage and engage diverse stakeholders. Stakeholder inclusion is critical to the success of reform initiatives [32], promoting establishment of credible and trusting partnerships that can encourage organisational buy-in to protect against significant external challenges [111]. Inclusion of stakeholders may be a particular challenge at higher levels of the health system, as indicated by our finding of fewer initiatives at this level reporting stakeholder inclusion.

Strengthening engagement also needs to consider breadth, and from our results, this may be particularly relevant at regional and state levels, where breadth of engagement reporting was narrowest. While stakeholder engagement requires specific capabilities, capacities and sufficient funding [133], there are also structural, procedural, institutional and technical barriers to stakeholder engagement that require consideration [134].

To truly address health equity challenges identified within a health system, the health sector needs to work alongside other sectors to address social determinants of health, which often require action beyond the remit of the health system [135]. From the included articles, the limited reporting of stakeholders working in other sectors such as community services, indicates an urgent need to expand stakeholder inclusion in health system reform. This can include social and community workers, and community-based and non-profit organisations. Engagement with these sectors would promote action to move beyond the health system silos that limit the ability to shift care into the community and streamline services where people need them.

Challenges, limitations, and opportunities

Our framework, developed on the basis of published literature, would be further strengthened through practical application to test its utility in promoting equity during implementation of heath reforms. It would also be strengthened through more explicit incorporation of the perspectives and knowledge systems of equity groups – for example incorporation of an indigenous lens to the framework e.g. 'working at the interface' [136].

Similar to other reviews of published literature, our findings are limited by the availability and completeness of available data. While the review provides a broad overview of the many strategies available to policy makers to embed equity in reform initiatives, many of the articles provided only cursory details about the strategies, lacking granular detail about implementation processes and

requirements [137, 138]. This lack of documentation limited the depth of analysis that could be conducted in the review. Further, there was little documentation about the temporal relationships between strategies throughout the implementation process and thus we were unable to map elements against the implementation phases.

Further research can build on the strategies identified within this review, to consider where each of the strategies best align within the few health equity related implementation frameworks that have only recently been proposed [8, 139].

Despite our comprehensive search strategy and broad inclusion criteria, there was an unexpectedly low yield of articles meeting inclusion criteria from Europe, the UK, Asia and the Middle East. While identification of further equity approaches in health reforms in these other contexts may have enriched the review, given the diversity of strategies and themes identified in the included studies, it is unlikely that additional articles would have altered our conclusions or framework significantly. Several papers and reports have provided a list of some examples of strategies available to promote equity that exist in the grey literature [10, 16, 140]. An expanded grey literature review, particularly drawing on COVID-19 responses would likely enhance understanding of recent health equity promoting reform initiatives, particularly those in times of crisis.

Finally, it is important to recognise that the information presented purposefully does not capture the nuance and context required to address specific sub-group needs. The themes and strategies to address equity during design and implementation of health reform will need to be tailored to the diverse sub-populations that exist in any particular reform context.

Conclusion

The review provides encouraging indications of the wide range of strategies available to promote action to address health equity at all levels of the health system, and across roles and responsibilities. Importantly, this review builds on previous reports and the literature towards addressing health equity in a coordinated approach. It provides novel considerations and opportunities towards addressing health equity reform implementation within a multilevel system, rather than independently within each health system level or organisation.

Despite the complexity of reform initiative design and implementation, this review has identified and clarified several considerations toward addressing health equity within the process. This research recognises that each system will have its own cultural and geographical requirements. Due to this, different strategies may be applicable in different contexts; however, as a starting point, health equity strategies and implementation should be made explicit, and will benefit from alignment and complementarity of strategies. The array of themes identified each represent a depth of strategies that can be locally tailored to support this process.

Finally, the proposed process framework for health equity promoting reform initiatives that we present, offers a novel literature and theory informed approach. We hope the framework alongside the equity promoting themes and strategies we identified, can support action to address health equity within current and future health system reforms.

Supplementary Information

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Supplementary Material 1

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Author contributions

TB, DP, DN, and GS designed the overarching study and search strategy. TB built and conducted the search strategy. TB, DN, SM, TS, PP, and GS conducted the title and abstract screening processes. TB, DN, SM and GS conducted the full-text screening. TB and SM conducted the data extraction. TB, SM and TS conducted the various analyses. All authors held discussions to guide the review, review analysis, and maintain quality control, in addition to editing contributions. All authors supported draft the article, have read the final manuscript, and have approved the final version for submission.

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Data availability

This work analysed secondary sources, which are cited and are publicly accessible or with academic institutional credentials. Authors can confirm that all other relevant data are included in the article and/or its additional files.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

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Competing interests

The authors declare no competing interests.

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