

Supplementary file S2: Key terminology and definitions used in this synthesis

Term	Definition adopted	Examples	Comments and caveats
Health research capacity development (HRCD)	“Capacity development is defined as the ability of individuals, organisations or systems to perform appropriate functions effectively, efficiently and in a sustainable manner. When applied to health research, this translates to enabling both individuals and institutions to define health problems, set objectives and priorities, build sustainable institutions and organisations and identify solutions to key national health problems”. [1]	Conducted by a large numbers of actors including: private foundations, multi and bi-lateral funders, international organisations, consortia, research councils, universities, NGOs and Industry. Examples include Rockefeller Foundation, The Swedish International Development Agency and WHO TDR. Usually involves knowledge or resource transfer at individual, institutional or macro levels.	This definition by Magwaza et al. [1] was found to be the most straightforward and encompassing definition of health research capacity development. Although the term “capacity development” has some pejorative connotations (assumption that there is little extant capacity), in its broadest sense capacity development could involve both building new capacity and strengthening existing capacity. It also semantically links capacity development to the international development agenda.
Research system	Concept representing a system designed to coordinate and manage health research at all stages of the knowledge cycle with the goal of improving health and health equity. The research system can be conceptualised as the environment or ecosystem that research takes place in [2].	Research systems encompass health research structures, regulations, governance, ethics, infrastructure, priority setting, financial and resource planning, acquisition and allocation at national, regional or global levels [3]. They include and connect all other levels, including the supra-national level.	Research system is not to be confused with “System Level”. “System Level” is sometimes used to describe the “Macro Level”.
Development modality	Modality refers to the methods or organisational setup used to deliver development interventions	May include basket funding to institutions, vertical support to projects, or horizontal capacity development, collaboration or partnerships [4].	Similar to research model. Modality is distinct from “strategy” which more specifically describes the development intervention.
Development strategy	Strategy refers to the selection and deployment of interventions aimed at resolving specific development barriers	Strategies can focussed at the individual, institutional, or macro level. Examples include training fellowships, building laboratories, or creating knowledge development platforms.	Modality is distinct from “strategy” which more specifically describes the development intervention.
Macro level capacity	The highest level of the national research system. Capacities at this level may be agenda setting, policies, national budgetary allocations, demand creation and strategic planning [5].	Government ministries such as Ministry of Health, Research or Education. Also includes regulatory and ethics bodies, funding bodies, top level administrative structures, professional associations and national registries.	Often used interchangeably with “System Level” [5]. However, this is confusing because the system encompasses individual, institutional, macro and supra-national levels.

Institutional level capacity	Refers to the ability of institutions to fund, manage and sustain themselves to perform all tasks required to deliver their services or goals. Common institutions include: universities, hospitals, and ministerial departments.	Elements of institutions include: human resources, material resources (computers and machinery), infrastructure (libraries and laboratories), service connections (internet, water, and power), service delivery and finance and management systems.	Based on the working definitions used by The Global Forum for Health Research and the World Health Organisation as they encompass the most common conceptualisations of the term [2, 5-7].
Organisational level capacity	The capacities of individual units within and governed by “institutions”.	Usually include departments or research units within universities or research divisions within ministries of health	The term “institution” is often used interchangeably with “organisation”. However, differentiating between these terms is useful because it distinguishes between the wider governing institution and organisational units within institutions [8].
Individual level capacity	Individual capacity development attempts to increase the capacities of individuals to perform their work effectively	Traditionally focused on producers of research. More recently extended to other stakeholders and includes “soft” skills training such as leadership.	Based on commonly accepted definitions used by The Global Forum for Health Research and the World Health Organisation [2, 5-7].

References

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