



Research Capacity Strengthening

Dr. Khin Saw Aye

MBBS, MMedSc (Pathology), PhD, FRCP (Glasg.)

Deputy Director General (Retired)

Department of Medical Research

Ministry of Health and Sports



What is Research Capacity Strengthening?

- Process by which individuals, institutions and societies develop abilities-individually and collectively- to perform **research effectively, efficiently and in a sustainable manner**
- Various approaches including improving the capacity of individual researchers through **training courses, supporting partnerships and developing leadership skills**

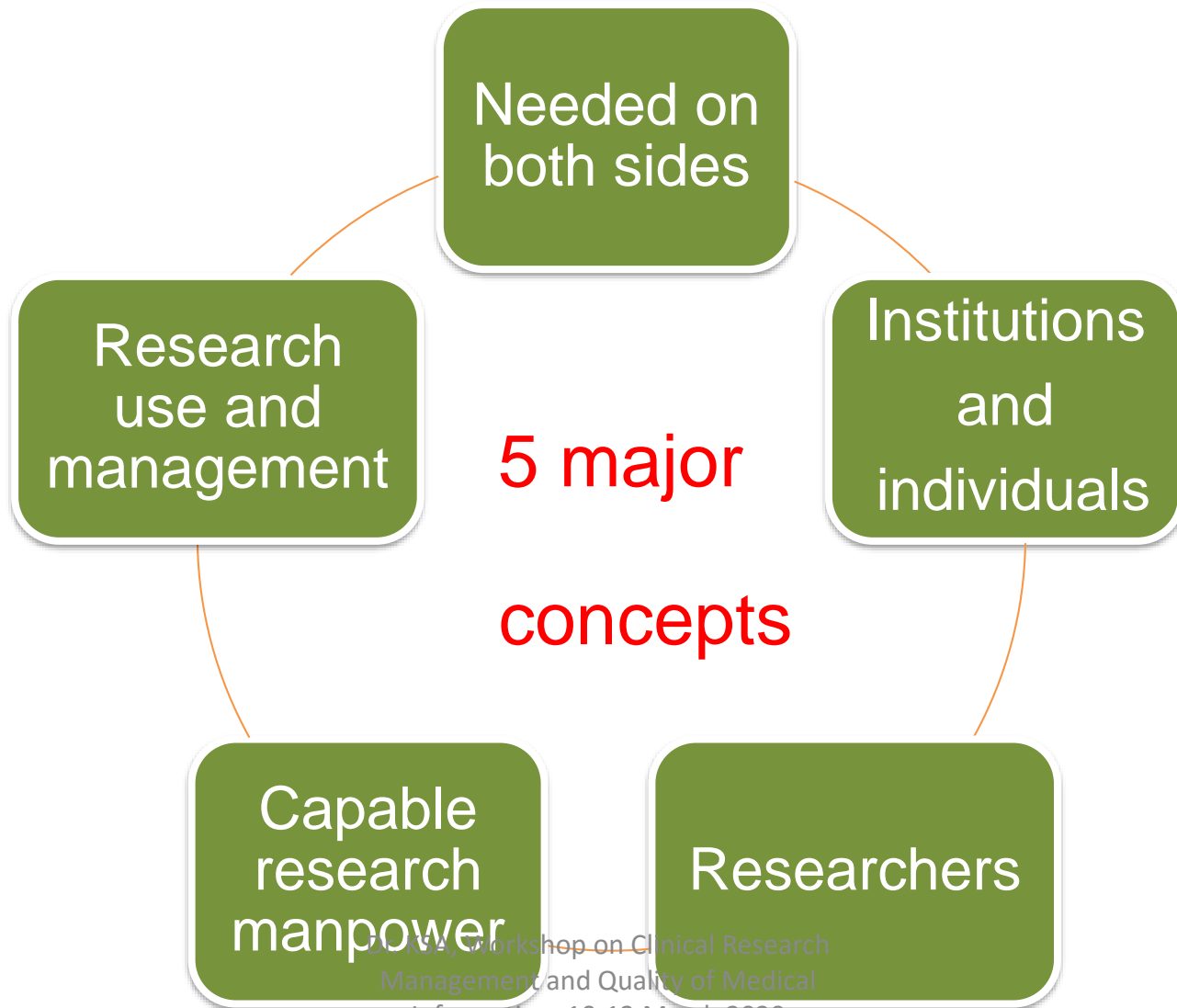


What is Research Capacity Strengthening?

- Researchers in low- and middle-income countries (LMICs) are best placed
- To identify and address the health challenges of their own nations
- To provide local and national policy-makers with a broad range of high-quality, relevant evidence to inform decision-making



Research capacity building in health research



Research capacity building in health research

1. Needed
on both
sides

Capacity building is needed both on

Supply side

Researchers

Demand side

Research users

- General public
- Civil societies
- Policy makers
- Health programmers



Research capacity building in health research

2. Institutions and individuals

There is a need to develop capacity of both institutions as well as individuals of **both the supply side and the demand side**.

- These should include the **building up and maintenance of the infrastructure facilities** necessary to support research.



Research capacity building in health research

3. Researchers

Researchers include a range of persons,
from

➤ highly trained professional researchers

to

➤ community health workers



Research capacity building in health research

4. Capable Research Manpower

4. There is a need to look beyond the production of capable research manpower.
- It is necessary to pay **attention to the maintenance and continuous improvement and utilization of this capable manpower** by providing an enabling environment, career development, rewards and incentives, and avoiding brain drain, both internal and external.



Research capacity building in health research

5. Research use and management

Capacity building includes

- Development of capability for research
- Research use
- Research management



National point of view

- A **more comprehensive approach to capacity building** is required.
- It is necessary to **build a research culture among the policy makers, administrators, the scientific community and among the civil society** (community at large), making them **appreciate the value and usefulness of research and its benefits to society**.
- This will assist in eliciting their support.
- This aspect of national capacity building in appreciation of research has been neglected, hence needs attention.



Different types of capacity

- Need to be developed in different groups besides the capability to conduct research.
- The use of the media to bring the outcome of research to the people, especially in developing countries shows room for improvement.
- It is also important to build up capacity among different groups of potential research users so that they can make use of relevant research information and findings.
- This includes the capability to do **evidence based policy analysis and formulation (policy analysts working with policy makers), and critical appraisal of publicly available health information (for general public).**

Institutions and Infrastructure

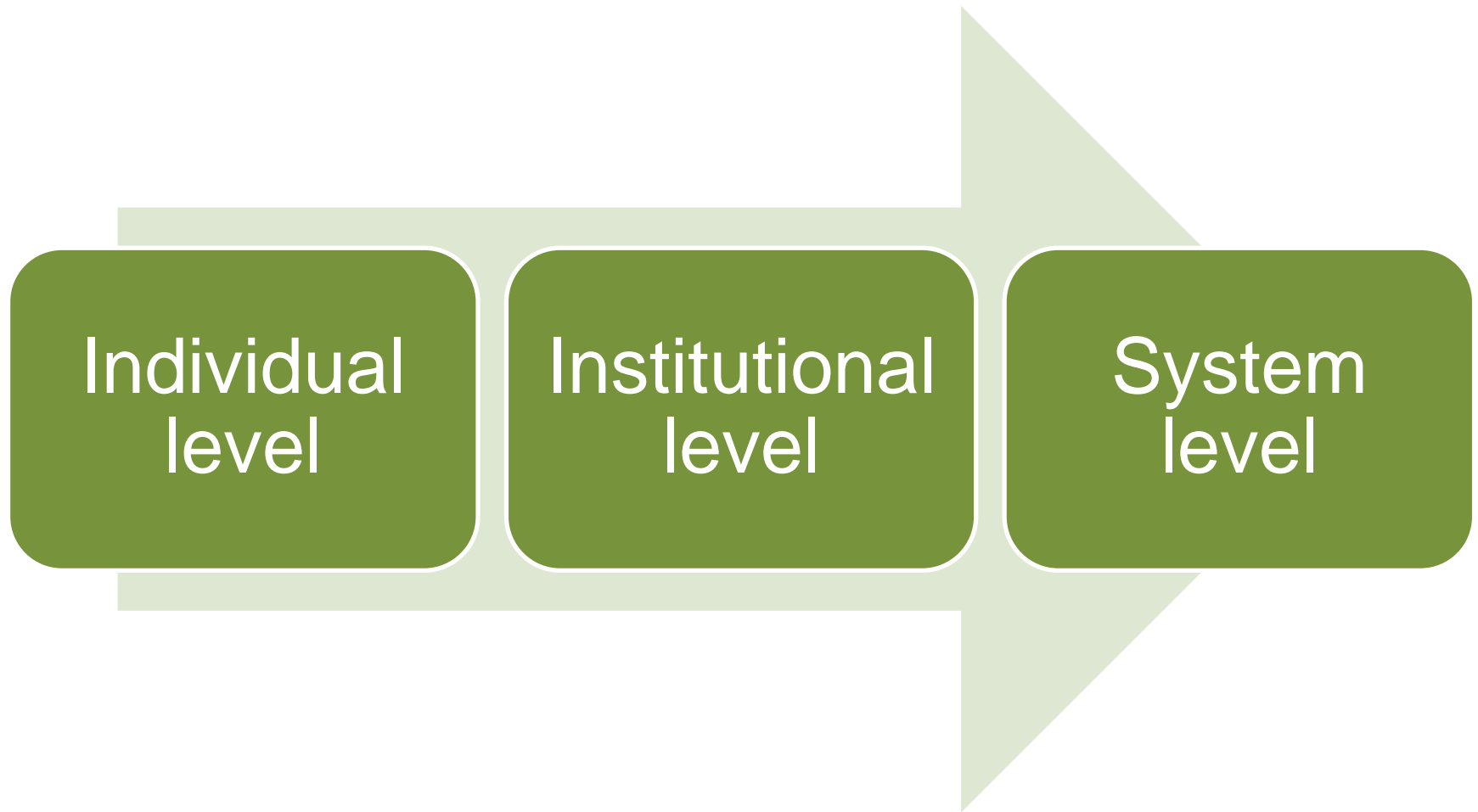
- This implies the need to carefully plan for infrastructure necessary to support present and projected needs for research activities.
- It is to be noted that in most developing countries, there is an under-usage of capital equipment.
- **Mandatory schemes** for **equipment sharing** may be needed specially, those items that are of **high cost**.
- This may require 'pooling' of the use of capital items, with the responsibility taken away from departmental heads that stake a personal claim to them.



Existing and available researchers

- Besides producing more capable researchers, it is important to pay attention to the maintenance and effective use of existing and available researchers.
- Appropriate plans to use the **trained personnel are crucial for sustainable capacity development**. The training should be relevant to the present and projected needs.
- The relevant institutions should have specific plans and support to make **proper use of those who have received the training**.
- Continuing professional development activities have to be instituted to make all staff to keep abreast of developments in their respective fields.

Capacity Strengthening at different levels





Individual level

- A critical mass of researchers competent in

- Basic,
- Clinical,
- Epidemiological,
- Biostatistical,
- Health systems and policy and
- Social sciences

performing quality research of national relevance and of scientific importance, has to be

- built,
- maintained
- retained.





Individual level

Capacity building strategies include

- graduate and postgraduate programmes,
- learning by doing approaches in the form of **development or seed grants**
- **hands-on training** in ongoing research programmes
- **institutional partnerships** between developing and developed and/or developing countries





Individual level

- Capacity strengthening at individual level has focused in the past exclusively on the procedures of research, i.e. researchers
- Recently, this focus has been enlarged to include other stakeholders such as:
 - decision-makers and managers
 - health workers at the various levels of the health system
 - research managers
 - community members



Individual level

- While technical competence (in protocol development and data analysis) is obviously a key element in capacity strengthening, there is a growing recognition that other aspects of the research process have to be included as well, such as
 - priority setting,
 - networking and leadership,
 - communication,
 - translation and dissemination,
 - advocacy,
 - promotion and negotiation, and
 - partnership development



Institutional level

- Identifying and training the proper balance of individuals with expertise in generating (and using) knowledge is only a very first step in capacity building.
- In order to maintain the interest and commitment of researchers, the research environment has to be enhanced.





Institutional level

Success of RCS was found to be associated with

- capable and committed scientific leadership,
- continuity of funding of research,
- ability to attract a core of dedicated young scientists,
- adequate and appropriate infrastructure for research (building and premises),
- adequate equipment and supplies including modern communication facilities and scientific literature,
- scientific linkage to another institution
- stable conditions of service with adequate payment





Institutional level

- Most of these "success factors" refer to the institutional environment of individual researchers and illustrate the critical importance of institution building as a different component in RCS.
- The importance of the institutional level in capacity strengthening is now generally recognized as **a key factor** for a more sustainable process of capacity strengthening
- There are numerous examples of programmes and agencies that illustrate how a critical mass of researchers has been built within academic and research centres and which capacities are required for such centres to perform effectively and efficiently.



The macro or system level (the health research system)

The Health Research System Analysis Initiative of WHO/RPC identified the following system characteristics, creating an enabling environment for researchers:

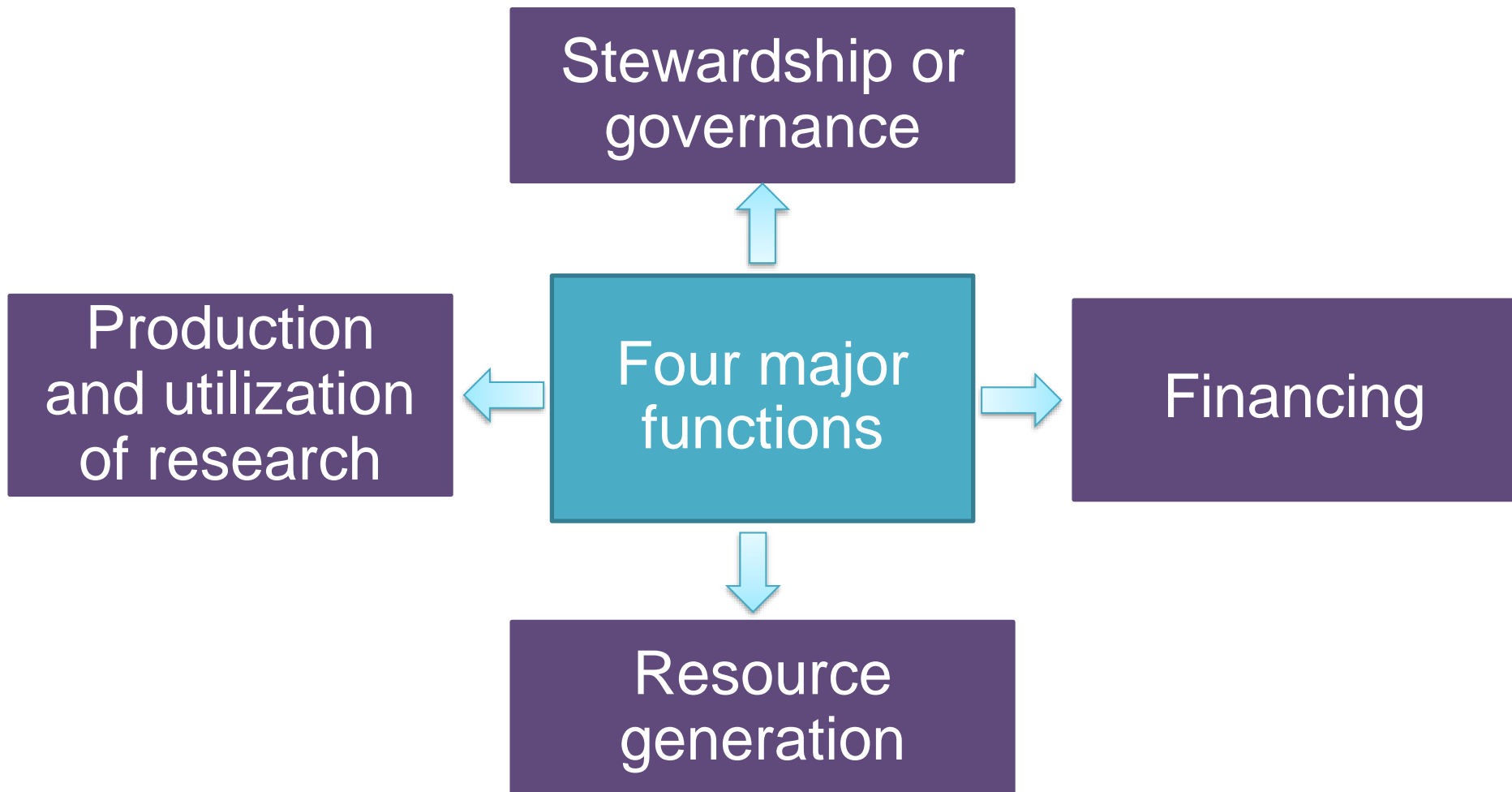
- range and breadth of researchers
- transparency of the funding process
- quality of the workspace and facilities
- encouragement of collaboration with others
- opportunities to present, discuss and publish results
- relevance of health research activities
- remuneration of health researchers
- nurturing of careers
- training and continuing education
- access and sharing of information.

The macro or system level (the health research system)

Capacities at this macro-level of the health research system include:

- Strategic planning
- Research priority setting
- Knowledge management
- Advocacy and demand creation
- Consensus building and negotiation
- Resource generation and allocation
- Partnership building across many stakeholders
- Communication, including virtual forms of networking
- Financial management and
- **Systems performance assessment**

The macro or system level (The health research system)



The macro or system level (the health research system)

Stewardship or governance

which encompasses "a range of activities intended to ensure that the health research system demonstrates **quality leadership**, is productive, has strategic directions and operates in a coherent manner"

Financing

which refers to securing funds, both national and external, and to allocating these funds to institutional or individual providers to deliver research products



The macro or system level (the health research system)

Resource
generation

or "the production, maintenance, improvement and retention (of capacities) of individuals, institutions and infrastructure, required for the production, utilization and management of health research"

Production
and utilization
of research

which includes the production of new research and the synthesis of existing research and the utilization of research in policy, practice and action



Capacity strengthening in various phases of the research process

Looking at research both in its production and utilization dimension, research can be conceptualized as an iterative and cyclical process, a continuum with various steps steering the process from knowledge production towards the use of this knowledge into policy, practice and action.

The following key steps are involved in this process:

Managing the research agenda

Producing evidence

Promoting the use of evidence

Utilizing evidence in policy, practice and action

Capacity strengthening in various phases of the research process

Managing the research agenda

Managing the research agenda includes two sub-components:

- setting priorities for research and
- aligning resources towards research priorities.

Producing evidence

The production of evidence encompasses two types of activity:

- production of priority research and
- synthesis of research to produce a body of knowledge.



Capacity strengthening in various phases of the research process

Promoting the use of evidence

- To maximize the chances that research evidence will be used, it first has to reach potential users, it has to be disseminated either passively (e.g. newsletters, websites, mass media) or more actively (e.g. workshops, specific meetings with opinion leaders, audit).
- The challenge of dissemination is to improve the accessibility of research findings to those one tries to reach.
- This means to identify clearly who are the intended and potential users of the research; to ensure the physical availability of research materials to as large as proportion of the target audiences as possible; and to make research findings comprehensible to those who receive them.



Capacity strengthening in various phases of the research process

Utilizing evidence in policy, practice and action

- Asking the right questions and allocating resources to address them,
- producing and/or synthesizing high quality research projects and
- promoting the use of the research outcomes

are major phases in a process leading to its ultimate phase: increased evidence-based policies, practices and actions in the broad field of health and the organization, management and delivery of health services.



Conclusion for Clinical Research Capacity Strengthening in LMICs

Highlighted key points and strategies for developing strong clinical research capacity in LMICs

- Improved clinical research mentoring opportunities, both institutionally and individually.
- Academy networks that can offer learning and support opportunities.
- Support for LMICs to define their own clinical research agendas.
- Strengthened national and regional networks.



Conclusion for Clinical Research Capacity Strengthening in LMICs

Highlighted key points and strategies for developing strong clinical research capacity in LMICs

- Increased health research funding from national governments as well as from international donors.
- Advocacy and research diplomacy to demonstrate the impact of clinical research.
- Improved career pathways for clinical researchers in LMICs.



Conclusion for Clinical Research Capacity Strengthening in LMICs

References:

1. World Health Organization (2008), SEARO. Module-4, Health Research Management.
2. World Health Organization (2004), Geneva. World report on knowledge for better health: strengthening health systems.
3. Thiers FA, Sinskey AJ & Berndt ER (2008). Trends in the globalization of clinical trials. Nature Reviews Drug Discovery 7, 13–14.



Thank you!

