

HOW COMMUNITY-ORIENTED MEDICINE IS IMPLEMENTED IN MEDICAL EDUCATION

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ABSTRACT

The Community Oriented Medical Education (COME) approach to medical education focuses on the population and individuals while covering all elements of health problem priorities. The World Health Organization (W.H.O) Strategic Framework identifies five key strategic directions for enhancing basic medical education to meet existing health concerns. A long-term, integrated module across disciplines is one strategy that the Faculty of Medicine at Universitas Indonesia has experienced in its implementation in both community and clinical medicine. The module includes a variety of field practices (hospital and primary care) as well as inter-departmental personnel (committees and tutors). The module has bridged the gap between community medicine and clinical medicine, with integrated staff as well as collaboration between the departments of community medicine and clinical medicine. Community medicine has been seen as important not only for epidemiological concerns but also as part of the clinical teaching approach that prepares students for careers in hospitals or primary care after graduation. COME can be taught in multidisciplinary or inter-departmental collaboration to accomplish applied learning outcomes for individuals and community health activities. COME ensures our education system produces medical graduates to meet health system needs with the help of faculties and teachers who are also responsible for community health and well-being.

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INTRODUCTION

A group of experts from the W.H.O Regional Office for Southeast Asia met in New Delhi in August 2009. The meeting's main goal was to examine and enhance the curricula for Prevention and Social Medicine (PSM), Community Medicine

(CM), and Community Health (CH), with a focus on the common health issues and public health concerns in the region's nations. It was noted that there were already numerous effective methods for teaching the subject, but they were primarily theory-

based and lacked interdepartmental connections¹⁻³.

The host-agent-environment, social determinants of health, blum, mandala of health, biopsychosocial model, and other models can all be used to explain the multiple factors that affect the population's health². The population's health will impact determinants of health, hence healthcare professionals need to understand these factors in the health system⁴⁻⁶. Medical professionals, who are frequently regarded as among the health system's leaders, should take the lead in reorganizing the way that healthcare is delivered^{7,8}. To build a bridge between people and their health, medical professionals must comprehend various sociodemographic factors⁹.

A community leader is one of the five-star doctors by the WHO¹⁰; therefore, community medicine is essential in medical school to build the link between population and health. Physicians must be skilled in a variety of preventive measures for individuals, families, and communities across the entire nation in addition to clinical medicine. To handle community issues and treat both illnesses and diseases, a doctor must also be aware of the roles that social and environmental factors play in determining health¹¹. This entire justification will affect how medical graduates behave⁴.

The rise in non-communicable diseases, emerging infectious diseases, the impact of climate change on health, human-caused tragedies, the aging population, population migration, and globalization are still challenges that must be overcome, including in Indonesia¹². Programs for clinical care, promotion, and prevention can address all these problems.

The need for community health intervention and medical services to

complement one another to ensure continuity of care, the requirement for primary care to serve as an efficient referral backup at the secondary level¹³, and the requirement for hospitals to be involved in health promotion and disease prevention by empowering patients and families are additional challenges in a health system that must be addressed¹⁴. To address these issues, a networking and academic health system are crucial⁴.

There are three different levels of health systems: macro, meso, and micro¹⁵. A macro health system is at the governance level and creates health policy, health finance systems, standards, and inter-sector coordination¹⁶. A meso health system is at the level of a health facility and manages the flow of health services, implements evidence-based medicine, and preventive medicine, and establishes connections with community resources. A micro health system can be defined as a health facility organization in which doctors provide daily services, encompasses not just the practitioners but also patients, technologies (including information technologies, and process of care that integral to their work^{17,18}. Since medical school graduates will eventually be members of the micro health system (the doctor's relationship to patients and the community), medical schools will need to strengthen the micro health system as part of their curricula to support the meso and macro health systems¹⁸.

The W.H.O research claims that medical graduates have an inadequate understanding of the current health issues that the healthcare system is dealing with. Medical students also show little leadership or effective teamwork, and they show little enthusiasm for community or public health. Medical education curricula should pay

more attention to the development of community medicine competency for their medical students to deliver preventive, promotive, curative, and rehabilitation care to address population health challenges in the local area, country, or region because doctors will practice and work within the health system^{4,19}.

The demand for medical graduates matches the intended quality as follows:⁴ Be skilled in public health, can work in a multisectoral, multidisciplinary environment, effectively adapt to the ongoing changes in the health paradigm, engage in public health education and research, including training and supervising a community-based health workforce or cohort, support the operation of public health activities such as disease surveillance, engage in health activities outside the walls of the medical institution, and take a more holistic approach when dealing with clients⁴.

OVERVIEW

Community-Oriented Medical Education (COME) is an approach to medical education that focuses on population groupings, specific individuals, and all aspects of the importance of health problems. The goal is to create community-focused physicians who are prepared and eager to serve their local areas, deal with health issues at the primary, secondary, and tertiary levels, attend to the needs of the community, and serve HOPE (health-oriented physician education) rather than DOPE (disease-oriented physician education)^{20,21}.

Students are expected to mobilize, organize, and motivate the community and take part in community development initiatives as part of the goal of community-

based medical education²². They are also expected to diagnose and handle top-priority health problems at the individual, family, and community levels; promote the health system; and work well with others in a health team¹⁸. These goals should be made clear to students at every stage of their education to develop the necessary self-confidence, problem-solving skills, lifelong learning, self-reflection, and collegial relationships.

How Close We Are?

It is critical to determine how well the educational aims and justifications connect with the community's needs and main health issues. It is also critical to determine whether the programmes take a holistic medical approach (health promotion, prevention, and rehabilitation) rather than simply providing treatment, and to ensure that instruction is available to the general public, including families and other peripheral healthcare organisations such as clinics and primary care centres, as well as adequately equipped teaching hospitals. It is thus vital to evaluate how students will be trained in an environment where they will be employed after graduation. It is also critical to ensure that health systems are properly integrated into the curriculum during the planning process, with health care workers taking part in all activities, including monitoring and assessment. Finally, it is critical to determine if graduates will be able to serve the community, address major health concerns at the individual, family, and community levels, promote health systems, and effectively collaborate in health teams.

GAP is possible that another clinical medicine topic will initially take precedence over the discussion of

community medicine and public health. First, even though they are both subfields of medicine, community medicine, and clinical medicine are seen as different disciplines. Second, community medicine is not sufficiently covered in the medical curriculum. Only the community/public health department is in charge of it, and it only makes up a small portion of the module. Third, a large portion of the teaching staff struggles to provide students with learning experiences that are sufficiently stimulating. Fourth, due to a lack of enthusiasm on the part of the organizers or a lack of funding, faculty-level field trips or community placements are not efficiently and cooperatively organized⁴.

What should we do to overcome this?

We might take a variety of actions, such as improving the teaching of public health and community medicine at undergraduate medical schools. The entire medical curriculum should incorporate teaching and learning in public health or community medicine. It should not only fall under the purview of community health departments and social, preventive, and medical medicine. Medical institutions should prioritize community involvement, be flexible in their teaching approaches, put the needs of their students first, and integrate as much as feasible. They should also place a strong emphasis on holistic healthcare management⁴.

National and local health policies, health issues, and obstacles in medical education will impact the strategic direction of medical education^{23,24}. To address these issues, education systems and health systems will need to work together. With this strategy, perhaps we will have an annual better medical education and

medical graduates with expanded capabilities that meet the needs of health systems. Ideally, this cooperative effort would aid in the retention of physicians in underserved areas and ensure that they will have the same chances and receive a payment or salary that is competitive with physicians in urban areas. All of these are explanations of how to improve the efficiency of healthcare systems and population health. Several stakeholders, including the Ministry of Education, Ministry of Health, Ministry of Internal Affairs, local government, which oversees the provincial/district budget, medical council, professional organizations, medical student organizations, community and civil society, development partners, and other stakeholders, can work together to implement this requirement^{1,3}.

There are five key strategic directions to improve medical education and address current health concerns. The W.H.O Strategic Framework identifies five important strategic directions (Figure 1).

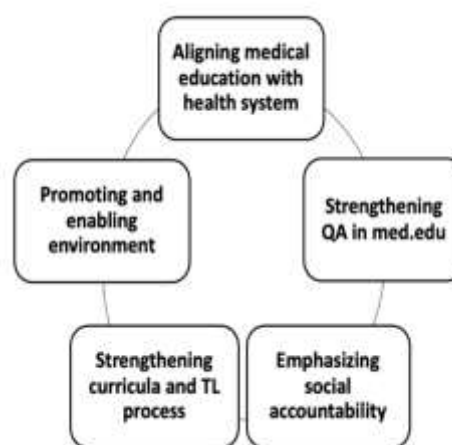


Figure 1. Five Key Strategic Directions¹

The five key strategic directions are, first, coordinating medical education with the demands of the healthcare system. Enhancing medical education quality assurance (QA) is the second. Third, emphasizing social responsibility. Fourth,

improving curricula and the teaching-learning (TL) process. Fifth, supporting and empowering the environment^{1,3}.

In the Faculty of Medicine at Universitas Indonesia, Jakarta, Indonesia, we have attempted to implement several educational initiatives, such as^{25,26}. Establishing a legal partnership between the faculty and the provincial health office as part of the academic health system to align medical education with the requirements of the health system; strengthening quality control in medical education by conducting an internal accreditation to make sure that our educational program is of the highest quality; stressing social responsibility by, as part of our educational curriculum, encouraging our students to create a program for the community, and they do so by creating a Community Empowerment and Community Development Program; strengthening curricula and the teaching-learning process. For students to learn more about the health system, global health, individual practice, and community practice, we developed a module called Primary Health Care System (year 4–preclinical) and a Pre-Internship module (final year–clinical) with a continuation learning target from knows, knows how, shows how, and does (Miller). The latter is a module that spans 16 weeks and allows final-year medical students to work in community healthcare centres and district hospitals under supervision. Finally, promoting and enabling environment by initiating to create a network with many stakeholders, including hospitals and primary care facilities, assisted by faculty networking and a legal committee, to enhance the standard of our medical education.

Community Medicine in Medical Education

The Faculty of Medicine at Universitas Indonesia has participated in both the basic science rotation and the clinical rotation to ensure that the redline and spiral of the community medicine approach were incorporated into our curriculum. The basic health care system module is taken by students before they begin their clinical rotation as a way to implement their learning goals for the concepts of knowing and knowing how. In this stage, students gain knowledge of the six W.H.O building blocks that make up the health system. They also stimulate the problem-solving cycle for program evaluation and community diagnosis, analyse aspects and risk factors that affect the individual, family, and community (including their place of residence, place of employment, and other environments), and create a prevention-based management plan. We also offer a pre internship module, which is a longitudinal and integrated clerkship module, in clinical rotation to enable students to put the fundamental knowledge and skills they have gained in earlier modules to use in the real-world work conditions that incoming doctors would encounter. The final learning goal is for students to be able to handle acute and chronic cases of all ages with supervision, using five levels of preventive care, inter-professional collaboration, and cross-sectoral cooperation to enhance the health of individuals, families, and communities. This is in line with the primary competency that students can manage personal, family, and community health issues in a thorough, holistic, integrated, and sustainable manner. Students can use the knowledge they have learned from the first to the last module in a community (family, workers, and other

communities) with the involvement of community medicine in medical education. In the individual health approach, we cover case-based family and occupational medicine, sports health, and population- and system-based methods. In a population-based approach, we conduct community diagnosis, program evaluation and quality assurance, problem-solving cycles employing active learning techniques, fieldwork at district hospitals, and primary care services. (Figure 2).

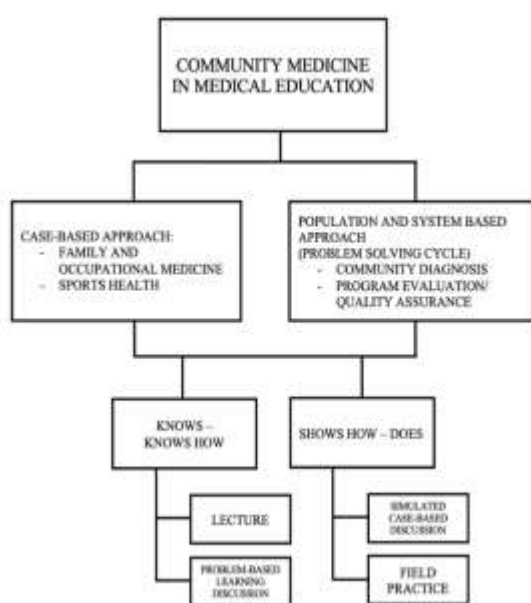


Figure 2. Community Medicine in Medical Education: Individual Health and Community Health Approach.

For clinical and community learning to take place under the direction and supervision of faculty and field lecturers and staff, a synergy between the faculty dean, study program committee, department, faculty staff, and field tutor is required. As part of faculty development and the academic health system, medical faculty institutions are required to collaborate and coordinate not only with the hospital but also with the local government, public health centre, and clinic owners under the M.O.U at the dean/rector level

and the leader of the local government, health office, or clinic owner.

Curriculum policies and human resource cooperation conditioning among teaching staff across departments are required. Aside from that, faculties should have a unit responsible for managing collaboration with teaching hospitals, local health and regional authorities, and clinical partners for educational collaboration. Periodic curriculum evaluation is needed to strengthen cognitive, attitude, and practice modules and learning targets in the final stage of clinical practice.

It is necessary to have a unified perception of all staff across departments in the faculty regarding the concepts of individual health efforts, public health efforts, and various levels of prevention (including primary, secondary, and tertiary prevention), which need to be applied in every case encountered. The concept of the problem-solving cycle as a basis for identifying problems, causes of problems, and alternative solutions to problems can also be introduced to other department staff who can function as home tutors.

Health providers in the health centres serve as field tutors, providing examples of field learning experiences to strengthen cognitive, attitude, and practice modules and learning targets in the final stage of clinical practice. All registered and appointed field tutors must receive clinical teacher training.

All staff involved as home tutors can be given letters of assignment from the Dean to visit educational facilities while performing community service in the surrounding environment. Field tutors may also be given a letter of assignment from the Dean as a field supervisor to fulfil credit points as members of a professional organization, which may be used as a

condition for extending their practice license.

Advocacy is required for all stakeholders (the chief executive officer of regional general hospitals, leaders of community health centres, and clinics) in the context of collaboration and shared perceptions about learning targets for case management and community programs. Hopefully, collaboration between faculty and local government, as well as with the local hospital and other health facilities, can improve health service quality, which follows the current best evidence.

CONCLUSION

For community-oriented medical education, we must make sure that our educational system develops medical graduates with the skills required to meet the needs of the healthcare system. For field practice in community healthcare, the capacity of medical faculty needs to be strengthened. This includes the learning environment, assessment, and supervision methods. Community medicine teaching is the primary focus of faculty development, and medical school faculties and professors are accountable for or involved in it. Teachers outside of community medicine may be involved in these activities. Public health and community medicine can be taught using a multidisciplinary approach, and clinical professionals from hospitals and other health facilities that offer medical field instruction may also be included.

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CONFLICT OF INTEREST

All Authors have no conflict of interest.

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RAW had the undertaking of completing the literature search and writing and editing the script. AS and DK were assigned to help with writing the manuscript's draft. AAR and AF evaluated the completed manuscript.

REFERENCES

1. World Health Organization. Strategic Framework for Strengthening Undergraduate Medical Education in Addressing the Current Health Challenges. New Delhi; 2012.
2. Kusnanto H, Agustian D, Hilmanto D. Biopsychosocial model of illnesses in primary care: A hermeneutic literature review. *J Family Med Prim Care*. 2018;7(3):497.
3. Armstrong RW, Mantel M, Walraven G, Atwoli L, Ngugi AK. Medical education and population health—A framework in the design of a new undergraduate program. *Front Public Health*. 2022 Dec 7;10.
4. World Health Organization. Training Modules for Teaching of Public Health in Medical Schools in

- South-East Asia Region. New Delhi; 2015.
5. Institute of Medicine (US) Committee on Assuring the Health of the Public in the 21st Century. *Understanding Population Health and Its Determinants*. Washington: National Academies Press (US); 2002.
 6. Patwardhan B, Mutalik G, Tillu G. Concepts of Health and Disease. In: *Integrative Approaches for Health*. Elsevier; 2015. p. 53–78.
 7. Collin-Nakai R. Leadership in medicine. *McGill J Med*. 2006;9(1):68–73.
 8. Chen TY. Medical leadership: An important and required competency for medical students. *Tzu Chi Med J*. 2018;30(2):66.
 9. Werdhani R. Medical problem in Asia pacific and ways to solve it: The roles of primary care/family physician (Indonesia Xperience). *J Family Med Prim Care*. 2019;8(5):1523.
 10. Werdhani RA. Leadership in doctor-patient relationship: Implementation on patient's case management in primary care. *Medical Journal of Indonesia*. 2017 Aug 18;26(2):158–66.
 11. Andermann A. Taking action on the social determinants of health in clinical practice: a framework for health professionals. *Can Med Assoc J*. 2016 Dec 6;188(17–18):E474–83.
 12. Schröders J, Wall S, Hakimi M, Dewi FST, Weinehall L, Nichter M, et al. How is Indonesia coping with its epidemic of chronic noncommunicable diseases? A systematic review with meta-analysis. *PLoS One*. 2017 Jun 20;12(6):e0179186.
 13. Give C, Ndima S, Steege R, Ormel H, McCollum R, Theobald S, et al. Strengthening referral systems in community health programs: a qualitative study in two rural districts of Maputo Province, Mozambique. *BMC Health Serv Res*. 2019 Dec 29;19(1):263.
 14. Kumar S, Preetha G. Health promotion: An effective tool for global health. *Indian Journal of Community Medicine*. 2012;37(1):5.
 15. Sawatzky R, Kwon JY, Barclay R, Chauhan C, Frank L, van den Hout WB, et al. Implications of response shift for micro-, meso-, and macro-level healthcare decision-making using results of patient-reported outcome measures. *Quality of Life Research*. 2021 Dec 2;30(12):3343–57.
 16. Bodolica V, Spraggon M, Tofan G. A structuration framework for bridging the macro–micro divide in health-care governance. *Health Expectations*. 2016 Aug 12;19(4):790–804.
 17. Donaldson MS MJ. Exploring Innovation and Quality Improvement in Health Care Micro-Systems: A Cross-Case Analysis. In Washington (DC): National Academies Press (US); 2001.
 18. Pruitt S ASJEJDJKM. Innovative Care for Chronic Conditions: Building Blocks for Action [Internet]. World Health Organization. Geneva; [cited 2023 Nov 2]. Available from: <https://www.who.int/publications/i/>

- item/innovative-care-for-chronic-conditions-building-blocks-for-actions
19. Quintero GA, Vergel J, Laverde Á, Ortíz LC. Educational Strategies to Develop and Implement a Comprehensive Health Care Model Focused on Primary Care in Colombia. *J Med Educ Curric Dev*. 2020 Jan 26;7:238212052093026.
 20. Hamad B. Community-Oriented Medical Education: What is it? *Med Educ*. 1991;16–22.
 21. Assadi SN. Community Oriented Medical Education for Learning of Pathobiology. *Health Scope*. 2016 Feb 17;5(3).
 22. Yazdani S, Heidarpoor P. Community-engaged medical education is a way to develop health promoters: A comparative study. *J Educ Health Promot*. 2023;12(1):93.
 23. Densen P. Challenges and opportunities facing medical education. *Trans Am Clin Climatol Assoc*. 2011;122:48–58.
 24. Majumder MdAA, Haque M, Razzaque MS. Editorial: Trends and challenges of medical education in the changing academic and public health environment of the 21st century. *Front Commun (Lausanne)*. 2023 Mar 24;8.
 25. Faculty of Medicine Universitas Indonesia. Teaching Guidebook of Modul Pre-Internship Year 2017/2018. Jakarta; 2017.
 26. Medical Education Unit. Faculty of Medicine Universitas Indonesia Medical Curriculum. Jakarta; 2012.