Redefining Student Learning Objectives for the General Medicine / Primary Care Clinical Clerkship ~ The Way to Implement Community Based Medical Education

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Abstract

Background: Mie University is one of the first medical schools to initiate a community-based clinical clerkship in general medicine. The curriculum was developed over fifteen years ago based on the personal expertise of the general medicine faculties. The purpose of this project is to update and revise the curriculum and learning objectives by integrating the ideas of community primary care physicians and university faculties involved in clinical clerkships.

Methods: We have conducted semi-structured interviews with community primary care physicians. The interviews were based on keywords extracted from the preliminary research. Two researchers independently reviewed the free-coded interview transcripts, organized them into thematic units using thematic analysis, and then discussed and merged them into one list between the two researchers. This list was shared and discussed among the four researchers to create a new curriculum and learning objectives.

Results: Nine primary care physicians participated in group interviews and 11 participated in individual interviews. The following themes were identified: 1.role of primary care 2.contextual care 3.hospital-clinic collaboration 4.multidisciplinary care/inter-professional work 5.work-life balance 6.health economics 7.health promotion 8.health policy 9.common problems/common diseases.

Conclusion:

We have redefined the learning objectives of the general medicine clinical clerkship. The abstracts have been made more specific, which will be more helpful for both teachers and learners.

Background

There is an inevitable need to change the curriculum of medical education (especially clinical clerkship) in Japan to meet the global standards set by the World Federation for Medical Education. The 2016 Japanese Model Core Curriculum for Medical Education emphasizes the development of curricula with a focus on community medicine. In addition, a minimum of one month clinical rotation in General Medicine/Family Medicine has become a requirement, and the rotation period may include a community medicine clerkship¹.

Community medicine clerkships were originally introduced at Jichi Medical University in the late 1990s to train doctors to practice in rural areas². Since then, many universities have gradually introduced these clerkships^{3,4}. However, most of these clerkships were short-term rotations, and there were very few universities those require all students to complete a one-month or longer rotation⁵. According to a recent survey, the majority (99%) of universities have introduced community medicine education programs following the revision of the aforementioned model core curriculum, but the number of universities offering clinical clerkship related to community medicine is still low⁶.

Although model General Medicine/Primary Care Clinical Clerkship Curriculums have been developed mainly by the members of Japan Society for Medical Education⁷⁻⁹, past studies have shown that primary care clinical clerkship is not sufficiently provided in the community⁴.

On the other hand, Mie University School of Medicine has been providing a one-month general medicine rotation in the community to all medical students since 2002, and is currently training students at eight hospitals and eight clinics in the community. The rotation consists of four weeks of training at the local site, with the exception of an orientation on the first day and the summary and reflection on the last day at the university. The learning objectives of the previous curriculum were developed more than 15 years ago based on personal expertise of the family medicine faculties, which have recently been criticized by community-based primary care physicians for being unclear.

This study aims to update and revise the curriculum and learning objectives by integrating the ideas of community-based primary care physicians and university faculties involved in our clinical clerkship.

Methods

Design and setting

This qualitative study analyzed data from semi-structured interviews conducted with community-based primary care physicians involved in a community-based general medicine/primary care clinical clerkship at Mie University. The data were analyzed through content analysis and a new curriculum and learning objectives were developed.

Subjects

Community based primary care physicians, involved in our clerkships were recruited to participate in our study and those who agreed to participate joined either face-to-face interviews or group interviews, depending on the availability of their schedule.

Table 1 Key Questions in the Semi-Structured interview

What do you think needs to be improved in the clinical clerkship?

What changes would you like to see in medical students?

Do you have any suggestion for new learning objectives?

Data collection

Semi-structured interviews with 20 to 40 minutes of audio recording were conducted in September 2013. The interviews were based on keywords (Table 1) extracted in a preliminary research at a workshop held to explore the learning objectives of “community-based medical education (Japan Primary Care Association Annual Meeting 2013).

Data analysis

Two researchers (MK and KI) independently reviewed the free-coded transcripts and organized them into thematic units using thematic analysis. First, the researchers familiarized themselves with the data and generated initial codes. They have independently searched for themes, reviewed the themes, and defined and named the themes. After the report was generated, a series of discussions were held between the two researchers to resolve disagreements and make them coherence, and then they merged them into a single list.

This list was shared among the four researchers (KM, MK, KI and AT), and through discussion, a new curriculum and learning objectives were developed.

Results

Eleven primary care physicians participated in the group interviews and eight participated in the individual interviews; five worked in hospitals and 14 worked in clinics (Table 2). All participants were family physicians or internists.

Table 2 Participant characteristics N=19

Workplace	Hospital	6	Clinic	13
Sex	Male	17	Female	2
Age	Average 45 yo*			

* Average of 15 participants (4 missing data)

Based on the list created by the thematic analysis, the following nine themes were extracted as a result of thorough discussions among the four researchers.

- Functions and Roles of primary care
- Importance of Contextual care
- Hospital and clinic collaboration
- Multidisciplinary care (collaboration) / Inter-professional work
- Work-life balance of primary care physicians

- Health Economics
- Health Promotion
- Health Policy
- Common problems / Common diseases

‘Health Policy’ was not extracted from the interviews, but was added after discussion among the four researchers.

We also added the following two learning objectives, which were not included in our list, but were already included in the core curriculum of Mie University.

- Professionalism / manners / communication
- Case presentation / Charting of patient information

Table 3 New list of themes for Family Medicine Clerkship learning objectives

Themes	Descriptions and keywords
1. Function and Role of primary care	<p>Understand the function and role of clinics and small hospitals, different from large hospitals.</p> <p><u>keywords</u>: difference in following points of view - resources, patient expectation, therapeutic target (cure vs care), medical problems (undifferentiated, chronic, healthy individuals), continuity, access to care, disease prevalence, epidemiology</p>
2. Importance of Contextual care	<p>Experience and understand the importance of patient background.</p> <p><u>keywords</u>: patient preference, family, life, locality</p>
3. Hospital and Clinic collaboration	<p>Experience and understand the circumstances, roles of clinics and hospitals through patient referral.</p> <p><u>keywords</u>: beneficence and convenience for patients, appropriate referral letter</p>
4. Multidisciplinary care(collaboration) / Inter-professional work	<p>Understand the role of each profession and realize the utility of multidisciplinary care.</p> <p><u>keywords</u>: experience other professions' role, meet the patient in different settings (ex: clinic, day-care center and home), participate in multidisciplinary care conference</p>
5. Work-life balance of primary care physician	<p>Realize the satisfaction and difficulty of professional and personal life of community physicians.</p>
6. Health Economics	<p>Understand the basics of health economics through the following viewpoints.</p> <p><u>keywords</u>: economic loads for patients, management of medical institutions, appropriate health care cost</p>
7. Health Promotion	<p>Understand the importance of health promotion through participation in the following activities.</p> <p><u>keywords</u>: local study group, educational activities outside the medical facilities, vaccination, periodic health check-up</p>
8. Health Policy *	
9. Common problems/common diseases	<p>Be able to take history, physical examination and list differential diagnosis and plans on common problems, common diseases in primary care.</p> <p><u>keywords</u>: common cold, cough, headache</p> <p>Understand the medical goals for chronic common diseases</p>

keywords: hypertension, diabetes mellitus, dyslipidemia

**10. Professionalism/manners/communication

keywords: proper greetings, dress code, respect to the patients, accountability, good communication with other health care providers

11. Case presentation / Charting patient information **

keywords: comprehensive geriatric assessment (CGA) report, case presentation

* Not extracted through interviews, but added afterward during discussion among 4 researchers.

** Not listed in learning objectives for General Medicine Clerkship, because already included in the core curriculum.

Discussion

Medical education institutions that practice outcome-based education are also expected to play a role in responding to societal needs. In order to clarify the primary care education that society needs, we considered it desirable to create learning objectives by integrating the perceptions of community-based primary care physicians and the knowledge of university faculties from the standpoint of medical education, and to match these objectives with education and evaluation.

This strategy is also desirable from the perspective of implementing community-based medical education (CBME). CBME is not only about placing the education in the community, but also about teaching the concept of primary health care in primary care settings, so it is inevitable that the curriculum reflect the voices of the community^{10,11}. Therefore, we have adopted a method of incorporating the opinions of community-based primary care physicians who are considered to be representative of the community.

The main focus of this curriculum revision is to clarify the learning objectives of the program, which combines general medicine/primary care clerkship and community medicine clerkship, in line with the needs of the community. As part of the general medicine/primary care training, students learn about the general practice skills that are required of doctors in all specialties and acquire the image of a general practitioner. In addition, from the perspective of the community medicine clerkship, students need to understand the public health, medical care, welfare, and nursing care activities required in the community, and learn the necessity of building community medicine and Community-based Integrated Care System in an integrated manner.¹

In Japan, general medicine has just been officially recognized as a specialty in 2018, but as society demands more leaders in community medicine, there is an urgent need for further training of general practitioners¹². Therefore, it is not hard to imagine that the improvement of general medicine and community medicine clerkship is expected to increase the number of young people who choose general medicine and community medicine as their future career.

Several studies have been conducted nationally and internationally on what experiences of medical students doing primary care clerkship leads to their choice of community or primary care careers. One qualitative study suggests that positive interaction with local residents and medical professionals, as well as contact with the attractive environment and culture of the region, can lead to a regional career¹³. In terms of quantitative data, a systematic review has shown that Longitudinal Integrated Clerkship(LIC) is the only intervention consistently associated with an increased in the proportion of students choosing primary care¹⁴. In fact, a previous study conducted in Japan failed to prove that community-based training significantly increases career choice in the community¹⁵.

According to the aforementioned systematic review, successful interventions were characterized by diverse teaching formats, student selection, and good-quality teaching. Therefore, the improvement of general medicine and community medicine clerkship provided to all medical students will indirectly serve as a foundation for the penetration and development of general medicine. From the viewpoint of fostering a large number of general practitioners, LICs are desirable, as mentioned above, and the first empirical trial of LIC in Japan is being conducted at Mie University School of Medicine¹⁶.

In terms of capturing the true needs of the community, it is most desirable to obtain information from a wide range of sources, including local medical providers, welfare, government, and residents. Obtaining information only from local community physicians may be considered to be a limitation. In addition, from the perspective of primary care physicians throughout Mie Prefecture, the target population of this study is very limited and does not cover all the needs of the Mie Prefecture. While the curriculum developed at Mie University can be used by medical schools around the world, it was developed based on feedback from community physicians in Mie University's region, and each region where the university is located may have its own specific learning needs.

Conclusions

We have redefined learning objectives of general medicine clinical clerkship to implement community-based medical education. We have incorporated the voices of primary care physicians in the community and integrated them with the expertise of university faculties. The abstracts are now more concrete and reflect the needs of the community, which should be more beneficial to both teachers and learners.

Abbreviations

CBME: community-based medical education, LIC: longitudinal integrated clerkship

Declarations

Ethics approval and consent to participate

This study was performed in accordance with the provision of the Declaration of Helsinki. This study was reviewed and approved by Mie University Hospital Institutional Review Board (1375). Written Consents were obtained from all participants prior to their participation in the interview.

Consent for publication

Not applicable

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

All the authors declare that they have no competing interests.

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Authors' contributions

KM designed the study and served as a guarantor. MK and KI collected the data. MK, KI, AT and KM analysed the data. KM drafted the manuscript. KM, MK, KI, and AT contributed to the design of the study and critically reviewed the manuscript. All authors had full access to the data, and they took responsibility for the integrity of the data and accuracy of the analysis.

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