



Community and Interns' Perspectives on Community-Participatory Medical Education: From Passive to Active Participation

Akiteru Takamura MD, MEd; Hidekazu Misaki MD; Yousuke Takemura MD, PhD

BACKGROUND AND OBJECTIVES: The use of community-based medical education as a method of learning primary care is now common worldwide. However, in many cases community participation remains passive. This study sought to explore the effects of introducing community members into medical education as active teachers. Medical education taught directly by community members might be a key to comprehensive community-based learning.

METHODS: This study was conducted in Japan at two postgraduate programs in community hospitals. We asked 10 community groups and 10 interns to join our 2-year "participatory" community curriculum continuously. Questionnaires completed by 10 interns and 77 community members were analyzed quantitatively. Audio-recorded and transcribed interview data from 10 interns and 39 community members were read iteratively and analyzed qualitatively.

RESULTS: Community members who participated in groups with the interns gave higher scores on approval of and willingness to participate in such experiences. Interns scored higher on their view of the importance and preferences to work with the community. In the qualitative analysis, health-oriented behavior, social connectedness, and shaping community orientation among doctors emerged as important for community members. Important themes that emerged from the interns' interviews were: taking responsibility for shared understanding, community-oriented focus, valuing community nurses, and tension from competing demands.

CONCLUSIONS: Interaction between interns and community members had positive effects for both. Community-participatory medical education could present a further step in the evolution of community-based medical education, one that is closest to community. Finding a balance between the time dedicated to working at the hospital and in the community proved to be essential to the success of this curriculum.

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to community-based, and now to community-engaged medical education, still generally referred to as CBME.⁵⁻⁹ It is believed to be effective for learning several important elements related to primary care, specifically, patient care, supervision, and assessment. CBME provides learning and context obtained from patients, peers, health providers, as well as community health and social resources.^{10,11}

Many studies have demonstrated the benefits of engaging with communities, such as gaining more experience with common diseases, developing hands-on techniques, and improving communication skills.^{12,13} Despite these findings, many medical schools or postgraduate training hospitals still restrict their community-based curriculum to health facilities. Moreover, even when there is entry into the community, trainees spend very little time interacting with local community members.^{14,15} The International Association for Public Participation has defined the role of the public in public participation as occurring in five steps along a spectrum, which are defined

Medical education has been integrated into communities since the late 20th century, for both undergraduate medical students and for

postgraduate trainees, including family physician trainees.¹⁻⁴ What began as "community-oriented medical education" in the classroom has developed from community-oriented

From the General Medicine Center, Kanazawa Medical University Hospital, Kanazawa, Japan (Dr Takamura); Department of Medical Education, Kanazawa Medical University, Kanazawa, Japan (Dr Takamura); Department of Family Medicine, Mie University Graduate School of Medicine, Tsu, Japan (Drs Takamura, Misaki, and Takemura).

as: 1) Inform 2) Consult 3) Involve 4) Collaborate and 5) Empower.¹⁶ According to our review, the majority of community-engaged curricula worldwide are still in the third step, “Involve.”

Furthermore, the benefits of community participation have been analyzed from the medical education standpoint only; effects on the community are not well known.^{12,17,18} In the 4Rs model suggested by Worley,¹⁹ which shows four axes of relationships between the important elements in CBME and among its dimensions, the “social axis” might be the most important and most difficult part for learners to understand. One purpose of a community-based curriculum is for learners to gain a better appreciation of the health needs of communities and the methods to address these needs through local initiatives and government policy, which is also important for postgraduate education. More effective curricula are needed to help medical students and interns in a number of areas: including understanding the social resources and health needs of a community, learning about community issues and viewpoints, recognizing social conditions faced by hospitalized patients after returning home, and understanding the contributions of local government in assisting such patients. This level of participation is addressed in the fourth step, “Collaborate,” or perhaps the final step, “Empower”.^{5,18,20}

We try to clarify the perspectives of a new educational strategy of continual exposure to a community external to health facilities, so that learners can experience the community at large. Our research identifies one potential solution to developing a community-based curriculum, particularly for exposure to the social elements of a community. Analysis of the perspectives of CBME on aspects of the community is also important. We call this effort “community participatory medical education” (CPME) for interns, which might become one active step up from CBME.

Methods

Setting

In Japan, novice doctors must complete a 2-year internship at a qualifying hospital after the national physician license examination. Interns primarily learn clinical skills only inside hospitals and rarely experience the community outside of health facilities. This study was conducted at two Japanese postgraduate community training hospitals.

Study Participants and Locations

Kanazawa Jouhoku Hospital (Site A) is a private community hospital in Kanazawa, Japan with 314 beds (population: ~500,000). All seven interns at this hospital participated in our CPME curriculum from 2012 to 2014. This hospital has self-managed volunteer community groups. Nabari City Hospital (Site B) is a local public hospital with 200 beds, located in Nabari, Japan (population: ~80,000). All three interns at this hospital participated in this curriculum from 2013 to 2015. Nabari has 15 governmental districts and each has its own community group supported by the Nabari city council. Community members had no particular role related to the interns’ education.

Educational Intervention

Interns were each assigned to one community-based group with the mission: “Try to make your community healthier in any way.” Before beginning the curriculum, we asked community group members to actively teach a chosen subject concerning

community health or other issues, from their own perspectives. Interns visited their community and planned health activities, which they implemented in the community together with residents. For the 2-year period and in cooperation with community nurses, interns held discussions that were focused primarily on community health. During this time, interns participated in regular feedback sessions with their instructors and sometimes other interns. These face-to-face discussions, intended to receive advice or share reflections, were held once a month for approximately 30 minutes and included oral self-evaluation of interns’ community activities. Examples of activities that interns and community members planned and implemented is shown in Table 1. Regarding the frequency of intern visits during the study period, the maximum was 26 visits and the minimum was 8; the average for the 10 interns was 19.4 visits for the 24-month duration of their internship.

Evaluation Methods and Analysis

All participating interns and inhabitants (a total of 39 residents) were asked to complete a questionnaire designed for their group after the 2-year CPME intervention. Semi-structured interviews were held after this intervention with all interns, and focus group discussions were conducted with the five participating community groups.

Quantitative analysis was used to evaluate the seven-item intern questionnaire and five-item community

Table 1: Content of Intern Community Activities With Inhabitants

Content	All Activities Planned by Interns with Inhabitants
Series of Lectures	Diseases and Disorders, Blood Test Data Interpretation, Nutrition, Prevention, Medical Check
Activities	Walking exercise, Yoga, Sports day, Cherry Blossom Festival
Community Watching	Dangerous Spot, Pollution, Visiting People Living Alone
Chatting Day	Community History, Local Culture, Local Industry Taught by Community People

member questionnaire to ask their intentionality and involvement for this community-based intervention. Responses from both interns (n=10) and community members (n=77) were on a five-point Likert scale, as follows: 1 = strongly disagree, 2 = disagree, 3 = neutral (neither disagree nor agree), 4 = agree, 5 = strongly agree. Community members were assigned to two groups: those who participated in the curriculum (n=39) and those who usually participated in community health activities without interns' engagement (n=38). Statistical analyses, such as by the t-test of parametric analysis, were performed using IBM SPSS Statistics for Windows, Version 20 (IBM Corp., Armonk, NY, USA). A *P*-value <0.05 was considered statistically significant.

Interview and focus group data were used for the qualitative analysis. The following questions were used as a guide:

1. What did you learn from or think about this curriculum?
2. What difficulties did you identify?
3. What impressions do you have after completing this curriculum?

All 10 interns participated in the interviews and gave their oral consent for the discussion to be recorded. Each interview and focus group

discussion led by the authors lasted approximately 30 minutes. All sessions were recorded and transcribed by the first author, who also reviewed the transcripts, identified keywords and concepts for coding, and created an initial thematic map. We then developed a final thematic map and defined and named final themes for analysis using the thematic analysis method.²¹ Transcripts and notes from interviews with interns and focus group discussions with community members were analyzed separately. Representative comments for each theme were selected to illustrate the perceptions of each type of participant. To validate the constructs, preliminary results were shared with two other members of the teaching staff in the same department who were not otherwise involved in the analysis. After analysis, keywords and concepts were translated into English.

Ethical Approval

This study was approved by the Kanazawa Jouhoku Hospital Review Board and Nabari City Hospital Review Board.

Results

Part 1: Quantitative Phases

Interns rated higher agreement on effectiveness of interns' community engagement, importance of interns'

community engagement, willingness to engage in community medicine in the future, contribution to increasing community doctors, and change in orientation toward the community at the 2-year, immediate post-participation questionnaire (see Table 2). Responses of community (n=77) were significantly more favorable on four of the five questions among those who had participated in the CPME program: willingness to actively participate in medical education, contribution to increasing community doctors, change in orientation to the community, and activation of the community (see Table 3).

Part 2: Qualitative Phases

Data from community members were transcribed and analyzed. Coding created 65 initial codes. Data from interns were also transcribed, and yielded 64 initial codes. Review of the initial codes were clustered and categorized. Finally, each thematic map was created based on the data from the interviews of community members and interns, which were categorized into three and four themes, respectively (see Table 4).

Perspectives of Community Members

(1) Health-oriented Behavior

Community groups that incorporated interns activated community

Table 2: Scores Before and After Intern Curriculum

n=10 Male: 7 Female: 3	Before the Curriculum	After the Curriculum	P-value
	Average of Likert Scale (0-5)±SD	Average of Likert Scale (0-5)±SD	
Interest in community medicine	4.0±0.67	4.5±0.52	0.0801
Effectiveness of interns' community engagement	3.9±0.88	5.0±0.00	0.0032*
Importance of interns' community engagement	3.6±0.84	4.6±0.70	0.0101*
Willingness to participate in community medicine in the future	3.8±1.14	4.7±0.48	0.0395*
Contribution to increasing community doctors (by this curriculum)	3.7±0.48	4.2±0.42	0.0241*
Change in orientation toward community (by this curriculum)	4.0±0.67	5.0±0.00	0.0011*
Activation of community (by this curriculum)	3.8±1.14	4.6±0.52	0.0643

Table 3: Comparison of Scores Between Non-participants and Participants in Communities

	Non-participants (N=38)	Participants (N=39)	P-value
Age(Ave±SD)	69.8±8.9	70.0±9.1	0.9291
Gender(Percentage)	“Male: 18 (47.4%) Female: 20 (52.6%)”	“Male: 15 (38.5%) Female: 24 (61.5%)”	
	Likert Scale (0-5) ±SD	Likert Scale (0-5) ±SD	
Do you agree that you are willing to be involved in teaching community activities to interns?	3.97±0.74	4.46±0.55	0.0016*
Do you agree that it is important for interns to be involved in the community?	4.59±0.91	4.69±0.77	0.591
Do you agree that the number of community doctors increases by interns being involved in the community?	4.11±0.98	4.58±0.72	0.019*
Do you agree that interns change their orientation toward community for the better by being involved in the community?	4.11±0.95	4.58±0.12	0.017*
Do you agree that the community is activated by interns being involved in the community?	4.51±0.79	4.90±0.31	0.0066*

Table 4: Elements Extracted from Interns and Community Members Through Qualitative Analysis

Community Residents	Interns
(1) Health-oriented behavior	(1) Taking responsibility for shared understandings
(2) Social connectedness	(2) Community-oriented focus
(3) Shaping community orientation in doctors	(3) Valuing community nurses
	(4) Tension from competing demands

members' own health-promoting behaviors. Community members who had regular visits from interns self-assessed as more motivated than those who did not. Representative comments from community members at Site A include:

“I really got interested in health because a young doctor always came to our regular group meeting and regularly had interesting lectures for us.”

“After talking about medical topics with a young doctor, I recognized that I should go to a hospital and have a regular medical checkup at least once a year. I went for a medical checkup the very next day.”

(2) Social Connectedness

Community members increased their involvement in all group activities when interns were involved. When they heard that their intern was coming for a community visit, more people participated in the offered activities.

“A young doctor actively and continuously participated in our regular group meeting, so we also felt like joining in more frequently than before, even when it had nothing to do with the health topics.” (Community member from Site A)

“We planned many activities with a young doctor to [help] us and him understand our community better. People love to join in [now], more than before.” (Community member from Site B)

(3) Shaping Community Orientation Among Doctors

In Japan, people perceive doctors as having a high social status, which means that culturally they feel unable to openly criticize them. However, in reality, people have positive and negative opinions regarding doctors. This program provided a good opportunity for community members to discuss with interns their concerns and thoughts about what doctors and medical provisions were needed in their community.

“At first, I was reluctant to teach something to a young doctor because I didn't have anything I could suggest. But I found I could tell him many ordinary things about our community and our hopes for the future.” (Community member from Site A)

“[The doctor's] speaking skills to older people were much better than when she came here the first time. Therefore, I believe a doctor can learn more quickly.” (Community member from Site A)

“I noticed there are many things we can do to nurture community doctors. We even feel as if we are designing our own doctor.” (Community member from Site B)

Perspectives of Interns

(1) Taking Responsibility for Shared Understanding

In the hospital setting, interns always behave formally. During their routine work, they are able to forget their social role. However, in the community setting, people ask about diseases and treatments, rely on the interns for advice, and sometimes criticize their statements, thoughts, or attitudes. In this study, interns re-identified their need to improve knowledge, communication skills, and relationships as a doctor through community-based activities.

“It was quite difficult to inform [community members] about diseases or treatments with understandable words; they repeatedly asked me to understand. This normally doesn’t occur in the hospital, but [people] felt free to ask in the community, in their everyday surroundings. I have to learn more skills, I can give better explanations, and also I could feel I am a doctor here.” (Intern from Site A)

“Teaching is a responsibility. I cannot teach them sufficiently without adequate medical knowledge. Therefore, I think I need to study more.” (Intern from Site A)

(2) Community-oriented Focus

One of the most important outcomes of this curriculum was an enhanced understanding of community-based practice and the community itself by interns. The longer interns were involved with the community, the more they understood its needs and issues and how they could solve or improve them. The interns tended to become more community-oriented in their focus on health. The longer interns remained in the same place, the deeper the relationships they formed with staff, patients, and community stakeholders. Finally, the interns recognized their social responsibility; they felt comfortable and were able to move into their social role gradually as more time was

spent in a community-oriented situation.

“I identified many needs and issues and, if possible, I would like to help [community members] to solve those.” (Intern from Site A)

“I [realized] that the participation of doctors in the community is not enough at the moment. And I also understood what kind of doctor people are seeking.” (Intern from Site B)

“I definitely formed deeper human relationships with everyone in the community.” (Intern from Site B)

(3) Valuing Community Nurses

Before beginning the program, interns had no idea about the roles of community nurses and local government in community health. The interns came to understand that nurses have an important role in maintaining community health. Nurses were in a position to cooperate with local governments for health promotion, disease prevention, and patient care after hospital discharge, and to thereby improve the status of community health.

“When a doctor thinks about discharging a patient, I learned that we have to think about not only medical issues but also social issues like family problems, financial problems, and sustainability of treatment. The community nurse is important for advice and support [in this regard].” (Intern from Site A)

(4) Tension from Competing Demands

Interns understand that the main task during internship is to become a better doctor, especially in medical knowledge and skills. Therefore, they believe they need as much hospital-based clinical experience as possible. Consequently, interns reported that it was difficult for them to spend a lot of time on community-based learning.

“If a patient with a severe condition was admitted [to the hospital], I felt that leaving for a planned visit to my community was difficult, even for a short time.” (Intern from Site A)

“Sometimes, I didn’t want to visit the community, especially when I was busy. During those times, I couldn’t understand the meaning or importance of going into the community.” (Intern from Site B)

Discussion

CBME has been conducted successfully worldwide in recent years.²² However, many curricula are still implemented only inside community health facilities, eg, only in clinical settings,²³ and normally the primary role of community members is as patients.

In this study, we explored the perspectives of interns and community members with a new curriculum of teaching and integration of community members within a graduate medical education program. Overall, the results from quantitative analysis were positive for both community members and interns. Community members enjoyed both the teaching activities and also creating community activities together with interns. They also began to understand that they needed to participate in the real education of interns if they were going to help create the kinds of community doctors they desired. For interns, this realization may be key for future CBMEs.

In qualitative analysis, as we predicted, interns reported learning better communication skills and relevant knowledge about community health and comprehensive community care or community issues.²²⁻²⁴ In fact, almost all interns reported improvement in their communication skills, and both interns and community members commented that a deeper understanding of the community was gained by the interns. This is consistent with findings from previous research.^{25,26} Some results

of CPME exceeded our predictions, such as interns' increased sense of autonomy with respect to trying to change or improve a community, and their understanding of social elements and their own professional identity.

This curriculum leads to the creation of more community-oriented doctors.²² Nurturing interns' medical skills as well as their concept of a community's health and its needs as a whole are an expected outcome of this type of education. Nevertheless, interns struggled with the competing demands of attending to their work inside the hospital and going out into the community. The reality is that interns tend to be more focused on medical procedures and are sometimes reluctant to go into the community because of time limitations. A balance between time spent at the hospital and in the community is essential. However, unless instructors explain the importance of community to support and motivate interns in this direction, this type of curriculum will fail. Instructors should nevertheless remind interns of the importance of active learning experiences within the community.

Limitations and Issues

The number of participants in this curriculum was small, the community members volunteered to join this intervention and they might have been interested in such educational activities before. Therefore, the baseline scores might be higher than those in the ordinary population, and further research may be needed. In terms of CPME in urban centers, community may be more a matter of size, culture, or ethnicity than geography.⁸ Furthermore, there are many community-engaged curricula.¹⁰

However, because we chose one relatively urban community and one rural community, this curriculum should be feasible and appropriate for application to any situation. Successful CPME depends on the creation of supportive community groups that can become actively

involved with interns. We do not know whether the same curriculum can be applied in other countries.

We successfully implemented this curriculum in a very conservative cultural setting where the common belief is that nonmedical professionals are not qualified to teach or even make suggestions to physicians because of the high social status, positional power, and respect accorded to doctors in Japan. Despite Japanese culture, we knew how willing people were in this study to becoming engaged with the doctors and to help them learn. The most important elements are that community leaders and members be persuaded to build meaningful relationships, partnerships, and community groups for understanding CBME,²⁷ and that interns come to know community needs directly.

Conclusion

Doctors-in-training will be better prepared to become community-oriented physicians if community members actively participate in their education and if the training institution supports this community-based education.²⁸⁻³⁰ The active participation of community members is the main focus of CPME. Regardless of their medical specialty, the interns in this study gained a better understanding of community medicine. It is possible that our intervention will work anywhere in the world, especially for medical students and interns undertaking, for example, basic clinical training. Additionally, people in the community favor the idea of "designing their own doctors" and are eager for the opportunity to do so.

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CORRESPONDENCE: Address correspondence to Dr Akiteru Takamura, Department of Medical Education, Kanazawa Medical University, 1-1 Uchinada-machi Daigaku, Kahoku-gun, Ishikawa 920-0293, Japan. +81-76-286-2211. Fax: +81-76-286-3478. akiteru@kanazawa-med.ac.jp

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