Teaching community diagnosis: experience of a new institution

[1]K A Narayan, [2]Abdul Rashid Khan

Abstract

Community diagnosis is one method of making medical education more community oriented and making the students learn and appreciate intellectual discovery and critical thinking.

Being a relatively young institution with constraints of manpower, finances and logistic support we proceeded to developed a short programme which would allow students to achieve the skills of community diagnosis.

Instead of a structured programme, we empowered the students to plan their own from meeting the villagers' right up to developing and successfully implementing a health promotion campaign specially focused to the need of the villagers. The lecturers were present only to guide and supervise the students.

Self assessment by the students at the end of the programme showed improvement in all the five domains assessed i.e. change in knowledge, change in skills, leadership and team work, attitudes and perceptions and humanistic attributes. The paper outlines how a brief programme can achieve substantial gain in skills and attitudes.

Introduction

Community diagnosis is the process of appraising the health status of a community, including assembly of vital statistics and other health related statistics and of information pertaining to determinants of health, and the examinations of the relationships of these determinants to health in specified community (Last, 1995). Medical education should become more community oriented if today's medical students are to become effective medical practitioners. Students should be encouraged to learn by intellectual discovery and critical thinking. Learning to work effectively with communities is not only an essential part of graduate level health education (Quinn, 1999) but it is also an important part of undergraduate health training.

[1,] Department of Community Medicine
Faculty of Medicine,
Health and Sciences School of Medicine
AIMST University, Jalan Bedong Semeling
08100 Bedong
Kedah, Malaysia

Community diagnosis aims to understand many facets of community including

- Culture
- Values and norms
- Leadership and power structure
- Means of communication
- Helping patterns within community
- Important community institutions and
- History of the community

Community diagnosis allows the students to learn about unfamiliar communities and foster new relationships with community members and learn about the difficulties of the communities in health care.

The coordination of the programme for Community Diagnosis requires a major commitment of time and resources. Class preparation, contact with students outside the class, review of lengthy documents and coordinating with lecturers demand a large time commitment. Cost is another factor as the cost associated with organizing the programme is enormous (Quinn, 1999). But the advantage is the use of limited educational time to introduce community health problems (Blair, 1980). This paper

describes how the programme was organized in our institution.

Description

As part of the curriculum for the medical degree awarded by our institution, which is a relatively new institution in Malaysia, students are posted to the community medicine department for a period of 10 weeks, during their fourth and final year postings. During this period the students are required to meet certain objectives drawn from the Institutional Goals. The objectives are;

- to appraise the health status of a community
- In depth study of public health
- Study of primary care services

Community diagnosis was chosen to achieve the first objective. The following goals were set.
At the end of the programme the students would be able to;

- gain a conceptual foundation for the understanding of community
- evolve methods for engaging the community effectively.
- mobilize community resources for prevention activities.

The specific learning outcomes were
Students would be able to

- Describe the concepts, principles and methods of a Community Diagnosis in a field setting.
- Gather, understand and present secondary data.
- Develop and use data collection tools like questionnaires and other forms of field observation in community settings.
- Explore issues of culture, race and class as they impact on health of the community.
- Appreciate ethical issues involved in Community Diagnosis.
- Plan and implement appropriate community intervention especially community education.

Developing health education programmes with the communities require certain competencies (Davidson et al, 1999). We planned the programme to address certain identified competencies. These competencies and strategies are listed in table 1.

Methodology

The programme structure chosen was both class room learning and field placement. Class room learning involved small group sessions and role plays. The reason this structure was chosen was to integrate the students learning by putting classroom concepts into practice. This batch of students consisted of 52 pupils. The batch was broken into two, with one group comprising 27 students and the other group 25 students. The students were posted to the community medicine department for 8 weeks, 3 of these weeks were reserved for community diagnosis.

Choosing the community

The community was chosen depending upon the location and accessibility. The criteria chosen for the village to be picked for this programme was that the village should have approximately 100 houses, so as to facilitate easy completion of the interviews within 5 days for a group of 25 students. A member of the faculty was appointed to meet the village head and to identify the resources available. The procedures involved were explained to the village head, he was told about the student's requirement in learning community diagnosis and the rights of each of the villagers not to participate. The village head was also briefed on the potential benefits of the programme by the one of the lecturers. After learning as much as possible about the village, the village head was requested to act ignorant of the processes involved and to allow the students to approach him for his permission to conduct the survey.

A good diagnosis includes what it is like to live in a community, what the important health problems are, what interventions are most likely to be efficacious and how the program would be best evaluated (Streckler et al, 1993), We decided on a home stay program where the students would stay with the villagers, selected families acting as foster parents for two or three students and the students being involved in their daily activities while conducting the survey.

Field Activity

Table 2 summarises the activities carried out by the students over the period of posting. The first day was devoted to a briefing on the importance of public health, the need for community diagnosis for assessing health status and how to achieve it using qualitative and quantitative data collection tools. Principles of planning and group dynamics were also reviewed.

Based on background information collected they developed a questionnaire to obtain information health and socioeconomic conditions of the villagers. The questions were primarily open ended. The following domains were addressed.

- General information including types of housing, income, telecommunications, transport, food preparation, water supply, power supply, social history and births.
- Medical information including acute and chronic illnesses.
- Immunization status.
- Awareness on health issues including awareness on communicable, non communicable illnesses as well as awareness on issues like Malaysian health system, self medication and mode of treatment.

The students were encouraged to incorporate qualitative methods of data collection into their survey. The important objective for the second day was "Approaching the community". The students met the village head conducted a village meeting and explained the purpose of their visit and survey. They learnt the techniques of identifying village leaders and community decorum the leaders. A village transect was conducted to familiarize themselves with the area, to verify data given to them, observe the condition of the villagers and identify resources not solicited during interview with the village head.

Over the next two days the students developed, designed and mock tested the data collection tools under guidance. Emphasis was laid on decorum and language when in the community and language.

The main survey was conducted over 5 days with the students living in the community with the villagers. The students were divided into five groups to survey different areas of the village without overlaps. Commonly the head of the household was interviewed if interview with every member of the household was not possible. The students conducted depth interviews and focus group discussions on selected topics of their choice. By this they realized that sensitive issues like sex education could be addressed if done with care and understanding.

Every evening the students would convene at the village hall and discuss the day's events to and review and collate the findings. One student made a written report on the days' activity for submission to the faculty.

On the final day of the stay and survey, the students and the villagers jointly organized a farewell dinner, which included a joint cultural programme of folk songs and dances. This brought home the local culture to the students.

The lecturers met with the students on regular basis depending on the teams needs. These meeting allowed the lecturer to discuss the group's progress and learning experiences and to anticipate relevant issues.

Subsequent to the survey the students entered and analysed the data using SPSS and EXCEL. In this process the students became proficient in using these research tools and learnt to critically interpret the findings. They made a formal presentation to the faculty.

As a follow up action based on the findings of the survey, the students planned and conducted a "Health Promotion Campaign" specially focused to the needs of the villagers. They choose themes and developed their own educational material for the campaign. They mobilized the needed resources and funds. To ensure participation they promoted the campaign through fliers and banners which they developed. By this activity they learnt the process of planning, organization and decision making. They also learnt protocols to be followed in organizing a

community event e.g.: inviting the guests, community dress codes and other codes of conduct in the village. On the final day the students reviewed the programme. The students were asked to complete a questionnaire to assess their community experience, knowledge, skills acquired and team work experience.

Results

The students were asked to rate on a scale of 1 to 5 how the posting enabled change in five broad attributes. The attributes are shown in Table 3. The findings are shown in figures 1 to 5. The skills in which the students perceived maximal change in each of the attributes were as follows;

- Knowledge of Preventive Medicine & Public Health (Figure 1)
- Communication with colleagues (Figure 2)
- Willingness to accept responsibility (Figure 3)
- Attitude to Health Service Infrastructure (Figure 4)
- Cooperation with colleagues (Figure 5)

They were also asked to "free list" their opinion on the posting. In the opinion of the students, the programme brought about significant change in the way they are able to work together as a team and that the experience enhanced their communication skills.

The three faculty involved and a purposive sample of villagers were asked to give their impressions on the posting. The faculty felt that the students gained significant knowledge and skills in survey and research techniques and data analysis skills especially in using statistical and graphical packages such as SPSS and EXCEL. More important was the significant attitudinal change in working in a community.

Impressions of the villagers: One of the village leaders, an ex- air force man commented "Among the several groups of students coming for the home stay programme, these students were the best behaved and interacted the most with the villagers. The villagers have benefited a lot from their stay. It was a pleasure hosting them and we would love to host more of them".

Table 1: The specific competencies to be gained during the postings and the experiences

Selected competency	***Selected CD experience***
1. Obtain health related data about social and cultural environments, growth and development factors, needs and interests.	Teams gather qualitative and quantitative data from secondary sources and interviews.
2. Analyze social, cultural, economic and political factors that influence health.	Students analyze many factors that impact health within the community.
3. Apply principles of community organization in planning programs.	Students work with community members to plan a community forum where they facilitate issue selection and future steps for community action.
4. Communicating health and health education needs, concerns and resources.	Students interview members of the community and service providers to learn about the perceptions of each group and the assets and needs identified. Students Impart Health education to select community.
5. Demonstrate both proficiency and accuracy in oral and written presentations.	Students present their findings and in a comprehensive CD document,
6. Apply appropriate research principles and methods in community diagnosis.	Community diagnosis involves both quantitative and qualitative research in a real community setting.
7. Assess the merits and limitations of qualitative and quantitative research methods.	Students must discern the merits and limitations of each type of data.

Adapted from Quinn (1999)

Table 2: Schedule of students in community medicine posting on community diagnosis

Day	Activity
1	• Briefing on the importance of public health • Questionnaire development • Open ended • Students only guided, they had to develop own questionnaire after finding out the village through the interview, reading about the village from papers and the district office. • Incorporate qualitative method of data collection • Development of sub groups
2	Students taken to the village • Meet the village head and elders • Walk though of village • Social map of village made with help of villagers
3 and 4	• Questionnaire reviewed and finalized • Mock interviews to Horne skills of data collection • Briefed on etiquette during community survey
5 to 10	Survey of village started along with home stay • Batch divided into five groups to survey five different areas of village • Students conducted qualitative study in way of focus groups on sex education, contraception and affects of tsunami on village. • End of each day data collected was reviewed and corrected. • Student conducted a farewell dinner on the last day of survey.
11 to 14	Students taught on data entry and analysis • Using SPSS and EXCEL • Students prepared for health promotion campaign based on findings of survey
15	Presentation by the students to the faculty
16	Health promotion campaign by the students in the village where survey was conducted, five topics chosen: • Adolescent health • Geriatric health • Women's health • Child health • Communicable and non communicable disease
17	Meeting in the classroom to review programme. Student complete questionnaire to assess their • Community experience • Knowledge • Skills • Team work

Table 3: Attributes for rating* by students.

1. Knowledge	
a	Knowledge of preventive medicine and public health
b	Health status and infrastructure
c	Clinical knowledge
d	Research methods
2. Skills	
a	Clinical skills
b	Communication skills with patients
c	Communication with colleagues
d	Ability to get information
e	Ability to solve problems
f	Word processing
g	Statistical package
h	Others
3. Team work	
a	Capability to handle assigned work load
b	Initiative to work
c	Ability to lead
d	Meticulousness and completeness of work assigned
e	Ability to motivate others
f	Work effectively with others
g	Ability to resolve conflicts
h	Willingness to accept responsibility
i	Ability to give new ideas
j	Ability to organize
k	Ability to finish given work on time
l	Attitude to friends and colleagues
4. Attitudes and perception of	
a	Community
b	Way people live
c	Economic status
d	Health status
e	Environmental condition
f	Housing condition
g	Health services infrastructure
h	Your ability to work in a rural area
5. Humanistic	
a	Cooperation with colleagues
b	Cooperation with paramedical staff
c	Relationship with patients
d	Showing empathy
e	Involving others in decisions
f	Considering clients/patient concerns
g	Putting people at ease and rendering comfort
h	Realizing and admitting ones own errors

* Ratings done on a scale of 1-5

Scale:
0 No Response
1: Very Much Poorer
2: Poorer
3: No Change
4: Some Improvement

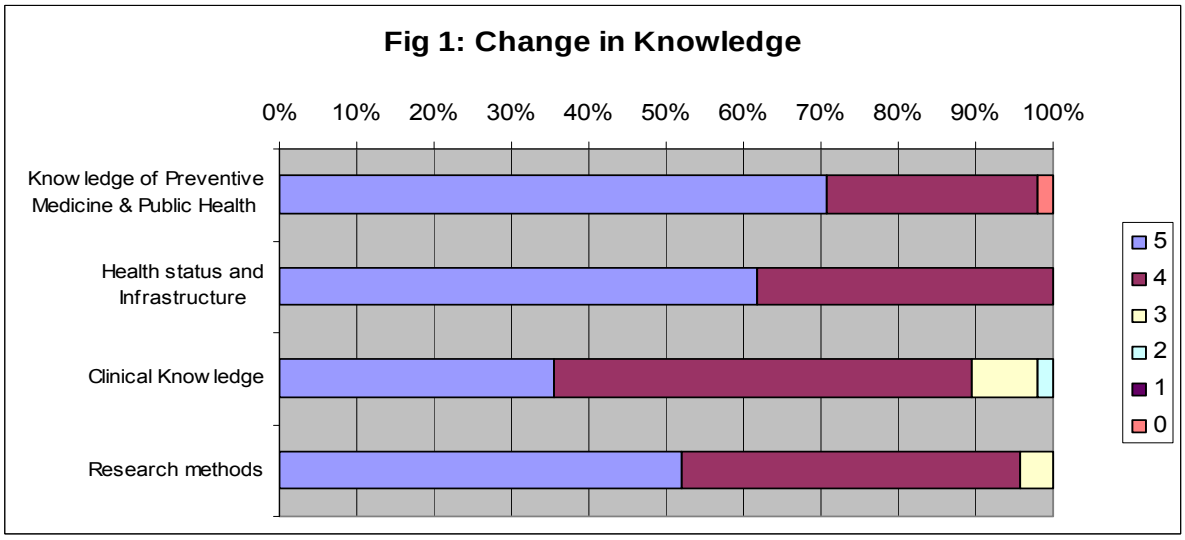


Fig 1: Change in Knowledge
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Know ledge of Preventive Medicine & Public Health
Health status and Infrastructure
Clinical Know ledge
Research methods
5
4
3
2
1
0

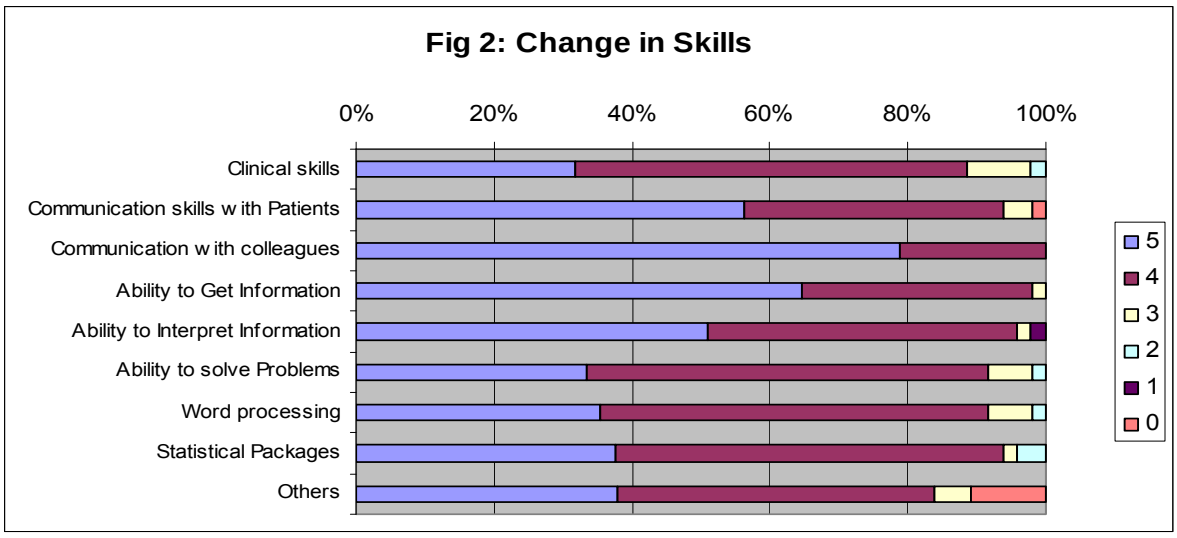


Fig 2: Change in Skills
0%
20%
40%
60%
80%
100%
Clinical skills
Communication skills w ith Patients
Communication w ith colleagues
Ability to Get Information
Ability to Interpret Information
Ability to solve Problems
Word processing
Statistical Packages
Others
5
4
3
2
1
0

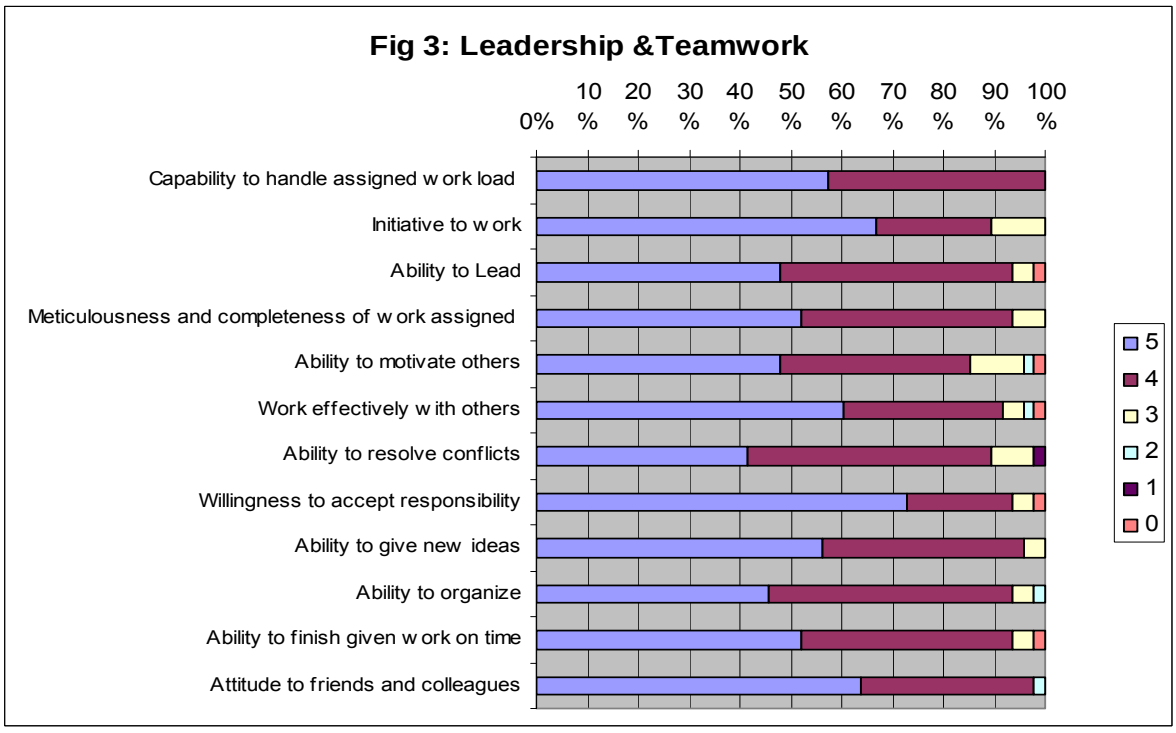
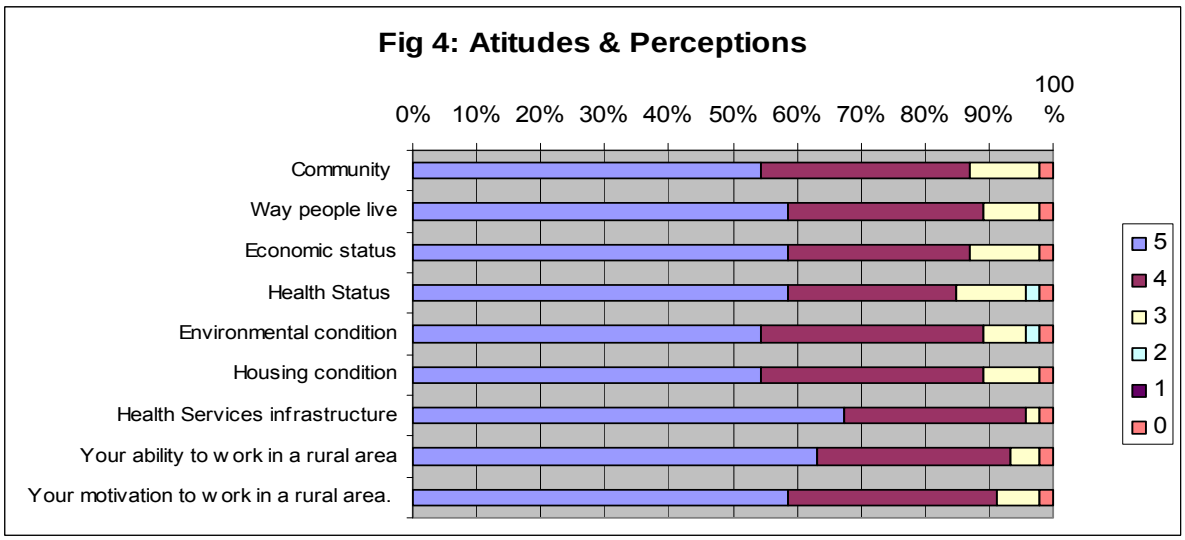
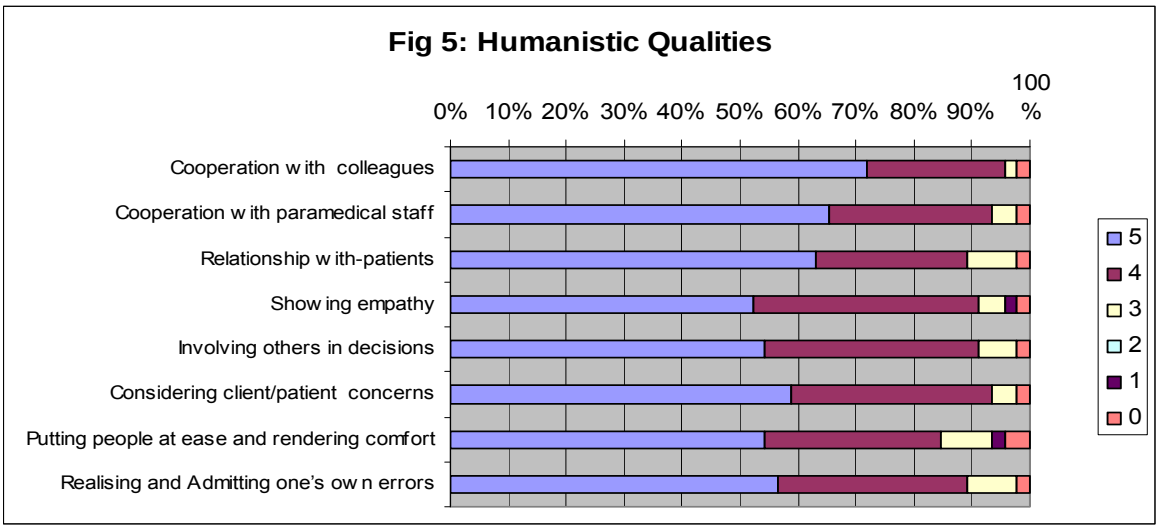


Fig 3: Leadership &Teamwork
0%
10 %
20 %
30 %
40 %
50 %
60 %
70 %
80 %
90 %
100 %
Capability to handle assigned w ork load
Initiative to w ork
Ability to Lead
Meticulousness and completeness of w ork assigned
Ability to motivate others
Work effectively w ith others
Ability to resolve conflicts
Willingness to accept responsibility
Ability to give new ideas
Ability to organize
Ability to finish given w ork on time
Attitude to friends and colleagues
5
4
3
2
1
0





Discussion

Based on the student, faculty and village opinions we feel that the community posting brought about a significant change in the following areas.

- Community structure and organization. The complexity of entering communities, developing relationships with communities and cultural sensitivity prior to beginning interviewing.
- The way people live and work even in low economic status,
- Coping mechanisms in time of crisis,
- The occupations they are involved and local trading methods such as "bisik bisik", a method of buying and selling fish by whispering which is very peculiar to this village The challenges encountered in seeking health care, limitations and problems in the health care system, and how these affect health and disease outcomes especially for long term treatment thus bringing home the broader aspects of managing health and illness.
- The roles played by members of a medical and health care team, including the decision-making and resources which can be utilized in community care.
- Grapple with work style and personality differences among team members. This `team process' is a critical component of CD and provides opportunities to practice sub-competencies of responsibility, leadership, cooperation coordination and conflict resolution. Faculty had an

opportunity to asses these in the students.

- The intensity of working in communities from which the students may differ by class, race or religion. In this instance the community was Malay Muslims and the students of Indian and Chinese origin. This may stimulate personal reflection and growth. As one student stated CD was an opportunity for enhancing her cultural sensitivity.

Conclusions

Though the intensity of the programme places a heavy load on student and faculty time, the benefits to the students and community accrued in a short time justifies its continuation. University administrations need to support departments by way of manpower and infrastructure to make community medical education meaningful.

References

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