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Original Articles

Present Academic Status of the Department of Medicine in Different Medical Colleges of Bangladesh

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Abstract

Background: *'Medicine' is said to be the father of Medical education. The clinical phase of education of a medical student should be done in an academically oriented hospital specially Medicine Department. Lack of adequate clinical exposure must leads to inadequate learning.*

Methods*: A cross-sectional study was done to look into the present academic scenario of the department in different Medical Colleges of Bangladesh. Here the Medicine Department of all the Medical Colleges was included; of them 22 were government and 44 were private. The allied branches were excluded. The concerned department of all the Medical Colleges was offered a prestructured questionnaire. 27 of them replied; 13 were public & 14 were private. They were regarded as Code A & Code B respectively.*

Results: *We found that the number of functioning unit is less than requirement in Code B(2.31). Though the student bed ratio is adequate; the number of midlevel teacher is much less in both the codes. Office secretary is lacking as well as the ward side minilab facility. Most of the conference rooms are shared. There is a great vacuum regarding the integrated teaching class. We also noted that the publication & presentation is much less in Code B.*

Conclusion: *With the rapid growth of Medical education, the need for promoting ethical medical practice is mandatory. So the lacking of existing medical content should be fulfilled in an urgent manner.*

Introduction:

The concept of clinical teaching lies at the heart of medical education.[1] The main goal of clinical teaching is to improve the professional education, to transmit knowledge, to impart skills and to inculcate the values of the profession.[2] Almost a century ago, Abraham Flexner, a research scholar at the Carnegie Foundation for the advancement of teaching, undertook an assessment of medical education in North America, visiting all 155 medical schools in the United States and Canada. His 1910 report, addressed primarily to the public, helped change the face of American Medical Education.[3-5] Flexner's report fueled change by criticizing the mediocre quality and profit motive of manyschools and teachers, the inadequate curricula and facilities at a number of schools, and the nonscientific approach to preparation for the profession.

Medical students are expected to develop, in addition to clinical skills and medical knowledge, a plethora of traits that can only be fostered through experience and reflection.[6] To be a wholesome clinician the clinical phase of education of a medical student should be done in an academically oriented hospital, where thoughtful clinicians would pursue research stimulated by the questions that arose in the course of patient care and teach their students to do the same.[1]

In Bangladesh, there are 66 medical colleges of which 22 are government, 44 are nongovernment. Each medical college has their own department of Medicine which provides medical education to large group of students. Each year near about 2500 students are admitted in the government medical colleges. Bangladesh Medical and Dental Council (BMDC) provide some definite prerequisite to establish proper environment of medical education e.g. adequate professorial staffs, teaching facility, adequate number of beds and sufficient instruments. For the last two years, a good number of medical colleges have been established. But, it seems to be difficult to fulfill all the requirements of BMDC. Only a few, old established medical colleges have such

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opportunity to fulfill them. A large number of students are graduated every year from different medical colleges. So, due to lack of adequate clinical exposure and other requirements there is naturally a big discrepancy among students of different institutions. Medical students experience that academic environment is a useful basis for modifying and improving the quality of medical education. Student's experience must be recorded in order to judge the competences accumulated.[7]

So, a cross sectional study was undertaken to look into the present academic scenario of the department of Medicine in different Medical Colleges of Bangladesh.

Materials & Methods:

This was a cross sectional observational study. The objective was to explore the present physical facilities and academic environment of department of Medicine & to identify the constraints of its improvement. The Medicine departments of all the medical Colleges were included in this study; of them 22 were government and 44 were private. The allied branches of Medicine were excluded. The study period was 6 months after approval of the protocol.The concerned department of all 66 medical colleges was offered a predesigned questionnaire. Distribution of letters to the relevant department by posts & couriers was done and encouraged them to send the information in time. Only twenty seven of themgave reply. Of the responders, 13 were government and 14 were nongovernment. The collected questionnaire were edited and arranged manually. On the basis of the key variables, a master-sheet was prepared. The collected data were duly entered, processed & analyzed. Interpretations were made subsequently.

Funding: Bangladesh Society of Medicine.

Results:

Medicine department of 27 Medical Colleges were included in this study. Out of 27, 13 were government and 14 were nongovernment. Government Medical Colleges were regarded as code A and nongovernment ones as Code B.

We found that the number of functioning units in Code A and Code B are 4.71 and 2.31 on an average respectively. Number of students admitted per year in Code A is 162.23 and in Code B is 100.77. Student bed ratio is 1:5.53 & 1:5.23 in Code A & Code B respectively. The average pass rate in the year 2011, 2012 and 2013 in code A are 80.06%, 79.48% & 73.18% and in Code B it is 70.61%, 70.56% & 74.66% respectively (Table-I).

Table-I

Number of Medicine units, students and student bed ratio

		Code A (N_1= 13)	Code B (N_2= 14)
Average Number of Functioning Unit		4.7 (Total 62 unitsin 13)	2.31 (Total 30 unitsin 14)
Average Numberof students admitted per year		162.23 (Total 2109 students each year)	100.77 (Total 1310 students in each year)
Pass rate (%)	2011	80.06%	70.61%
	2012	79.48%	70.56%
	2013	73.18%	74.66%
Student Bed Ratio		1:5.53(total2109 students : total 11660 beds)	1: 5.23 (total 1310 students: total 6934 beds)

Table-II

Teaching & other staffs

Teaching and other staffs	Code A (N_1=13) Average (n/N_1)	Code B (N_2= 14) Average(n/N_2)
Professor	2.31 (Total 30 in 13)	1.93 (Total 27 in 14)
Associate Professor	3.69 (Total 48 in 13)	1.57 (Total 22 in 14)
Assistant Professor	4.31 (Total 56 in 13)	1.79 (Total 25 in 14)
Resident Physician (RP)	0.92 (Total 12 in 13)	0.50 (Total 7 in 14)
Registrar	6.69 (Total 87 in 13)	2.57 (Total 36 in 14)
Assistant registrar	09 (Total 117 in 13)	2.71 (Total 38 in 14)
Residents/MO	13.38 (Total 174 in 13)	7.85 (Total 98 in 14)
Office Secretary/ Assistant	0.23(3 in 13)	0.86(12 in 14)
Ancillary staffs (except security)	38.31 (total 498 in 13)	15.93 (total 223 in 14)

The number of teachers from professor to register is adequate; which fulfills the criteria set by BMDC. But the numbers of Residents & Indoor Medical Officers are 13.38 &7.85 on an average in Code A and Code B respectively.Resident physician (RP) is present in 12 participants in Code A & only 7 in Code B. Office secretary is available in only 3 Medicine departments of Code A; the number is 12 in Code B.Average number of ancillary staffs in Code A is 38.31 and 15.93 in Code B (Table-II).

Regarding physical facilities, conference room is available in all participants, but the number of dedicated conference room for the department is only 5 for each code.Dedicated tutorial rooms are available in 26 participants; one of Code A did not answer. Room for the teachers is available 100%. Ward side minilab is present in 4 participants of Code A; the number is 6 in Code B. The number of dedicated minilab isone in Code A, 2 in Code B. Multimedia projector is available in 11Medicine departments in Code A & all 14 in Code B. One participant of Code A did not reply. Public address system is available in 12 of Code A & 13 of Code B. Computers are available 100%. Photocopier is available in 7 of Code A& 10 of Code B. Transport vehicle for the students are available in 9 Medical Colleges of Code A & 11 in Code B. (Figure-1).

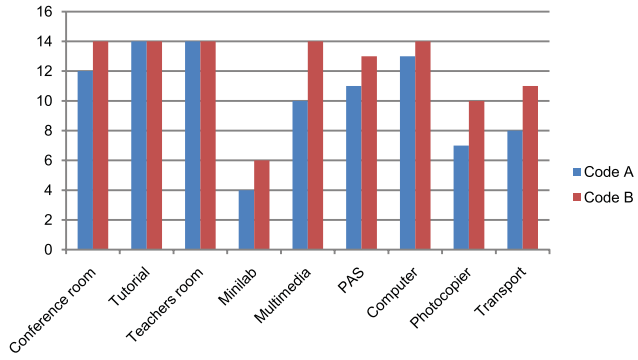

Fig.- 1: *Physical facilities*:*

*The responders lacked uniformity as most responders of Code A reported the dedicated facilities and most responders of Code B reported shared and dedicated facilities together.

The attendance registers for lecture & clinical classes is available 100%. Maintenance of evening class register is 85%& 93% in Code A & Code B respectively. Evening class calendar is found in 93% participants in Code A & 79 % in Code B. Clinical class schedule is found available 100%, academic calendar availability by date, time, topic and teacher is 100% in Code A and 93% in Code B (Table-IIIa).

Table - III(a)

Academic activities

Academic activities	Code B (N_1= 13) Yes (%)	Code B(N_2= 14) Yes (%)
Lecture Attendance register	100	100
Clinical Attendance register	100	100
Eveningclass register	85 (11 out of 13)	93 (13 out of 14)
Academic calendar by date, time, topic & teacher	100	93 (13 out of 14)
Clinical class register by date, time, topic & teacher	100	100
Evening class schedule by date, time and teacher	93 (12 out of 13)	79 (11 out of 14)

Table - III(b)

Academic Activities (Continued)

Academic Activities	Code A(N_1= 13) Average (n/N_1)	Code B(N_2= 14) Average (n/N_2)
Average Numberof lecture class schedulelast week	5.15 (Total 67)	5.14 (Total72)
Average Number of lecture class held last week	5 (Total 65 in 13)	5.10 (Total 71 in 14)
Average Numberof clinical class held last week	6	6
Average Numberof evening class held last week	5.76 (Total75)	5.21 (Total 73)
Number of Medical Colleges whereintegrated class held last year	7	4
Schedule of clinical meeting by date and time	13	14
Schedule of journal club by date and time	11	12
Numberof publications by the department	8.46 (Total 110)	2.78 (Total 39)
Number of national/international presentations by the department	4.62 (Total 60)	1.93 (Total 27)

Number of lectures, clinical & evening classes held in a week is more than 5 on an average. Integrated teaching class held last year in 7 participants of Code A, 4 in code B. Schedule of clinical meeting is 100% available; journal club schedule is not found in 2 each in Code A & Code B. Number of publications by the department last year is 8.46 & 2.78 for Code A & Code B respectively. The average number of national & international presentations by the department last year is 4.62 in Code A & 1.93 in Code B (Table-IIIb).

Discussion:

This cross sectional observational study was conducted to explore the present academic status and physical facilities of Medicine department in different Medical Colleges of Bangladesh. Though all the medical colleges were offered a prestructured questionnaire, only twenty seven of them responded. Two thirds (59%) of government Medical Colleges replied while only one thirds (32%) of private medical colleges responded. As the response in private sector is obviously much less we suspect that the result of this study could be affected by this and actual scenario might not be come into light.

The government Medical Colleges was regarded as Code A. Rest 14 private ones were regarded as Code B. The aim was to explore the practice of clinical teaching & also to find out the constraints of the department. In this study we found that the student unit ratio is adequate in Code A; it is a bit less in Code B. According to BMDC, there should be minimum 3- 4 units for 100 students.[8] This scenario emphasizes that student unit ratio should be upgraded to keep pace with ongoing development within the profession.[9, 10]

According to BMDC the student bed ratio should be 1:5; which means minimum 5 beds should be allocated for each student. In our study we found the ratio is maintained properly in both Code A & Code B. It is very important, because lacking of adequate admitted patients can lead the trainees to play a role of simple passive observer rather than being a clinically expert one.[11, 12]

Medical novices require the opportunity to practice skills under the guidance of experienced teaching physicians till they attain a high level of proficiency.[1] Regarding teaching staffs, from professors to registers, the number is satisfactory in both the codes; BMDC criteria are fulfilled. But the post of Resident Physician (RP) is vacant in 1 place of Code A & 7 in Code B. As per BMDC, there should be minimum 18 Residents or Medical Officers for 100 students; here we found the number is 13.38 & 7.85 in Code A & Code B respectively; less than the requirement. This lacking of midlevel teaching staff is consistent with the findings of Norman G et al & Gordon Jet al.[13,14] The number of ancillary staffs in both the codes are arbitrary; as the respondents stated that these staffs usually have to do rotational duty and shifting duties also. So the actual number could not be ascertained.

Though BMDC emphasizes on having at least one office secretary of the department, we found only 3 participants possessed one each in Code A; the number is 12 in Code B. For proper record keeping and other academic activities, a fulltime office secretary must be ensured in Medicine Department.

The educational mission of a teaching hospital can be compromised by the lacking of supportive physical facilities. Here we found though the tutorial & teachers' rooms are available, some other important tools are inadequate. Most of the conference rooms are shared in both the codes. Ward side minilab is available in only 4 centers in Code A and 6 in Code B. There is no multimedia projector in 1 center of Code A. There is also lacking of photocopier; the number is 7 & 10 for Code A & Code B respectively. It is also found in the study that there is lack of uniformity regarding the information about physical facilities as most of the responders of Code A reported the dedicated facilities and most of Code B reported dedicated and shared facilities together.

As per BMDC rule, at least one transport vehicle should be provided for the students by the college to take them to the affiliated hospitals. In Code A, nine out of thirteen has got the facility; the number is 11 in Code B.

To run the academic activities in full swing, records of lecture & clinical attendance, evening classes is mandatory. Here it was found that the lecture and clinical attendance registers regarding these issues are maintained 100%. But the academic calendar, which is an important item of teaching curriculum, is less maintained in Code B. Same about the evening class register and schedule. The average number of lecture, clinical & evening class is satisfactory in both the codes; more than five per week. An important part of clinical teaching is integrated teaching schedule, where the Department of Medicine incorporates with other departments and prepares the undergraduate students for a fine presentation of a clinically important issue. Last year it was held only in 7 & 4 Medical colleges in Code A and Code B respectively.The schedule of clinical meeting in the department is 100%, but journal club schedule is lacking.

As we know, the professionals in training must master both research & clinical teaching; so research publication is an important indicator of clinical environment of the concerned department. Research is important because it leads to better

patient care & teaching.[15] In this study we found the number of publications & national & international presentations are more in Code A. It may be due to the fact that the most of the participants of Code Aare old ones having their own college journals, which is lacking in Code B.

Conclusion:

The educational mission of teaching hospitals can be compromised by the absence of perfect academic environment. With the rapid growth of medical education & practice, the need for promoting ethical medical practice becomes more felt and it has been recognized that related action should start early. This study was done to explore the current academic scenario in the department of Medicine in different Medical Colleges & also to find the constraints. Medicine department of 27 Medical Colleges took part in the study; of which 13 were government & 14 were nongovernment. It was observed that there is scarcity of Medicine units in proportion of students. Mid level teachers are much less than the standard one. The unavailability of physical facilities played an important barrier against achieving clinical perfection. Student bed ratio is appropriate. Number of publication, national & international presentations is also much less than expected. It is obvious that lacking of the existing medical content should be fulfilled in an urgent manner.We hope that this study will give important feedback to the curriculum planners and health policy makers to take necessary steps to achieve standard academic parameters.

Limitations:

1. The answersof the questionnaire could not be verified physically.
2. A remarkable amount of Medical Colleges did not respond specially the private ones, which we think could have negative impact on this study.
3. Time constraints.

Recommendations:

BMDC should improve the oversight to comply the Medical Colleges to fulfill the standard criteria set by itself regarding both the physical facilities and academic status.

Conflict of Interest : None

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