

## Study of Status of Clinical Skills' Education Among Interns of Birjand University of Medicine

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### Abstract

**Background and purpose:** *Acquiring clinical skills is one learning goal for medical students. Clinical skills are essential to diagnose diseases and to accomplish therapies. The aim of this study is to review status of clinical skills among interns in Birjand University of Medicine*

**Methods:** *This was a cross sectional study, in witch all interns of Birjand University of Medicine articulated. A questionnaire including questions about 8 essential clinical skills was developed. Have interns responded the questionnaire and questionnaires been collected, data were coded and analyzed .*

**Results:** *More than 90% interns lack required skills for intubation, cardiopulmonary, resuscitation and normal vaginal delivery. Despite the fact that more than 80% of interns assumed these skills as highly useful, most of them hadn't been trained by qualified trainers.*

**Conclusion:** *It seems that the usual methods of teaching clinical skills is not adequate and needs to be modified at University. Using some new teaching setting like skill labs and observational evaluation methods will have an important role in development of clinical skills .*

**Keywords:** *TEACHING, CLINICAL SKILLS, INTERN*

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### Introduction

Medical students have to acquire a set of clinical skills which education in order to use for health problems of the society. During traditional education, students acquire clinical skills in setting like classrooms, laboratories, operation rooms, clinics patients' bedsides ore health fields outsides universities (1).

Traditional clinical educations were highly relied on apprentice model. It is obvious that faculty members are not able to teach all skills to students effectively (2). Although developments in medical

sciences and changes in health system, include education has also been changed, so that these days more emphasis is put on teaching clinical skills and developing attitudes of physicians (2). Not providing equipment for interns to learn and practice clinical skills related to history taking, physical exam, and procedures of injection, suture and dressing prior to let them work on real patients will hinder patients' rights. On the other hand learning in bedside setting is limited by factors like number of students, lack of space, students' tension during first encounters with patients. Thus clinical education must include patients' bedsides as well as skill centers. Considering the above facts, world wide accredited medical education centers and centers for training skills or skill lab centers (CSL) have been developed (3).

Clinical skill centers provide opportunities for medical students to enhance their clinical and

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communication skills in calm controlled environment (4).

Fundamental changes have been developed in medical education in Iran in recent years so that planning for development of clinical skills centers was done at Education Deputy of Ministry of Health and the plan is to be implemented in order to centralize discrete actions and embody the important area of clinical education (5).

This study is an attempt to find out the status of clinical skills of interns at Birjand University of Medicine.

**Methods**

This was a cross sectional study, in Birjand University of Medicine in 2004. Data collection tools were a questionnaire made by researchers based on studies at other universities like Shaheed Beheshti University of Medical Sciences, Tabriz University of Medical Science, Tehran University of Medical Sciences and Isfahan University of Medical Sciences and set of skills related to intubation, cardio-pulmonary resuscitation(CPR) and normal vaginal delivery, insertion of suprapubic catheter, lumbar puncture (LP),pleural tap and taking arterial blood sample, to study arterial blood gases were studied.

The questions were asked for each set of above skills were:

1- In your opinion how much are the skills

essential for a general physician?

2- Have you learned the skills of clinical skills centers?

3- Who did each you the skills?

4- Are you able to perform the skills by yourself?

5- Do you like a course of clinical skills be included in curriculum of undergraduate medical education?

Validity of the result was determined based on expert opinion. Reliability was investigated by Cronbach's  $\alpha$  (0.84). Study population includes all interns of Birjand University of Medicine. Questionnaires were distributed among interns by researchers. Data were coded and analyzed. Descriptive statistics was used to determine relative frequency and X2-test was used to analyze data.

**Results**

45.6% of population study were male and 54.4% were female. 61.2% of interns believe that these eight set of skills are highly useful for general physicians. In their opinion CPR (89.1%), to intubation (83.7%), normal vaginal delivery (81.2%), were the most applicable ones.

Table 1 shows who has taught the skills. Of all interns, 22.71% learnt the skills at clinical skill centers, the highest ranks were of normal vaginal delivery (33.3%) peritoneal fluid tap (29.2%) and intubation (24.5%).

**Table 1.** Frequency distribution of interns trainers of skills for each set of skills

Trainer \ Skills	Specialized physician		General physician		Hospital staff	
	Frequently	percent	Frequently	percent	Frequently	percent
Intubation	13	28.3	0	0	5	10.9
CPR	7	14.9	4	8.5	12	25.5
Suprapubic catheterization	7	14.8	0	0	8	17
Normal vaginal delivery	30	65.2	0	0	2	4.3
LP	22	41.08	0	0	1	2.1
Peritoneal fluid tap	17	35.4	2	4.2	1	2.1
pleural fluid tap	21	44.7	0	0	1	2.1
ABG	8	16.6	1	4.2	5	10.4

Table 1. Continued

Trainer Skills	Other students		Library sources		None		sum	
	Frequently	percent	Frequently	percent	Frequently	percent	Frequently	percent
Intubation	1	2.2	3	6.5	24	52.2	46	100
CPR	1	2.1	3	6.3	20	42.6	47	100
Suprapubic catheterization	13	27.7	2	4.3	17	36.2	47	100
Normal vaginal delivery	0	0	0	0	14	30.5	46	100
LP	0	0	3	6.4	21	44.7	47	100
Peritoneal fluid tap	10	20.80	1	2.1	17	35.4	48	100
plural fluid tap	0	0	3	1.4	22	66.8	47	100
ABG	19	39.6	0	0	14	29.2	48	100

The skills related to normal vaginal delivery were used independently by female intern significantly more than males. Other skills were the same for both genders.

Table 2 shows the statuses of interns' performances regarding each set based on their own opinions. Of all respondents, 78.2% told that they fear any encounter requiring their use of these skills on real patients. 93% of interns believed that teaching clinical skills in form of workshops and at clinical skill centers leads to increase in physicians' competence. All interns under study agreed with developing a unit for clinical skills.

## Discussion

Clinical skills are a set of practical activities required for medical students' future tasks as general physicians. Medical students need to learn and practice the skills during and after education to accomplish their care delivery tasks. Clinical education provides opportunities for students to change factual knowledge to various psychosomatic skills essential for patients' care (6).

This study shows that less than 5% of interns (23.7%) are able to accomplish the skills. A study in Lorestan showed that about 50% of interns

**Table 2:** Frequency distribution of status of performing skill by interns independent of other set of skills

Performance of independently Skills	Yes		No		To some extent		Sum	
	Frequently	percent	Frequently	percent	Frequently	percent	Frequently	percent
Intubation	5	10.2	28	57.1	16	32.7	49	100
CPR	9	18.7	24	50	15	31.3	48	100
Suprapubic catheterization	15	30.6	15	30.6	19	38.8	49	100
Normal vaginal delivery	13	27.7	21	44.7	13	27.6	47	100
LP	3	6.3	33	68.8	0	0	48	100
Peritoneal fluid tap	19	39.6	18	37.5	11	27.9	48	100
plural fluid tap	9	18.4	27	55.1	13	26.5	49	100
ABG	16	32.7	15	30.6	18	36.7	49	100

claimed that they are able to use clinical skills whenever they had to (7).

Studies done in Tabriz and Gorgan showed that medical students are very weak regarding their practical skills (8-11).

The weakness may be caused by defects in teaching skills and insufficient practice of medical students. Rahmani wrote that most medical students often don't be taught clinical skills they learn the skills themselves because they feel the need to learn them and because there are a large number of clients (patients) (12).

It is to be noted that teaching clinical skills is known as a neglected area of education with no proper plan, implementation and an evaluation. Not only in developing but also in developed countries there are students who have graduated without evaluation of patient interview or physical exam (13).

This study showed that only one intern (32.7%) was taught by specialized physicians. The study of Fazeli also showed that faculty members had the smallest role in teaching clinical skills to students (14).

Medical students must be taught clinical skills by qualified physicians to apply them properly on patients. Although this fact has been neglected and not qualified teachers cause defect in learning or incorrect learning lead to problems in their future career. This problem was focused on by Mohagheghi which showed internal medicine residents knew faculty members' absence at daily ward visits as one educational drawback (15). Fasihi Harandi recommended workshops to alter faculty members' attitudes and to explain new educational and evolutionary methods of clinical skills to them. He also suggested suitable solutions must be thought of in order for faculty members to be active and have better performances (16).

In this study two interns believed that clinical skills are highly useful for their future career and almost all of them believed that there was a need for a unit of clinical skills in the curriculum.

Study of Khosravi yielded similar results (7).

As internship is a stage just prior to interns entering

work environment and community, interns are more informed about their weaknesses and understand better the need to learn clinical skills. This study showed significant differences between male and female interns only in skills related to normal vaginal delivery which may be due to limited tasks of male students in obstetrics and gynecology wards.

### **Conclusion**

The result of this study showed that interns' competence related to clinical skills are far from their desired status and a large percent of interns responded that they are not able to use skills whenever they are needed. Undoubtedly this problem won't be removed unless there are no attempts to make educational plans and to activate clinical skills centers. Manager's cooperation for educational planning, considering clinical skills as a mandatory unit and use of educational experiences of other universities will yield strategies to solve this problem.

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