

Report

Analysis of clinical consultations at teaching hospitals in Qazvin, Islamic Republic of Iran

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Introduction

Hospitals are an important part of any health care system and generally account for the majority of national health resources. They provide complex curative care and, depending on capacity, act as primary, secondary or tertiary level referral facilities. They also provide emergency care for the severely injured and critically ill. Hospitals are also centres for the transfer of knowledge and skills and are an essential source of scientific information and research.

Hospitals' common missions are [1]:

- timely admission, treatment and care of patients;
- health promotion in partnership with the community;
- education of health personnel;
- medical research.

Teaching hospitals can provide effective services and produce efficient doctors, nurses, midwives and medical specialists, provided the physical, technological and other facilities are appropriate [2]. In the past decade, more than 30 medical schools have been established in the Islamic Republic of Iran, but only a few of them have

sufficient facilities, including teaching hospitals, for advanced medical education. Although a general hospital which includes the four main departments (internal medicine, general surgery, obstetrics and gynaecology, and paediatrics) can play an effective role in teaching the clinical process, most teaching hospitals that produce specialists as well as general practitioners are divided into more specialized, and limited, medical departments than necessary. This situation can limit communication and the flow of resources between different specialists, residents of different specializations and interns, despite the need for timely clinical consultations and scientific exchange.

One effect of specialization in both basic and clinical sciences is a progressive ignorance of every area outside one's own specialty, including what can be done, at what risk, for which patients. This ignorance is most pronounced with regards to what other health professionals do, and are able to do, unless the clinician functions within a multidisciplinary team [3].

By performing consultations and participating in treatment decision-making, students can gain a holistic overview of medical science. The medical teacher can help students clarify treatment choices through group discussion of responsibili-

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ties with regards to a particular case and, subsequently, with regards to all such illnesses. The answers to the questions raised determine who will manage the care of the patient. As specialization increasingly divides care among a range of different health workers, students and graduates may need explicit training in working alongside other health professionals as a part of a team [4]. Some researchers have found consultations to be "very helpful" or "helpful" in caring for patients, and in some aspects of physician education [5]. They have discovered that timely consultations can increase the effectiveness of treatment and reduce the duration of hospital stays [6,7].

Qazvin University of Medical Sciences and Health Services affiliates four teaching hospitals, none of which is a general hospital, in different locations:

- Boali Sina (134 beds) specializes in internal medicine, infectious diseases, cardiology, psychiatry and neurology.
- Shaheed Rajaie (200 beds) specializes in general surgery, orthopaedics, genitourinary diseases and accident casualties.
- Qoods Children's Hospital (122 beds) specializes in paediatrics.
- Kosar Women's Hospital (125 beds) specializes in obstetrics and gynaecology.

About 300 medical students and 56 residents of internal medicine, obstetrics and gynaecology, general surgery, paediatrics and anaesthesiology are being trained in these hospitals. Although communication and the exchange of knowledge is useful for both residents and specialists, organizational restrictions prevent it.

The objectives of this study were:

- to identify the attitudes and practices of residents and specialists concerning clinical consultations;

- to determine the average waiting time for consultations;
- to determine the frequency distribution of consultations by department.

Materials and methods

In October 1995, two separate, self-administered questionnaires were used to gather data about attitudes and practices concerning clinical consultations in four teaching hospitals. Thirty specialists (about 50%) and 24 residents (43%) responded. A check-list was also designed to record waiting times for consultation orders during the month. Information about the orders was recorded by the responsible nurse and the waiting times were determined accordingly.

Results

Of the 30 specialists, 24 (80%) preferred to work in a general, as opposed to specialized, teaching hospital, and 97% indicated that clinical consultations were useful for better diagnosis and treatment. However, they reported that only 30% of their consultations had taken place in a timely manner. About 70% of consultations had been done late or too late.

All of the responding specialists indicated that they had had consultations with other specialists; 13% believed that their colleagues' consultations had been good and logical, 73% had found consultations useful, and about 14% had found the consultations useless.

Residents also preferred to be trained in a general hospital. Although direct contact between residents seems to be very useful for learning about controversial aspects of clinical diagnosis and treatment, 90% of the residents believed that the exchange of scientific knowledge and views was nearly

impossible because of the distances between the hospitals. They emphasized that seeking medical consultations with other specialists was necessary to their clinical practice. They also indicated that they had no opportunity to attend morning sessions concerning medical issues at other teaching hospitals, which they believed would be useful.

The most frequent consultations residents felt were needed were internal medicine (29%), followed by general surgery (27%), cardiology (14%), neurology (12%), obstetrics and gynaecology (10%), and others (8%).

During the 1-month study period, 100 clinical consultations were followed. Of these, 65% were for emergencies and 35% for other cases. In addition, 31% of the consultations were intrahospital and 69% were interhospital. The minimum waiting time was 5 minutes and the maximum was 95.5

hours with an overall average of 12.85 hours (Table 1). The average waiting time in individual hospitals ranged from 3.8 hours at Kosar Women's Hospital to 16.32 hours at Qoods Children's Hospital. The average waiting time for emergency cases ranged from 2.8 hours at Boali Sina to 6.12 hours at Qoods Children's Hospital. The majority (62%) of consultations took place during the morning shift, 28% during the afternoon shift and the remaining 10% during the night shift. Of the 100 consultations, 34% were for cardiology, 26% for internal medicine, 15% for general surgery and 25% for other departments (Table 2). In 67% of the consultations, the patients were transferred between wards or hospitals, in 29% of the consultations the consultant doctors came to the bedside and in the remaining 4% only the medical reports were reviewed.

Discussion

The findings of this study reveal that although nearly all of the specialists and residents believed that they need to have medical consultations with their colleagues, these did not always take place as they should. The distances between the teaching hospitals and inefficient communication facilities may exacerbate the situation. The average waiting time for consultation indicates a defect in the procedures for consultation, from request to reply. These problems may lead to the loss of time in the treatment and care of the patient at critical and vital times.

Clinical practice is currently entering a phase of more searching analysis which requires substantially more quantitative justification for each decision made. Preparing students for a practice based on a clinical science of decision-making, as much as on

Table 1 Consultation waiting time

Waiting time (hours)	Emergency cases	Ordinary cases	All cases
<1	16	8	24
1-3	15	10	25
3-6	3	4	7
6-9	1	6	7
9-16	2	4	6
16-25	13	2	15
25-49	11	1	12
49-73	2	0	2
73-96	2	0	2
Total	65	35	100
Mean	15.76	5.76	
Standard deviation	19.89	7.43	

Table 2 Frequency of interdepartmental consultations (n = 100)

Department requesting consultation	Number of consultations	Department consulted
Paediatrics	16	Cardiology
Paediatrics	8	Surgery
Paediatrics	6	Ear, nose and throat
Paediatrics	5	Orthopaedics
Paediatrics	3	Internal medicine
Obstetrics and gynaecology	8	Internal medicine
Obstetrics and gynaecology	5	Cardiology
Obstetrics and gynaecology	4	Surgery
Obstetrics and gynaecology	2	Urology
Cardiology	6	Internal medicine
Cardiology	3	Neurology
Cardiology	2	Infectious diseases
Internal medicine	4	Cardiology
Internal medicine	3	Neurology
Internal medicine	1	Surgery
Infectious diseases	5	Internal medicine
Infectious diseases	3	Cardiology
Infectious diseases	2	Obstetrics and gynaecology
Infectious diseases	2	Surgery
Infectious diseases	2	Neurology
Surgery	6	Cardiology
Surgery	4	Internal medicine

a clinical art of judgement, requires teaching in new areas with few precedents described in a sparse literature [8].

Teaching hospitals should provide opportunities for easy communication and consultation between medical trainees and staff members from different specialties. Participation in common seminars, the discussion of controversial issues, the debate of complex cases and clinical decision-making may help in this respect. It was recommended to the university authorities that one of the four teaching hospitals be reor-

ganized to function as a general hospital to facilitate consultations and the exchange of knowledge among specialists and residents.

Good and timely consultation leads to better clinical procedure and decision-making, in turn shortening hospital stays and reducing hospital costs. It also helps medical practitioners develop a holistic view of medicine and discover the concept of comprehensive medicine. To this end, developing regions should better equip their health organizations' communication systems.

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