Clinical experiences of intern doctors in Kuwait: implications of assessment practices for internship training

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Objectives This study reviewed the clinical conditions encountered by interns during their specialty rotations and the pattern of assessment ratings of their performances of clinical skills.

Methods Trainers used a checklist and a set of Interaction Cards to assess the performances in six clinical domains of 45 interns in the 2002/03 cohort during and at end of rotations over a one year period.

Results Analysis of 4868 assessments revealed that the clinical conditions seen during training matched the health problems of Kuwait adequately. The majority of the ratings were close to upper end in a rating scale of 1 to 5, with 66% in the *5 - excellent* category.

Conclusion During their rotations interns encountered clinical conditions common in Kuwait. There was leniency in assessment. Feedback to trainers on the ratings given and workshops in clinical assessment would improve assessment in internship training.

Key words: internship training, clinical assessment, rating scale, clinical skills domain

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Introduction

The *internship year* or *pre-registration house officer (PRHO)* year, which medical graduates enter on completing undergraduate education, provides them with opportunities for gaining additional competencies, under supervision, in the established medical specialties. This phase has been viewed as the final year of basic medical education by the General Medical Council (GMC) in the UK,[1] which took the initiative for major reforms. A number of changes have been introduced in the training programs as a result during the 1990's.[2,3]

During training and assessment in medical school, a great deal of emphasis is placed on the acquisition of knowledge and the ability to take a history, conduct a physical examination and formulate a reasonable diagnostic hypothesis. The skills of performing many important procedures are often not assessed. Though it is generally expected that the interns would acquire such skills during the internship year, PRHOs themselves, in the UK and the rest of Europe, have indicated that they were deficient in practical skills,[4,5] some of which may be considered as essential.[6] A national survey of the opinions of PRHOs in the UK revealed that only about a quarter felt that the experiences at medical school had prepared them well for the jobs they had undertaken.[7] An observation worth noting that gives a different view is the report that the majority of the core skills required in clinical firms had been acquired by final year medical students and PRHOs before the end of the final year or during the PRHO year.[8]

For assessing clinical skills, esp. at formal examinations, examiners traditionally used the 'short cases' and the 'long case'. The Objective Structured Clinical Examination (OSCE),[9,10] which is widely used today in many settings, and the Objective Structured Long Examination Record (OSLER),[11] aim to improve the psychometric characteristics of the assessments. The latter, in addition, has shown that the standard of clinical skills even of candidates preparing for postgraduate examinations was unacceptably low. Moves to develop internship or residency training, esp. with respect to the assessment of clinical skills have been reported in the USA,[12] Norway,[13] and Australia.[14,15] Among the approaches that have been introduced with the aim of improving the assessments, especially in clerkship and residency training, are ratings of the different aspects of clinical performance given by a supervisor, peer or an observer,[16] the

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Clinical Anesthesia System of Evaluation (CASE),[17] the Structured Technical Assessment Form (STSAF),[18] and the *Encounter Card*.[19,20] The Encounter Card was reported to be superior to global evaluation scales on many aspects in assessing clinical competencies, offering promise in formative evaluation.

In Kuwait, the Kuwait Institute for Medical Specialization (KIMS) is responsible for administering the internship training program. Approximately 90 interns are posted annually at five major General Hospitals to follow rotations in Medicine (16 weeks), Surgery (16 weeks), Obstetrics & Gynecology (8 weeks), and Pediatrics (8 weeks). Starting with the cohort that commenced internship training in March 2002, each intern was provided with a list of the minimum competencies that the trainee was expected to acquire before the specialty rotations were completed. In addition, the trainers were asked to use a checklist and assess the procedures that the intern was expected to perform during each rotation.

Objectives of the Study

This study was undertaken to determine the following:

i. Clinical conditions encountered by interns during specialty rotations;
ii. Clinical performance domains in which assessment is undertaken;
iii. Consistency of the assessments of the performance of interns within the specialty and across specialties;
iv. Association between the rank of the assessor and the rating given at assessment.

Subjects and Methods

Each trainee received a copy of a publication, the *Internship Training Trainee Guide*, which listed the minimum competencies that he or she was expected to acquire during the specialty rotations. The *Guide* also had a set of *Interaction Cards*, with a format for the trainer to evaluate the intern's level of performance in six listed domains, and for the trainee to note the essential data regarding the patient. The trainers were asked to check whether the intern performed a set of listed procedures in each specialty, using a checklist provided.

A short workshop was conducted at the outset for clarifying the roles and responsibilities of the trainers. It was explained that the learning objectives listed indicated the minimum competencies that the trainee was expected to acquire. The *Interaction Cards* were to serve as a written record of the performance of the trainee at individual assessments. The trainers also received a copy each of a *Trainer Guide*, which provided guidelines on how they were to make the assessments and record the ratings.

The domains of clinical skills listed in the Interaction Card were clinical skills, professional behavior, case presentation, diagnosis, therapy, and handling of emergencies. The trainers rated the performances of the intern using a five-point rating scale (1 = *unsatisfactory*, 2 = *below expected standard*, 3 = *at expected standard*, 4 = *above expected standard* or 5 = *excellent*).

The assessments were repeated in relation to different clinical problems. Before completing the rotation, the trainee met the supervisor/trainer at a final meeting, at which the overall performance during the attachment was reviewed based on the data in the Interaction Cards. The ratings of the previous performances were averaged and recorded.

Data Collection and Analysis

Data were collected from a total of 90 interns who commenced their internship during the period under study. This report is based on the data from 45 interns who had completed the four rotations of medicine, surgery, obstetrics & gynecology, and pediatrics. A total of 4868 completed Interaction Cards was available. For analysis, ratings for *1 = unsatisfactory and 2 = below expected standard* were pooled.

Statistical Analysis

Data were analyzed using counts of the ratings in each category of responses and their percen-

Table 1. Distribution of designations of evaluators among different hospitals

Hospital	Consultant	Faculty Member	Senior Registrar	Registrar	Asst. Registrar
	n (%)	n (%)	n (%)	n (%)	n (%)
Adan	105 (10.1)	0 (0.0)	163 (10.3)	82 (4.1)	2 (1.5)
Amiri	163 (16.8)	3 (0.7)	195 (12.3)	249 (12.4)	28 (20.9)
Farwania	410 (39.4)	0 (0.0)	506 (32.8)	585 (29.1)	39 (29.1)
Maternity	44 (4.2)	0 (0.0)	94 (5.9)	426 (21.2)	22 (16.4)
Mubarak	196 (18.9)	37 (90.2)	348 (22.0)	358 (17.8)	36 (26.9)
Sabah	122 (11.7)	0 (0.0)	274 (17.3)	310 (15.4)	0 (0.0)

tages. Frequency data were analyzed based on Chi-square tests and normal Z-tests (proportion) using SPSS software.

Results

Table 1 indicates the categories of designations of the evaluators and their postings at the six hospitals at which internship training was conducted. The number of assessments undertaken in Medicine, Obstetrics & Gynecology, Pediatrics, and Surgery totaled 1260, 1176, 1142, and 1290 respectively (n=4868). Registrars had carried out the highest number of assessments (Table 2), with those in Obstetrics & Gynecology conducting more assessments than the Registrars in the other specialties.

Table 2. Distribution of designations* of evaluators among different specialties

Hospital	Consultant	Faculty Member	Senior Registrar	Registrar	Asst. Registrar
	n (%)	n (%)	n (%)	n (%)	n (%)
Medicine	254 (24.4)	23 (56.1)	365 (23.1)	545 (27.1)	71 (53.0)
Obs & Gyne	70 (7.0)	0 (0.0)	325 (20.6)	706 (35.1)	24 (17.9)
Pediatrics	415 (39.9)	11 (26.8)	295 (18.7)	393 (19.6)	19 (14.1)
Surgery	301 (29.0)	6 (14.6)	595 (37.7)	366 (18.2)	20 (14.9)
Total	**1040**	**40**	**1580**	**2010**	**134**

* Evaluators who did not give designation excluded from data in table

Table 3. Most frequently encountered clinical conditions in Medicine, Obstetrics & Gynecology, Pediatrics and Surgery

	Medicine	Obst & Gyne	Pediatrics	Surgery
1.	Chest infection	Threatened abortion	Gastroenteritis/ diarrhea	Acute appendicitis
2.	Ischemic heart disease	Management of normal delivery/CS	Bronchial asthma	Hernia
3.	Stroke/TIA	Urinary tract infection	Urinary tract infection	Hemorrhoids
4.	Diabetes mellitus	Ovarian cyst	Respiratory tract infection	Pilonidal sinus
5.	Heart failure	Uterine bleeding	Fever	Diabetic foot
6.	Bronchial asthma	Fibroid	Jaundice	Abscess
7.	Urinary tract infection	Gestational diabetes	Sepsis	Pancreatitis
8.	Epilepsy	Placenta previa	Epilepsy	Anal fissure
9.	Vein thrombosis	Pelvic inflammatory disease	Anemia	Cholecystitis
10.	Anemia	Ectopic pregnancy	Tonsilitis	Jaundice

MEDICAL PROBLEMS SEEN BY INTERNS

Table 3 shows the ten highest ranking clinical conditions encountered during the rotations in Medicine, Obstetrics & Gynecology, Pediatrics, and Surgery, with the interactions of all the interns considered together.

CLINICAL PERFORMANCE DOMAINS ASSESSED

Of the six domains of clinical performances [Clinical skills (History, Case sheet, Physical exam), Professional behavior, Case presentation, Diagnosis, Therapy (interpretation of investigations), and Handling of emergencies] that the interns were required to undertake, the focus of interaction in the majority were the assessment of history taking (59%), case sheet (56%), physical examination (52%), and professional behavior (51%) (Table 4). The performance of clinical skills by the interns in these situations had been assessed while being observed directly by the tutor.

Table 4. Focus of interaction in the clinical performance domains assessed

Domain	n	%
Clinical skills		
History		
Directly observed	2893	59.4
Not observed	130	2.7
Case sheet		
Directly observed	2728	56.0
Not observed	157	3.2
Physical exam		
Directly observed	2572	52.8
Not observed	198	4.1
Professional Behavior		
Directly observed	2508	51.5
Not observed	195	4.0
Case presentation		
Written	1843	37.9
Verbal	1589	32.6
Diagnosis (clinical judgment)	1214	24.9
Therapy	1079	22.2
Handling of emergencies	618	12.7

Table 5 shows the distribution of the ratings given for the assessment of clinical performance domains in the four specialties in the different hospitals.

ASSESSMENTS OF THE PERFORMANCE OF INTERNS WITHIN AND ACROSS SPECIALTIES

Nearly all the ratings assigned at the assessments were positive, with a high proportion

(66%) falling within the *excellent* category (Table 6).

Review of the ratings assigned and the specialties shows that the interns received a higher proportion of *excellent* assessments during Surgery (37.6%) and Pediatrics (31.8%) rotations than in other specialties (Table 7).

Within as well as across the four specialties, the ratings given for the performances were consistently close to the upper end of 5 ($p< 0.001$) in the rating scale (Table 8).

Table 5. Distribution of ratings in each category in the different specialties in the six hospitals

Hospital	& Specialty	Rating			
		Below Expected Standard	At Expected Standard	Above Expected Standard	Excellent
Adan	Medicine	-	16	58	13
	Obs & Gyne	-	-	15	72
	Pediatrics	-		14	35
	Surgery	-	7	40	41
Amiri	Medicine	-	23	102	112
	Pediatrics	-	14	38	151
	Surgery	-	20	96	116
Farwaniya	Medicine	-	23	102	254
	Obs & Gyne	1	57	130	219
	Pediatrics	-	46	172	124
	Surgery	-	2	32	405
Maternity	Obs & Gyne	-	12	128	456
Mubarak	Medicine	2	78	113	145
	Pediatrics	-	26	90	188
	Surgery	3	125	289	212
Sabah	Medicine	-	14	86	155
	Pediatrics	-	33	62	86
	Surgery	-	2	54	149

Table 6. Distribution of overall ratings given at assessment

Rating	n	(%)
Below expected standard	47	1
At expected standard	432	6.94
Above expected standard	511	24.99
Excellent	1348	65.92

RANK OF ASSESSOR AND ASSESSMENT RATING

Registrars constituted the designation category that had allocated the highest proportion of *excellent* ratings (46.3%) (Table 9). When considered against the total number of evaluators who participated in the study from each category, *excellent* ratings were assigned by the majority of Asst. Registrars (71.5%), Registrars (69%) and Senior Registrars (69.6%). Consultants (53.2%) and Faculty Members (25%) assigned *excellent* ratings to a lower extent.

Table 7. Distribution of ratings in each category among the designations and specialties of evaluators

Designations & Specialties		Rating			
		Below Expected Standard	At Expected Standard	Above Expected Standard	Exce-llent
Consultant	Medicine	1	18	32	62
	Obs & Gyne	0	0	0	8
	Pediatrics	0	31	73	87
	Surgery	0	12	32	55
Faculty Member					
	Medicine	0	5	3	8
	Obs & Gyne	0	1	2	1
	Pediatrics	0	1	0	4
	Surgery	0	0	4	2
Asst. Registrar					
	Medicine	0	2	4	9
	Obs & Gyne	0	0	2	18
	Pediatrics	0	0	2	0
	Surgery	0	0	1	10
Registrar	Medicine	0	15	19	37
	Obs.& Gyne	0	1	19	155
	Pediatrics	0	4	27	114
	Surgery	0	4	22	109
Senior Registrar					
	Medicine	0	31	48	27
	Obs & Gyne	0	0	22	41
	Pediatrics	0	3	32	104
	Surgery	0	3	81	189

Table 8. Summary statistics of ratings given at overall assessment in the different specialties

Specialty	Mean	Median	Mode	Minimum	Maximum
Medicine	4.4	5	5	2	5
Obs & Gyne	4.6	5	5	2	5
Pediatrics	4.4	5	5	3	5
Surgery	4.7	5	5	2	5

Table 9. Overall ratings assigned by the different categories of evaluators

Designation	Below expected standard	At expected standard	Above expected standard	Excellent
Assistant Registrar	-	7	30	93
Registrar	1	142	472	1374
Consultant	2	109	372	550
Faculty member	-	13	13	12
Senior Registrar	1	161	473	936

Discussion

CLINICAL CONDITIONS ENCOUNTERED BY INTERNS

In the specialty of Medicine, the interns were exposed most frequently to Chest infection, Ischemic heart disease, Stroke/TIA, Diabetes mellitus, Heart failure, Bronchial asthma, Urinary tract infection, Epilepsy, Vein thrombosis, and Anemia. When considering the public health issues of concern in Kuwait, the range of exposure received by the interns may be considered as adequate.

During the rotations in Obstetrics & Gynecology, the conditions seen most frequently were Threatened abortion, Management of normal delivery/CS, Urinary tract infection, Ovarian cyst, Uterine bleeding, Fibroid, Gestational diabetes, Placenta previa, Pelvic inflammatory disease, and Ectopic pregnancy. The conditions compare favorably with those seen in the medical practices in Kuwait.

In the specialty of Pediatrics, the interns were exposed to Gastroenteritis/diarrhea, Bronchial asthma, Urinary tract infection, Respiratory tract infection, Fever, Jaundice, Sepsis, Epilepsy, Anemia, and Tonsilitis most frequently. These conditions may be considered as important problems in Pediatrics prevalent in Kuwait.

In the specialty of Surgery, the conditions most frequently encountered by the interns were Acute appendicitis, Hernia, Hemorrhoids, Pilonidal sinus, Diabetic foot, Abscess, Pancreatitis, Anal fissure, Cholecystitis, and Jaundice. These conditions are common among the health problems in Kuwait. The management of trauma/RTA, however, had not received adequate exposure.

ASSESSMENT OF PERFORMANCES

A large proportion of the evaluations of the performances had received *excellent* ratings. When the normal distribution of attributes within a population is considered, it may be argued that the majority of the subjects should fall into a group that may be designated as average or satisfactory (64% of the population coming within ±1 SD of the Mean). Candidates who would be excellent should constitute only a small minority, falling near the +3 SD of the Mean cut-off point in a distribution. Thus, the results observed in the assessments raise questions that may be related to the quality of the instrument, the expertise of the evaluator in assessment, or the manner in which the instrument is used by the evaluators.

Assessment Instrument

The Interaction Card is a modified format of an assessment tool that had been used in other settings.[14,15] As the original version had been designed only recently, it has been tested only to a limited extent. The investigators who developed the instrument had stated that it offered promise as an alternative to those that are used at present for evaluating clinical performances. Additional study of the appropriateness of the method in clinical assessment was needed, and the present investigation is a step with this goal in mind.

Expertise of Evaluator

One of the major concerns for the administrators of the internship training program should be the expertise of the evaluators in the area of educational measurement. The large majority of the tutors who are entrusted with the responsibility of training the interns and then assessing their performances are clinicians who are primarily concerned with patient care. It may safely be assumed that they have not been exposed to the basic concepts of educational measurement, and would only have limited expertise or training in this field. Therefore, the results of the type obtained in the current study could hardly be surprising and emphasize the need for putting in place appropriate measures in the form of training programs or workshops.

Use of Assessment Tool

Some of the tutors may feel that giving low or negative ratings to trainees may result in the Training Unit itself being perceived somewhat negatively by the trainees and the administrators, leading to a situation in which trainees would not be posted for rotations in future. Such an eventuality is likely to reduce the

personnel available for sharing the workload and also may be viewed as lowering the standing of the unit in the eyes of the community of medical undergraduate and postgraduate trainers.

An added factor that may have contributed to the excessively high proportion of *excellent* ratings may be a tendency on the part of the evaluator to please the trainee. This reluctance to assign negative or low positive ratings may also be related to the influence of the local cultural background, where negative aspects are not usually emphasized.

This study highlights the need that exists for providing feedback to the evaluators on the leniency – the tendency to give ratings or scores at the high-ability end of the scale of assessment – that was observed. The importance of making use of the entire range in the assessment scale, too, has to be emphasized, pointing out that restriction of range when grading performances would also decrease the reliability of the measurement. Such steps should be supplemented with seminars on basic concepts of educational measurement and workshops on clinical assessment dealing especially with the use of rating scales and checklists.

GUIDELINES TO TUTOR

It is clear that the tutors do not use the Interaction Card to its full potential. Further clarifications of the format and the Rating Scale, and the manner in which each of the domains should be rated against the scale points appear as necessary. A format outlining the rationale for the scale points is proposed, as is shown in Annex. The guidelines combine *Above expected standard* and *Excellent* rating scale points that appear separately at present. The scheme still allows assessors who wish to assign *excellent* ratings to outstanding performances.

Recommendations

This study, which had been carried out over a period of one year, leads us to propose the following measures that we feel would lead to improvements in the training of interns:

i. The Chairmen of Departments, Ministry of Health responsible for the different specialties taking care to ensure that the trainers are selected based on their interest and commitment to be involved as tutors at the level of post-basic medical training.

ii. The Chairmen of Departments, Ministry of Health placing greater emphasis than at present on the assessment of interns, both at in-training and end-of-training levels, to ensure that it is implemented on sound educational principles;

iii. Instituting a scheme of regular meetings between the Chairmen of Departments, Ministry of Health and the trainers entrusted with internship training for:
   a. Reviewing the guidelines for internship training, and
   b. Ensuring that the assessment methods match the recommended guidelines;

iv. Chairmen of Departments Ministry of Health organizing regular meetings with the trainees for obtaining feedback regarding administrative aspects of training such as the availability of physical facilities, so that relevant information may be forwarded to the Hospital Administration for any needed remedial measures.

v. Chairmen of Departments, Ministry of Health instituting a hospital-based scheme for rewarding tutors who take special interest in the internship training program and who suggest or take appropriate measures to develop their own competencies in instruction and assessment, with the overall aim of enhancing the standard of internship training.

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Annex

Domains in the Interaction Card and the proposed Rating Scale, with the basis on which each point may be selected

Domains Assessed	Unsatisfactory	Below Expected Standard	At Expected Standard	Above Expected Standard/ Excellent*
Clinical skills - History	Language not clear; Not logical; Does not listen well; Does not respond to patient's responses; Poor history	Recognizes only a few cues; Language mostly not clear; Needs to listen more; Needs to follow up leads more; Incomplete history	Concise history taking; Avoids technical jargon; Good listener; Responds to important cues; Encourages patient to speak; Follows up leads.	Asks only relevant questions; Comprehensive; Uses time efficiently; Clear and easy to understand; Excellent response to patient's emotional and social factors; Respects patient's privacy
Clinical skills - Physical exam	Examination poor and unsystematic; Misses majority of physical signs	Examines inadequately: Needs to be more organized; Detects few important physical signs	Examines systematically; Detects important physical signs	Examines thoroughly and systematically; Recognizes all important physical signs; Respects patient's privacy
Professional behavior	Unaware of patient's concerns and problems; Causes obvious physical or mental distress	Inadequate appreciation of patient's concerns and problems; Poor rapport	Aware of patient's concerns; Builds rapport	Takes extra care to deal with patient's concerns; Displays confidence, rapport and empathy
Case presentation	Too fast; Not clear and organized; Incorrect or irrelevant facts; Not logical; Discussion lacks insight	Mostly incorrect or irrelevant facts; Discussion mostly not logical	Most facts correct and discussion logical and relevant; Good communication; Appropriate speed	Outstandingly clear and factually correct presentation; Organized; All facts relevant; Discussion logical and appropriate; Confident in style
Diagnosis	Data collection, processing, interpretation not sound; Evaluation and decision-making not logical	Mostly incorrect data collection, processing, interpretation and evaluation	Collects, processes, interprets data logically; Evaluates data correctly	Outstanding in data collection; Collects appropriate data methodically; Easily identifies data not relevant; Processes, interprets and evaluates data logically
Therapy	Poor knowledge of therapeutic agents; Poor choice; Not aware of indications and side effects	Limited knowledge of therapeutic agents; Inadequately aware of indications and side effects;	Adequate knowledge of therapeutic agents; Aware of and indications and side effects	Logical choice of therapeutic agents; Thorough knowledge of indications and side effects; Excellent in advising patient on use;
Handling of emergencies	Does not detect important signs; Slow response, no sense of urgency; Poor clinical reasoning; No priority setting; Poor management	Detects few important signs; Not prompt in response; Inadequate clinical reasoning; Priorities incorrect; Inadequate management	Detects most of the important signs; Prompt in response; Adequate clinical reasoning; Correct priority setting; Adequate management	Detects all the important signs; Prompt in response; Appropriate clinical reasoning; Correct priority setting and decision making; Adequate management; Proper follow-up

* Assessment rating as *Excellent* is to be given to trainees whose performance is judged as outstanding and above expectations in all components of the competency that is under consideration.