

FROM THE LITERATURE

Abstracts of Recent Papers

With thanks to the Editors and Publishers of *Academic Medicine*, *Medical Education*, *Medical Teacher* and *Teaching and Learning in Medicine*, we regularly reproduce selected abstracts of recent papers from these journals that may be of interest to the readers of *Education for Health*.

These journals can be ordered at the following addresses:

Academic Medicine: Association of American Medical Colleges, 2450 N Street, NW, Washington, DC 20037, USA.

Medical Education: Blackwell Publishing Co., PO Box 87, Osney Mead, Oxford OX2 0DT, UK.

Medical Teacher: Taylor & Francis Ltd, Customer Services Department, Rankine Road, Basingstoke, Hants RG24 8PR, UK.

Teaching and Learning in Medicine: Lawrence Erlbaum Associates, 365 Broadway, Hillsdale, NJ 07742, USA.

Implementing a communication skills programme in medical school: needs assessment and programme change. Toni Suzuki Laidlaw, Heather MacLeod, David M Kaufman, Donald B Langille & Joan Sargeant
Medical Education, 36, 115–125, 2002.

Introduction: Communication skills training (CST) in medicine, once considered a minor subject, is now ranked a core clinical skill. To assess the state of formal and informal CST at Dalhousie Medical School a needs assessment was undertaken in 1997 with the goal of using these findings to plan and implement a new communication skills curriculum.

Objectives: This article briefly describes the relevant findings of the needs assessment, the subsequent development of an integrated cross curriculum CST programme, and early programme evaluation results.

Method: Surveys were completed by undergraduates at the end of pre-clinical ($n=65$), and clinical phases ($n=82$), residents ($n=54$), and faculty ($n=117$). Results revealed learners' and faculty's appreciation of the importance of CST, learners' assessment of training weaknesses in the delivery of CST, learners' weakness in higher order patientdoctor communication skills, and faculty weakness in assessing learners' communication skills competency. The results

also indicated that CST was generally not being addressed either formally or informally in clinical medical education.

Results: The paper describes and discusses the subsequent implementation (beginning in 1998) of CST into the medical school curriculum. There is a description of programme development and evaluation at the pre-clinical, clerkship and postgraduate levels, a description and discussion of faculty development, and discussion of the importance of financial and administrative support for the programme.

Conclusion: Programme evaluation results at all levels are positive.

The effectiveness of a computer-assisted instruction programme on communication skills of medical specialists in oncology. Robert L. Hulsman, Wynand J. G. Ros, Jacques A. M. Winnubst & Jozien M. Bensing
Medical Education, 36, 125–134, 2002

Background: Although doctor–patient communication is important in health care, medical specialists are generally not well trained in communication skills. Conventional training programmes are generally time consuming and hard to fit into busy working schedules of medical specialists. A computer-assisted instruction (CAI) programme was developed—“Interact-Cancer”—which is a time-efficient learning method and easily accessible at the workplace.

Objective: To investigate the effect of the CAI training, “Interact-Cancer”, on the communication behaviour of medical specialists, and on satisfaction of patients about their physician interaction.

Design: Consultations of medical specialists with cancer outpatients were videotaped at 4 specific stages, 2 before and 2 after Interact-Cancer, with intervals of 4 weeks.

Patients/participants: Participants were 21 medical specialists, mainly internists, working in 7 hospitals, and 385 cancer outpatients.

Methods: Communication behaviour was assessed on 23 observation categories derived from the course content. Frequencies were rated as well as judgements about the quality of the performance of each target skill. Satisfaction was measured by the Medical Interview Satisfaction Scale. Data were analyzed by means of multilevel statistical methods.

Results: The behavioural assessment showed course effects on ratings of the physicians’ quality of performance. No course effects were found on the frequencies of physicians’ behaviours and on the patient satisfaction ratings.

Conclusions: CAI is a promising method to supply medical specialists with postgraduate training of communication skills. The application of judgement ratings of communication behaviour proved to be valuable to evaluate course effects in real-life patient encounters.

Medical students as standardized patients to assess interviewing skills for pain evaluation. Brian E. Mavis, Karen S. Ogle, Kathryn L. Lovell & Lisa M. Madden
Medical Education, 36, 135–141, 2002.

Purpose: The use of medical students as standardized patients in a performance assessment of pain evaluation was studied.

Methods: Fifty-two pairs of second-year medical students participated. One student portrayed a patient presenting with cancer pain and was interviewed by the other medical student. The student–patient then rated the interview using a checklist of pain assessment and general interviewing skills. The interviews were audiotaped and also rated independently.

Results: Based on student–patient ratings, 36 (69%) students demonstrated 9 or more of the 11 pain-specific checklist items, compared to 34 (65%) students according to the trained rater. Highly specific pain-related items had higher agreement than broader interviewing skill items. There would be differences in the summary assessments of students depending on which rating data were used.

Discussion: Medical students represent a readily accessible resource as patients for clinical simulations. Students tended to overestimate the performance of fellow students, but acting as a standardized patient had educational value, and can be used to extend simulated patient encounters within the curriculum. Further investigation is needed to improve the reliability of the feedback provided by student–patients.

The development of a scale to measure medical students' attitudes towards communication skills learning: the Communication Skills Attitude Scale (CSAS). Charlotte Rees, Charlotte Sheard & Susie Davies
Medical Education, 36, 141–147, 2002.

Introduction: There is little research identifying medical students' attitudes towards communication skills learning. This pilot study outlines the development of a new scale to measure attitudes towards communication skills learning.

Methods: First- and second-year medical students ($n=490$) completed the 26-item Communication Skills Attitude Scale (CSAS) and 39 students completed the CSAS on a second occasion. Factor analysis was conducted to determine the factors underpinning the scale. The internal consistency of the subscales was determined using coefficients. The test–retest reliability of the individual scale items were determined using weighted kappa coefficients and the test–retest reliability of the subscales were established using intraclass correlation coefficients.

Results: Maximum likelihood extraction with direct oblimin rotation resulted in a 2-factor scale with 13 items on each subscale. Factor I represented positive attitudes towards communication skills learning and factor II represented negative attitudes. Subscale I had an internal consistency of $= 0.873$ and an intraclass correlation of 0.646 ($P < 0.001$). Subscale II had an internal consistency

of = 0.805 and an intraclass correlation of 0.771 ($P < 0.001$). The majority of items on the positive ($n=9$, 69.2%) and the negative attitude subscales ($n=8$, 61.5%) possessed moderate test-retest reliability.

Discussion: The development of a new and reliable scale to identify medical students' attitudes towards communication skills learning will enable researchers to explore the relationships between medical students' attitudes and their demographic and education-related characteristics. Further work is needed to validate this scale among a broader population of medical students.

Predicting communication skills with a paper-and-pencil test. J. van Dalen, E. Kerkhofs, G. M. Verwijnen, B. W. van Knippenberg-van den Berg, H. A. van den Hout, A. J. J. A. Scherpbier & C. P. M. van der Vleuten
Medical Education, 36, 148–154, 2002.

Aim: This study was conducted to investigate the value of a written knowledge test of communication skills for predicting scores on a performance test of communication skills.

Method: A paper-and-pencil test of knowledge about communication skills and a performance test of communication skills, consisting of four stations with standardised patients, were administered to students of two classes of the medical schools of Maastricht and Leiden, the Netherlands. The results on these tests were compared.

Results: From the results of both instruments, the classes of the participating students could be recognised equally well: 60% correct qualifications of the classes by the knowledge test and 64% by the multiple station examination. Between the two tests an overall, disattenuated correlation of 0.60 was found ($N=133$, $P < 0.01$), suggesting moderate predictive value of the knowledge test for the performance test of communication skills. The correlation is stronger for students from Maastricht medical school than for their colleagues in Leiden. Correlation between the knowledge of communication skills test and other available test results of the participating Maastricht students is close to zero, suggesting that the test measures a distinct quality of students' competence.

Discussion: The paper-and-pencil test of knowledge of communication skills has predictive value for the performance of these skills, but this value seems to be less pronounced than similar findings for clinical procedural skills. The stronger relationship between "knowing how" and "showing" in the Maastricht student group might be indicative of an effect of the training format.

The influence of admissions variables on first year medical school performance: a study from Newcastle University, Australia. Frances Kay-Lambkin, Sallie-Anne Pearson & Isobel Rolfe
Medical Education, 36, 154–159, 2002.

Aims: This study examined the relationship between the performance of first year medical students at the University of Newcastle, Australia, and admission

variables: previous educational experience, and entry classification (standard—academic or composite, Aboriginal and Torres Strait Islander, or overseas), age and gender.

Methods: Admission and demographic information was obtained for students who entered first year medicine at Newcastle between the years 1994 and 1997 inclusive. Academic performance was measured according to results of first assessment (“satisfactory” vs. “not satisfactory”) and the final assessment of the first year (“satisfactory” vs. “not satisfactory”). Logistic regression was used to examine the relationship between predictor variables and outcomes.

Results: Assessment and admissions information was obtained for 278 students, 98% of all students who entered the medical course between 1994 and 1997. Regression analysis of first assessment indicated that Aboriginal and Torres Strait Islander and overseas students were significantly more likely to be “not satisfactory” than all other students (RR = 3.1, 95% CI: 1.4–6.7 and RR = 1.5, 95% CI: 1.2–1.8, respectively). Analysis of final assessment indicated these two student groups were also significantly more likely to be “not satisfactory” than all other students (RR = 4.5, 95% CI: 1.4–13.5 and RR = 3.5, 95% CI: 1.2–10.8, respectively). At first assessment, students entering via the standard academic pathway and older students were less likely to be “not satisfactory” (RR = 0.6, 95% CI: 0.5–0.7 and RR = 0.8, 95% CI: 0.7–0.9, respectively). However both these differences were not evident at final assessment. There were no significant relationships between performance in first year and the remaining variables.

Conclusions: Aboriginal and Torres Strait Islander, and overseas medical students had academic difficulties in the first year of the course, suggesting the need for extra course support. The result may reflect the educational and other obstacles these students must overcome in order to enter and progress through their medical degree. More research is warranted to explore the extent to which these differences persist throughout the medical degree.

Adapting the Key Features Examination for a clinical clerkship. Rose Hatala & Geoffrey R. Norman

Medical Education, 36, 160–166, 2002.

Purpose: A written test of clinical decision-making, the Key Features Examination, was developed for use in clerkship.

Methods: Following the guidelines provided by the Medical Council of Canada, a Key Features Examination was developed and implemented in an internal medicine clinical clerkship, during the 1998/99 clerkship year. The reliability and concurrent validity of the exam were assessed.

Results: A 2 hour examination, containing 15 key feature problems, was administered to 101 students during 6 consecutive internal medicine clerkship rotations. The reliability of the exam, calculated from Cronbach’s alpha, was

0.49. The exam had modest correlation with other measures of knowledge and clinical performance.

Conclusion: The Key Feature Examination is a feasible and reliable evaluation tool that may be implemented as a component of student assessment during a clinical clerkship.

Collusion detection in multiple choice examinations. A. Ercole, K. D. Whittlestone, D. G. Melvin & J. Rashbass
Medical Education, 36, 166–173, 2002.

Objective: To develop and test a novel method for collusion detection in multiple choice examinations.

Subjects and Methods: Answers from two negatively marked medical prize examinations for two different years were analysed. Both examinations were administered electronically. One examination was formally invigilated, while the second was not; instead, candidates were able to sit the test at any time and at any computer with an internet connection. We examine pairs of students and compare correlations between their answers. Our approach allows us to correct for the difficulty of individual questions and for the estimated ability and the degree of risk aversion of the students. We compare the results of this statistical analysis with other information on the timing of the answers and the physical location of the computer, both of which are available to the web-server.

Results: Significant correlation between several candidates who either admitted having cheated or could be linked to other corroborating evidence of collusion was found.

Conclusions: It is possible to detect collusion in multiple choice examinations in a statistical way by examining the patterns of answers between pairs of candidates. In examinations that are delivered on-line, information is often available on the location of the candidates and the timings of their answers, and can be used as additional corroborative evidence.

Students' perceptions of whistle blowing: implications for self-regulation. A questionnaire and focus group survey. Sarah C. Rennie & Joy R. Crosby
Medical Education, 36, 173–180, 2002.

Aim: The aims of this study are to gauge and use the views of medical students to elaborate on the concept of whistle blowing and to give an indication of its role in self-regulation.

Methods: An anonymous questionnaire survey was conducted among medical students from a Scottish medical school. Students were asked (i) whether they should, and (ii) whether they would report to faculty academic misconduct by other students. Comparisons were made between all five year groups.

Subsequently students in focus groups were asked to give their reasons for whistle-blowing or not doing so.

Results: Of the students, 40% felt they should whistle-blow, with 13% saying they would actually do so. The numbers of students who felt they should or would whistle blow were smaller in the later year groups. Focus groups identified positive and negative reasons for whistle blowing or not, and reasons connected to the process itself. Reasons given for not whistle blowing included camaraderie, retaliation by peers, self-preservation and a belief that it is not a student's responsibility to report the misconduct of others.

Conclusions: The results have two important implications. First, medical schools have to decide whether students have a duty to whistle blow and/or whether there is a need to devise clear procedures. Any procedures should take into account the reasons given for not whistle blowing, but should concentrate on positive motivating factors. Secondly the medical profession needs to consider the role of whistle blowing, as the results suggest that whistle blowing should not be the only method of detection of misconduct in an undergraduate setting.

Identifying oneself as a teacher: the perceptions of preceptors. Sarah Stone, Beth Ellers, Deborah Holmes, Rosemary Orgren, Donna Qualters & Janet Thompson

Medical Education, 36, 180–186, 2002.

Introduction: Attracting and retaining qualified medical educators will be a continuing challenge as physicians feel more pressure to produce clinical revenue. With this paper we hope to begin to identify how clinical teachers, judged as excellent by their peers, establish their professional identity as physician *and* teacher.

Methods: This qualitative study examines the views of 10 clinical teachers to identify the characteristics excellent preceptors attribute to their teaching identity.

Results: This study revealed four themes that influence faculty teaching identity: underlying humanitarianism, familiarity with adult learning principles, understanding of the benefits and drawbacks of teaching, and the image of self as teacher.

Conclusion: Using the findings from this study, suggestions are given to faculty developers for activities to increase physician identity as teacher.

Career destinations and views in 1998 of the doctors who qualified in the United Kingdom in 1993. Trevor W. Lambert & Michael J. Goldacre
Medical Education, 36, 193–199, 2002.

Objectives: To report career destinations and views in 1998 of doctors who qualified in the United Kingdom (UK) in 1993.

Design: Postal questionnaire survey.

Setting: This study took place in the United Kingdom.

Subjects: All doctors who qualified in the UK in 1993.

Main Outcome Measures: The percentage of doctors in each branch of medicine five years after qualification, and their views on their training and career opportunities.

Results: The NHS and universities in the UK employed 88% of respondents (men 90%, women 86%). UK general practice employed 24% of respondents (men 19%, women 28%). There were significant differences ($P < 0.01$) between the percentages of men and women working in the surgical specialties (men 28%, women 10%), paediatrics (men 8%, women 15%) and obstetrics and gynaecology (men 5%, women 10%). Respondents not in paid employment comprised 1.4% of men and 66% of women. 45% of respondents agreed that their postgraduate training was of a high standard, with 26% disagreeing and 29% unsure. 47% of specialist registrars felt their training was too short and 78% were concerned about the availability of consultant posts on completion.

Conclusions: Although loss of doctors from the British workforce through emigration or unemployment is not increasing, our findings confirm a substantial shift away from careers in general practice. The number of home-trained GPs from this generation of doctors will be inadequate to meet service needs. GPs and hospital specialist doctors expressed concerns about quality of training, lack of careers advice, the shortness of specialist registrar training and availability of consultant posts on completion of training.

Establishing the validity of test score inferences: performance of 4th-year U.S. medical students on the ECFMG clinical skills assessment. W. R. Ayers & J. R. Boulet

Teaching and Learning in Medicine, 13, 214–220, 2001.

Background: Although the relations among prematriculation, matriculation, and residency assessments have been studied, measures pertaining to clinical skills have rarely been incorporated in any analyses.

Purpose: The purpose of this article was to investigate the relations between scores obtained on the Educational Commission for Foreign Medical Graduates Clinical Skills Assessment (CSA) prototype and aptitude–ability measures designed to select medical students, to assess medical students while in medical school, and to evaluate physicians in post-graduate training programs. The sample included 122 4th-year medical students.

Methods: Relations among scores were summarised with correlation coefficients. Analysis of variance was used to compare CSA scores by departmental grades.

Results: Significant correlations ($p < .01$) were found between scores from assessments commonly used in medical school (i.e., United States Medical Licensing Exam [USMLE] steps 1 and 2) and CSA component score. There

were weak associations between CSA measures and both Medical College Admissions Test scores and residency program evaluations.

Conclusions: The relations between CSA scores and various other medically oriented ability measures provide additional evidence that inferences based on CSA scores are appropriate and valid.

National survey of internal medicine residency programs of their 1st-year experience with the electronic residency application service and national resident match program changes. L. J. Adams, S. Brandenburg, C-T. Lin, M. Blake & M. Lemenager

Teaching and Learning in Medicine, 13, 221–226, 2001.

Background: The residency recruitment and selection process is a critical one for residency programs and medical students. In 1999, internal medicine programs conducted the residency match on the Web for the first time using the Electronic Residency Application Service (ERAS).

Purpose: The authors wished to study the impact of this change on house staff recruitment and quality of match.

Method: A Web-based survey with e-mail, paper and fax reminders was sent to all 407 internal medicine residency programs after the 1999 match.

Results: Eighty-six percent of reporting programs found the screening of applicants easier. The overall number of applicants varied greatly (48% of programmes reported more applicants; 32% reported fewer). The quality of final match was rated the same as previous years by 47%, better by 37% and worse by 15%.

Conclusions: The transition to ERAS was successful in internal medicine. However, there are several areas that were identified that will improve the ERAS process as it evolves.

Standardised patients' perceptions about their own health care. P. M. Wallach, M. Elnick, B. Bognar, R. Kovach, M. Papadakis, S. Zucker & A. Speer

Teaching and Learning in Medicine, 13, 227–231, 2001.

Background: There have been detailed descriptions on standardised patient (SP) programs' effects on students, curricula, and faculty, yet little attention has been paid to the consequences of participating on the SP's.

Purpose: This study explored the perceptions of SPO's toward their own health care in the context of having served as SP's.

Method: All 180 SP's participating in the department of medicine programs at 5 medical schools were surveyed. They completed the survey during SP activities, or it was mailed to them. SP's indicated their level of agreement or disagreement with 11 attitude statements related to their own health care after serving as an SP using a Likert scale, with 1 reflecting the most positive attitude and 5 the least positive.

Results: Responses to the attitudinal questions were obtained from 164 SP's (91%). Sp's perceived that because of their participation as SP's they had a better understanding about medical history taking and physical examinations (1.9 ± 0.9), communicated more effectively with their health care provider (1.8 ± 0.9), and were more comfortable with both health care visits and physical examination (2.2 ± 0.9). There were no significant differences in results based on gender, age, race, or school.

Conclusions: As a consequence of their participation, the SP's indicated a change in attitudes about their personal health care. They perceived improved understanding and ability to communicate and comfort with their own health care. Participation in SP programs seems to influence SP's by improving perceptions about their own health care interactions.

Personalised remedial intensive training of one medical student in communication and interview skills. C-T. Lin, G. E. Barley & M. Cifuentes
Teaching and Learning in Medicine, 13, 232–239, 2001.

Background: Medical students found to be deficient in communication and medical interview skills pose a difficult remediation challenge. There is no standard way to address such deficiencies. The authors describe the development and implication of an intensive remedial curriculum.

Description: A second-year student found deficient in communication skills was held back for a year and paired with a clinical preceptor for intensive skills training, including a weekly precepted clinic, structured readings, standardised patient (SP) exercises, communication workshops, and end-of-year standardised clinical evaluations.

Evaluation: The student's self-assessment and the preceptor's assessment of communication skills gradually improved over the year. The student improved through a progression of SP exercises focusing on specific communication skills. The student passed a final examination exercise with an excellent rating from the SP and the preceptor.

Conclusions: This multistrategy approach to improve communication skills can be applied to other students and in other institutions. Based on the Bayer Institute communication workshops and integrated coaching techniques, the material forms a framework to help deficient students to become proficient in communication and interviewing skills.

First aid and basic life support skills training early in the medical curriculum: curriculum issues, outcomes, and confidence of students. M. Das & M. Elzubeir
Teaching and Learning in Medicine, 13, 240–246, 2001.

Background: The importance of training physicians and other health care professionals in first aid and basic life support (BLS) is now widely

recognised. The Faculty of Medicine and Health Sciences of the United Arab Emirates University have been offering formal training in these skills to first year medical students since 1989. The aim of this study was to determine the efficacy of the programme and the extent to which it provides students with confidence to perform skills on their own after training.

Description: 165 of 180 male and female students comprising 3 cohorts (91.7% response rate) completed a self-administered anonymous questionnaire. The questionnaire contained open-ended and Likert-type questions regarding course organisation, content, strengths and weaknesses, teaching–learning approaches, and skills development and confidence. The authors analysed assessment outcomes and associations between self-perceived levels of confidence and ability to practice.

Evaluation: Students were uniformly enthusiastic and highly motivated by the program. Self-assessed confidence in ability to perform skills on their own after completing the program was moderately correlated with perceived frequency of opportunity to practice many skills. There was nevertheless a consistent desire for more practice time.

Conclusions: The results suggest that the program provides students with sound basic knowledge and adequate practical skills in first aid and BLS and that adequacy of time and physical and human resources are important prerequisites to facilitate practice and engender confidence in skills.

Interdisciplinary education in a community-based geriatric evaluation clinic.

R. B. Rosher, S.B. Robinson, D. Boesdorfer & K. Lee

Teaching and Learning in Medicine, 13, 247–252, 2001.

Background: Demographic predictions are challenging schools of medicine to emphasise geriatrics. This article describes a geriatric evaluation (GET) clinic and explores the opportunity for residents to attain core geriatric competencies.

Description: The GT clinic is located in a small Midwestern city associated with a community-based medical school. It is staffed by an interdisciplinary team consisting of a geriatrician, a gerontological nurse specialist, and a social worker. Residents, medical students, and nursing students are frequent participants.

Evaluation: Descriptive data indicate that the clinic experience addresses the core competencies set forth by the American Geriatric Society. The clinical outcomes indicate that the clinic is effective in maintaining the functional status of patients and has a positive effect on family caregivers. Residents and students rate their experience as excellent.

Conclusions: The GET clinic provides a unique interdisciplinary educational opportunity. Further investigation is needed to determine if residents who participate do attain core competencies.

Learning styles and perceptions of the value of various learning modalities before and after a 2nd-year course in microbiology and infectious diseases.

N. C. Engleberg, T. Schwenk & L. D. Gruppen

Teaching and Learning in Medicine, 13, 253–257, 2001.

Background: The authors' 4-week course in microbiology and infectious diseases consists of lectures, small-group sessions, interactive computer-assisted learning (CAL), and textbook readings.

Purpose: To determine how individual learning styles influenced learners' value assessments of these teaching modalities.

Methods: A Kolb Learning Style Inventory and questionnaire to assess enthusiasm for each teaching modality were administered before the course. At course end, a 2nd questionnaire assessed the perceived usefulness of each teaching modality.

Results: Learners with a relative preference for experiential learning rather than abstraction initially favored small groups ($R^2=.06$, $p=.004$) and CAL ($R^2=.06$, $p=.005$). Similarly, learners with a preference for reflective observation favored lectures ($R^2=.05$, $p=.01$). However, at course end, Kolb learning style did not predict the value assessment of any modality.

Conclusions: Kolb learning style influenced the initial attractiveness but not the retrospective assessment of learning modalities; hence, quality and content superseded learning style as determinants of value after course completion.

Offices of research in medical education: accomplishments and added value contributions.

M. A. Albanese, S. Dotti & G. A. Nowacek

Teaching and Learning in Medicine, 13, 258–267, 2001.

Purpose: Offices of research in medical education have been in existence since the 1st one was begun by Hale Hamm at Case Western Reserve in 1958. There are now 61 medical schools in North America that have a formal office of medical education (OME) and are part of the Society of Directors of Research in Medical Education (SDRME). The purpose of this study was to report how SDRME and OME's have contributed to the research in medical education (RIME) efforts.

Summary: This study reports specific initiatives that have been begun by the SDRME culled from historical documents and business meeting minutes and profile results of the 2000 biannual membership survey that describes what the individual units are doing in support of their institutions. As an organisation, SDRME sponsors literature reviews, 5 of which have been published in peer-reviewed journals. It has also collaborated with the American Medical Association, the National Institutes of Health Bureau of Health Professions (NIH BHP), and the Association of American Medical Colleges in offering conferences and workshops. SDRME worked with the Macy Foundation on a grant initiative which by November 1993 had established 6 consortia to develop

regional centers on clinical competence and with the NIH BHP in the development of a grants program that established centers for RIME. Results from the 2000 membership survey indicate that individual units are heavily tied into evaluation efforts at both the institutional and national levels. Research efforts being engaged by these units have led to a reasonably high, but variable, level of publication activity. The current wave of new curricula being implemented in medical education centers are being heavily supported by these units, with all units being involved in curriculum planning and administration.

Conclusion: SDRME has been effective in promoting RIME through sponsoring literature reviews and collaborating with various national organisations. OME units have been effective in serving the needs of their institutions as well as contributing to national research efforts.

Correlates of performance on the MCAT: an examination of the influence of college environments and experiences on student learning. G. Anaya
Advances in Health Sciences Education, 6, 179–191, 2001.

This study examines the influence of several college factors and learning activities on student learning as measured by performance on a standardised test. The study uses a national sample of 495 students who completed the Medical College Admission Test (MCAT) four years after entering college in the United States in 1989. Multiple regression analysis is used to examine the impact of between- and within-institution learning environments, and non-academic activities on student learning. The relative influence of between-institutions characteristics is reported to be greater than that of within-institution factors. For example, the standardised coefficients for attending a university (public or private) are 0.15, and for the variables “physical science major” and “worked on a professor’s research project” they are 0.08 and 0.07 respectively. The institutional type of college attended as an undergraduate, university as compared with 4-year colleges, as well as opportunities to interact with faculty outside the classroom are positively associated with student performance.

Measuring student motivation in health professions’ colleges. L. J. Perrot, L. A. Deloney, J. K. Hastings, S. Savell & M. Savidge
Advances in Health Sciences Education, 6, 193–203, 2001.

Active, independent, self-directed learning requires motivation or a willingness to exert high levels of effort towards educational goals, conditioned by individual need. Motivation may be a function of individual differences or induced by situational constraints. Archer (1994), who used goal orientation to conceptualise university student motivation, theorised that students would exhibit a preference

for either mastery orientation (desire to develop competence/increase understanding), or academic alienation (no concern for developing competence or demonstrating achievement). The purpose of this study was to identify and validate an instrument that would measure goal orientation preferences of students in health professions programs. The authors administered Archer's survey to a sample of medical, nursing and pharmacy students to determine if the instrument was appropriate for this population. Results demonstrated that goal orientation preference could be measured in these students and confirmed the instrument's reliability and valid use for these populations.

Students' perceptions of learning outcomes from group-based, problem-based teaching and learning activities. H. Forbes, M. Duke & M. Prosser
Advances in Health Sciences Education, 6, 205–217, 2001.

Objectives: A study aimed at exploring the variation in perceptions of learning outcomes reported by undergraduate nursing students enrolled in a problem-based learning subject in a pre-registration Bachelor of Nursing course (BN).

Method: Students were asked to respond to four open-ended questions which focussed on their learning outcomes in the different teaching/learning modalities of the subject. Data were analysed in two phases using a modified phenomenographic analysis. In the first place a set of categories of description were developed from the student responses to questions related to the learning modalities. In the second phase the individual responses were classified in terms of the categories. Finally, correlations between the categories were identified. In this paper the approach to analysis, the process of category identification and the correlation between the learning modalities will be described and the implications for further research and teaching will be discussed.

Results: The findings indicated that there were two distinct groups of student responses. Inward focussed students who described outcomes in terms of their own learning and students whose focus was outward, i.e. describing learning in terms of patient care and how learning relates to that care. Another important result shows the relationship between the learning modalities and outcomes. From the students' perspective, the most sophisticated outcomes of the lectures and laboratories were ideas and skills to be used and applied in clinical settings. Whereas, the group-based activities in which clinical problems were presented to the students in the form of Situation Improvement Packages (SIPS) focussed their attention on the clinical setting which constituted a preparation for the realities of clinical practice.

Conclusion: The findings from this study indicate that students perceive their learning in the group-based teaching/learning modality (SIPS) as effective in focussing them on the reality of their role in the clinical practice environment while lectures and laboratories provided the skills and knowledge required for this setting.

Locating, characterising and minimising sources of error for a paper case-based structured oral examination in a multi-campus clerkship. A. Kumar, R. Bridgham, M. Potts, C. Gushurst, M. Hamp & D. Passal
Advances in Health Sciences Education, 6, 213–229, 2001.

Objective: To determine consistency of assessment in a new paper case-based structured oral examination in a multi-community pediatric clerkship, and to identify correctable problems in the administration of examination and assessment process.

Method: Nine paper-case-based oral examinations were audio-taped. From audio-tapes five community coordinators scored examiner behaviors and graded student performance. Correlations among examiner behavior scores were examined. Graphs identified patterns of evaluators. The effect of exam-giving by evaluators was assessed by t-test. Reliability of grades was calculated and the effect of reducing assessment problems was modeled.

Results: Exam-givers differed most in their “teaching–guiding” behavior, and this negatively correlated with student grades. Exam reliability was lowered mainly by evaluator differences in leniency and grading pattern; less important was absence of standardisation in cases.

Conclusions: While grade reliability was low in early use of the paper case-based oral examination, modeling of plausible effects of training and monitoring for greater uniformity in administration of the examination and assigning scores suggests that more adequate reliabilities can be attained.

Are interpersonal skills ratings influenced by gender in a clinical skills assessment using standardised patients? K. I. Chambers, J. R. Boulet & G. E. Furman
Advances in Health Sciences Education, 6, 231–241, 2001.

Purpose: The purpose of this study was to explore possible performance differences in interpersonal skills (IPS) ratings as a function of candidate and standardised patient (SP) gender.

Methodology: The IPS scores and SP characteristics for 79,999 patient encounters were studied. This included 18,325 (20.36%) female candidate to female SP, 26,872 (29.86%) male candidate to female SP, 18,281 (20.31%) female candidate to male SP, and 16,521 (29.47%) male candidate to male SP interactions.

Results: The analysis did not reveal a significant candidate gender by SP gender effect. There were no meaningful differences in IPS scores as a function of SP or candidate gender.

Conclusions: The non-significant interaction between SP gender and candidate gender provides some evidence that male and female candidates are being assessed equivalently by male and female SPs. This result, combined with the extremely weak relationship between gender (candidate or SP) and IPS ratings, provides additional support for the fairness and defensibility of the IPS measures.