Clinical rheumatology training of Australian medical students
A national survey of 1991 graduates

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Objective: To describe Australian medical graduates' knowledge, experiences and practical training in rheumatology and their attitudes towards rehabilitation and disability.

Design: Cross-sectional survey of all intern at randomly selected hospitals in each State.

Participants: 382 Australian interns at 12 hospitals surveyed in the first week of their 1991 internship.

Results: New intern demonstrated little experience with soft tissue rheumatism, with only 45% reporting they had examined a patient with bursitis and 22% one with epicondylitis. There was considerable dissatisfaction with the teaching of assessment of low back pain, regardless of the amount of formal rheumatology teaching the graduates had experienced, with only 22% rating it as good or excellent. There was little evidence that students are exposed to the social dimensions of chronic illness; only 32% of students reported that they had been shown how to assess a patient's psychological adjustment to illness. Only 22% felt competent at assessing disability and handicap and less than half of the graduates studied had ever attended a clinic where there was a physiotherapist. Graduates who had never been attached to either a rheumatology ward or an outpatients clinic (17%) were less likely to have examined a patient with gout (P < 0.001), osteoarthritis (P < 0.01), or chronic low back pain (P < 0.05), and were more likely to report dissatisfaction with training in rheumatology.

Conclusion: This survey suggests that there are significant problems in the training of medical students in musculoskeletal disorders, particularly in relation to the assessment of disability and the appreciation of psychosocial factors.
(Med J Aust 1993; 158: 119-120)

Musculoskeletal conditions occupy a large part of most doctors' workloads. In the 1989-1990 Australian Health Survey musculoskeletal complaints were the second most common reason for consulting a doctor in the two weeks prior to interview.1 With an increasing ageing population, doctors will need skills in the management of these conditions,3,4 including the psychological aspects, patient education and rehabilitation.4 Studies of undergraduate and postgraduate rheumatology training have identified psychological aspects of chronic illness and the role of other health professionals (e.g., physiotherapists) as being poorly taught.3,4

This study aimed to document the rheumatology teaching experienced by Australian medical graduates commencing their internship in January 1991. It identifies skill and knowledge deficits to provide a basis for future curriculum planning.

Methods

Study population and data collection

Within each State, a random selection was made of hospitals expecting more than 20 interns. Four hospitals were selected from New South Wales, two from each of Victoria, Queensland and South Australia and one from each of Western Australia and Tasmania. The selection probability for each hospital was proportional to the expected number of interns. All interns at these hospitals were approached in the first week of their 1991 internship.

The survey instrument

A self-administered questionnaire, partly derived from scales in similar studies,** assessed knowledge, clinical approach, experience with musculoskeletal conditions and rated teaching received. Percentages quoted in the text are weighted to take account of the cluster sampling design. Because the sampling design affects the precision of these estimates (design effect = 4.2), 95% confidence intervals were calculated by a jack-knife procedure.**

Results

The survey was completed by 382 interns from 12 hospitals. Five overseas graduates were...
excluded. The overall response rate was 92%.
The response rate at each hospital was over 90%, except in Western Australia (57%). The
touch to a six-year course meant that few
graduates were from the University of Sydney.
Because only two hospitals from Victoria were
surveyed, graduates from Victoria are under-
represented.

Description of the sample

The respondents' average age was 24 (range,
21–52 years) and 59% were male graduates.
Only 22% nominated general practice as their
career goal but 24% were uncertain.

Knowledge

The knowledge questions were well answered
with 51.4% scoring 100%, but responses on
prognosis of rheumatoid arthritis were inap-
propriately optimistic. For example, most
graduates (84%) incorrectly responded that a
normal life span is the general rule in rheuma-
toid arthritis and remission is possible in many
cases.

Clinical experience

While most graduates had examined patients
with rheumatoid arthritis, gout and osteoarthriti
during their training, they had had less ex-
perience with soft tissue conditions. Less than
half reported personally examining patients with
bursitis (45%), epicondylitis (23%) and poly
myalgia rheumatica (29%); in fact many had
never seen or examined patients with these
conditions (25%, 53%, 43% respectively).

The teaching they had received appeared to
have focused on the technical aspects of the
management of musculoskeletal disorders.
Sixty-one per cent had been present at a hip
replacement operation, but few had attended a
clinic where there was a physiotherapist or
occupational therapist (43% and 36% respect-
ively). Only 32% recalled being shown how to
assess patients' psychological adjustment to
their illness but about half had been shown how
to aspirate a joint (52%). However, experience
in practical procedures was low: only 19% had
aspirated a joint and 14% had injected a joint.

Most graduates included the musculoskeletal
system in their routine case histories and admis-
sion procedure arbitrarily (e.g., 72% examined
the musculoskeletal system sometimes). A
fifth (20%) never assessed disability and 13%
ever examined the musculoskeletal system.

Compared with graduates who had formal
attachments to a rheumatology ward or clinic,
those who had never been formally attached
(17%) reported less exposure to rheumatolo-
gical conditions, for example, painful shoulder
(42% versus 72%; P < 0.001) and were less likely
to have been taught the role of the physiother-
apist in managing arthritis (56% versus 76%;
P < 0.01).

Rating of teaching

Rehabilitation and geriatrics were the least
popular medical subjects. Graduates were
dissatisfied with their teaching in assessment
of back pain and disability. Few graduates rated
their teaching in these areas as good or excellent
(22% and 24% respectively), even those who
had had formal rheumatology attachments. This
compared unfavourably with the more traditional
aspects of rheumatology — 57% rated instruc-
tion on diagnosis of rheumatoid arthritis as good
or excellent. About a third felt not at all or only
a little competent at assessing disability (34%)
and examining the lower back (31%).

Discussion

In patients with chronic rheumatic diseases, a
lack of psychological support, required because of
the impact of the variable nature of the diseases and their
impact on significant relationships, is more of
a concern than the disease process itself.14 Yet,
our study suggests that training in the assess-
manship of disability and psychological adjustment
to illness are not adequately addressed in under-
graduate education.

While undergraduate programs cannot give
exposure to all clinical and procedural skills, a
grounding in basic history taking and examina-
tion is expected at this stage.12 It was of
particular concern that assessment of the
musculoskeletal system and disability were not
seen as part of routine history taking. A recent
Australian hospital audit found patients' complaints of musculoskeletal problems were
minimised and ignored by admitting doctors.15

Similar under-estimations of patients' disabilities have been noted in both hospital and ambula-
tory care settings in the United States.16

Responses to self-report questionnaires may
d not accurately represent graduates' experiences and behaviors. Activities and teaching over the
previous six years may well have been forgotten.
However, the high response rate (94%) in this
study minimised a non-response bias, and a
large number of graduates have been included
in the study.

In summary, the results indicate significant
problems in the training of medical students in
musculoskeletal disorders, although improve-
ments have occurred over the past decade.
Comparison with an earlier Australian survey3
reveals an increase in the number of students
completing formal attachments to rheumatology
wards (40% in 1981 versus 83.6% in 1991) and
outpatient clinics (55% versus 82%). The
importance of these formal attachments is not clear
but they provide exposure to a greater range of
conditions. However, training in the manage-
ment of common chronic soft tissue rheumatic
disorders, such as low back pain and epicon-
dylitis, remain deficient. Rheumatology units at
(teaching hospitals) may be unable to provide
broad exposure to rheumatological conditions
due to a focus on the more "immunological"
Inflammatory rheumatic diseases.

The finding that recent graduates are not
comfortable in assessing disability in patients
with musculoskeletal diseases is important, as
these conditions are the primary cause of dis-
ability in 28% of the 2.5 million Australians
classed as having a disability in the 1988 Dis-
ability and Handicap Survey16 and represent a
major cost to workers' compensation schemes.
Another disturbing finding is the lack of appreci-
ation of the importance of psychosocial factors
in chronic musculoskeletal diseases.14,17

These data should provide a stimulus for rheu-
matologists and medical schools to re-evaluate
their teaching priorities in the musculoskeletal
diseases to provide medical graduates with a
broad training which includes these common
disabling conditions.

Acknowledgements

We thank Dr Wayne Smith of Westmead Hospital who provided
valuable advice on sampling, and all the medical administra-
tors of the selected hospitals who scheduled time for the survey.
Sincere thank you for the assistance of Dr Scott Bell, Dr Steve
Hodty, Dr Steve Mokroczki, Dr David Wetter, Dr Julienne Schwenke,
Dr GJ Eastgate, and Dr Tony Fitzgerton in distributing the ques-
tionnaires. The valuable statistical advice from Dr Sue Taylor
(Department of Statistics, Rensisa University) and Professor John
McKenzie (School of Educational Studies, Flinders University) is
gratefully acknowledged. This study was supported by grants from
the Boots Foundation, Pfizer and Ciba-Gligy.

References

5. Wright V, Hallwell RE. Educating doctors about rheumatology.
tology training at internal and family medicine residency
7. Renton NR, Devine BA, Boonst Et, et al. Clinical rheuma-
8. McCredie M, Bockus PW. Rheumatology teaching in Australia:
the need for review. Mod J Aust 1985; 142: 452-458.
9. Smith WT, Talalabh MM, Iwmg LM, Langlands AO. Under-
graduate education in cancer. Eur J Cancer 1991; 27:
1444-1453.
10. Rabinov F, Fukuy JW. Data analysis including statistics. In:
Lindsey G, Aronson E, editors. The handbook of mental
psychology: 2nd ed. vol. 2. Reading. Mass: Addison-Wesley,
1969: 134.
11. Balmer DH. The CARE project: the evaluation of group coun-
12. Committee of Inquiry into Medical education and Medical
Workforce (Doherty RL, chairman). Australian medical educa-
tion and workforce into the 21st Century. Canberra: AGPS,
1998.
21: 303-308.
14. Colditz GA, Rubenstein LV, Clarys PO, et al. Failure of phy-
sicus to recognise functional disability in ambulatory patients.
15. Australian Bureau of Statistics. Disability and handicap,
Australia. Canberra: ABS, 1988. (Catalogue no. 4312.0)
16. McCredie M, Bockus PW. An analysis of the relationship
between psychological morbidity and disease activity in rheu-
17. Oberai B, Krwan JS, et al. Patients with chronic rheumatic

(Revised 2 Mar, accepted 21 Sep 1992)