ACPSEM
Australasian College of Physical Scientists and Engineers in Medicine

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Thursday, November 10, 2005

Robert Fitzgerald
Commissioner
Productivity Commission
PO Box 80
Belconnen ACT 2616

Dear Commissioner Fitzgerald,

RE: HEALTH WORKFORCE STUDY

The Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM) submitted last August a short report for your consideration. As explained at that time, ACPSEM incorporates the professional activities of medical physicists, biomedical engineers and physical scientists working in medicine. ACPSEM provides post-graduate accreditation for Medical Physics experts in Radiation Oncology, Radiology, Radiation Protection and Nuclear Medicine.

A point that needs to be emphasised is how diverse and small (but vital) this workforce is and how thinly spread it is across Australia. Our professionals are not registered by AHWAC and therefore your statistics do not include this very small but essential health workforce.

ACPSEM has 450 members comprising an estimated 350 hospital employees and the rest from universities, medical R&D institutions and health companies. In one specialty, around one third of this workforce is in-training.

ACPSEM has since 1988 reported a major shortfall in adequately qualified experts in medical physics and biomedical engineering. The reason for this has primarily been due to:

- A lack of knowledge by health authorities and administrators of the role and tasks performed by this workforce;
- No National uniform standard of qualifications, competency or training is required;
- No support for a training, education and accreditation program has, until just recently, been coordinated in the hospitals or universities;
- There is very little legislative control or competency requirements for medical physicists calibrating or testing radiation equipment in radiotherapy or imaging clinical departments;
- There is virtually no National or State strategic plan for an optimum medical physics/engineering workforce in urban, rural or remote areas.

These issues were essentially the root causes of the workforce shortfall identified in the 2001-2 Radiation Oncology Inquiry. In the subsequent Baume Report (2002), it was reported that cancer patients attend around 40 Australian radiotherapy centres. There were 120 major treatment machines and approximately 80 suitably experienced medical physicists employed to support this clinical service. The Inquiry recommended that the Department of Health and Ageing (DoHA) immediately begin work assisting ACPSEM to establish a training, education and accreditation program (TEAP). There were also a number of other workforce initiatives recommended to 'fast-track' the number accredited and retain those already in the workforce.

Although the work of medical physicists in radiation oncology has received appropriate attention during the last couple of years, there is a similar urgent need to improve the medical physics/engineering workforce for clinical imaging and the many other specialist clinical areas that we serve as well.

ACPSEM gratefully acknowledges the support of the Commonwealth Minister for Health and the DoHA for the funding of a professional enhancement project. Since the original Baume Report, TEAP is now established and I am arranging an independent review of this program through DoHA. To cater for the future, ACPSEM has totally reviewed its professional management and established a responsible, transparent TEAP structure for the organization.

Consequently, ACPSEM appears to be in tune with the future proposals outlined in the Productivity Commission's proposals and generally supports the reasons for change. However, due to the fact that the ACPSEM profession is only around 0.1% of the total health workforce and that there are some very unique features and needs for our members, I have listed some specific comments and provisions in the attachment.

Since ACPSEM was unaware of the 'roundtable' meetings during the preparation of this Position Paper, I would ask that we are provided an opportunity to discuss this with the Commission at the earliest possible date, before or after acceptance of this Paper.

The Position Paper makes frequent referrals to the impact of technology on the health system and its workforce. I believe the Commission would receive very valuable, innovative input from a meeting of key senior ACPSEM members. All of whom are experts in the medical physics/engineering aspects across a wide spectrum of medicine and hold considerable experience in the utilisation, safety and quality aspects of the present and future technology.

I would be pleased to provide any further information or advice on this submission.

Sincerely

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President
ACPSEM

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Royal North Shore Hospital
and
Adjunct A/Professor
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ACPSEM Comments on the Commission's Proposals

Facilitating workplace innovation (support proposals 3.1 and 3.2)

Workplace innovation is one of the core businesses of the profession. From the late 70's when Dr Dave Robinson and Dr George Kossof invented and implemented the world's first ultrasound imaging for obstetric imaging to A/Professor Dale Bailey who has just developed the world's first combined SPECT/CT scanner at Royal North Shore Hospital, there have been a plethora of major clinical achievements by our members. The profession has maintained significant achievements, high standards and is highly respected internationally.

Medical physicists and biomedical engineers are graduates in their appropriate discipline but then progress on to a relevant postgraduate degree that includes further education in the medical sciences with hands-on training provided in a clinical medicine department. With a solid scientific education and the appropriate in-house hospital training, these professionals are capable of overseeing a wide range of technical areas in medicine. Individuals receive an initial broad based training applicable in many different clinical departments and across conventional barriers but then specialize in their chosen future career.

The education component of the TEAP program provides professional service skills across a very wide variety of services whilst still enabling registration or accreditation in a specific specialty as well.

The trend overseas in Europe and America is that these professionals are capable of providing significant depth and support to the clinical medical specialist. It is normal to appoint the leaders in these disciplines to a 'Director' of technical services in the various clinical areas of radiology, radiotherapy, nuclear medicine, neurophysiology, pulmonary physiology, etc. The medical specialist is therefore relieved to concentrate on the medical care of the patient whilst the medical physicist or engineer support the clinical service's scientific and technical work, research and development in cooperation with the medical practitioners.

There are many examples in other countries. United Kingdom is particularly strong on medical physics/engineering services to health where the whole nuclear medicine department technical services and the radiotherapy dosimetry planning services are the responsibility of the medical services.

Although very small in number, ACPSEM professionals are a vital workforce that health simply cannot do without. This profession provides the necessary solid foundation for safe, high quality practice. Investment in the medical physicist/engineering profession would play far reaching dividends in, not only the quality of medicine, but also a strong nucleus of innovative, practically oriented physical scientists that can maintain Australian medicine at the forefront.

More responsive education and training arrangements (support proposals 4.1 and 5.1-3)

Since the workforce is very discreet, it is in the interest of the profession that the best physics/engineering graduates are attracted into the profession. Educating too many or unsuitable candidate is economically wasteful and unfair for student expectations. The most

appropriate system is for hospitals to be involved in the selection process, education and training scholarships to be offered to the successful candidates.

Supply and demand can then be closely monitored according to supply and demand. University higher degree medical physics course and thesis work is normally arranged through ACPSEM accredited Schools of Physics/Engineering. These institutions would require appropriate funding under the new proposal from DoHA.

A consolidated national accreditation regime (support proposals 6.1 and 6.2)

The present TEAP is designed to be managed on a national basis. ACPSEM strongly supports this proposal and has sought a national strategy for overseas trained professionals.

Supporting changes to registration arrangements (support proposals 7.1-3)

ACPSEM strongly supports national registration or regulatory control.

Improving funding-related incentives for workplace change (support proposals 8.1 and 8.2)

Whilst ACPSEM and the DoHA have implemented initiatives to improve the professional training and education needs, there is still a significant retention problem to address. It is estimated that around 10% of the workforce is lost each year through retirement, work overseas or simply discontent with the conditions of employment and work satisfaction. This can project to more than 25% reduction in potential work output from an individual work centre.

Unfortunately, Australia exists in an internationally competitive remuneration systems where our very well qualified professionals are attracted to salaries 2-3 times greater (the Baume Report) causing large-scale leakage to our attempts to address the workforce needs. Medical physicists are expensive to train, small in numbers graduating but play a vital role in their support within the health system. It is wasteful to lose them through failure to pay the competitive remuneration.

As mentioned in the Baume report, research opportunities is an important factor in the attractiveness of the sector and leads to workforce satisfaction. Strengthening the tie between research, the clinic and positive patient outcomes is a very effective initiative all round. That is, research is about improving knowledge relevant to the treatment of patients. The profession cannot stand still.

ACPSEM strongly supports a review of the Medical Benefits Schedule (MBS) with a view to reward medical physics/engineering services. There are significant medical physics services provided for current MBS. The costs for this service are hidden within the health system with neither acknowledgement nor reimbursement as an incentive. The ACPSEM has secured the support of the RANZCR to include a medical physics cost component in any re-evaluation of the MBS payments. ACPSEM intends to itemize all clinical services as an FTE-hrs item.

Better focused and more streamlined projections of future workforce requirements (support proposals 9.1 and 9.2)

ACPSEM fully supports any proposal to ensure an adequate workforce in the future.

More effective approaches to improving outcomes in rural and remote areas (support proposals 10.1-3)

ACPSEM supports any initiative to improve professional services to the rural and remote areas. ACPSEM could also play an integral part in advising and implementing the use of technology to provide adequate facilities for a 'virtual clinic' service in its areas of expertise.

Ensuring that the requirements of groups with special needs are met (support proposal 11.1)

ACPSEM supports the need to address special needs in mental health and the indigenous community.

A/Prof L D Oliver PhD
President, ACPSEM
10 November 2005

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Australasian College of Physical Scientists and Engineers in Medicine
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(EXEC + BRANCH CHAIRS)
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HEAD OF OPERATIONS
HEAD OF SPECIALITIES
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MISSION: To advance services and professional standards in medical physics and biomedical engineering for the benefit and protection of the community
OCTOBER 2005: COUNCIL HAS 5 DIRECT REPORTS AND 2 ADVISORY COMMITTEES