
방사선사: 전문 의료직인가? 단순 기술직인가?

Radiographers: Responsible Medical Professional or Detached Employee?

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요약

“방사선사: 전문 의료직인가? 단순기술직인가?”라는 명제로 방사선사의 전문성을 고찰하였다. 전 세계적으로 방사선사의 전문성은 의료인에 비해 자치권과 자율권이 많이 축소되어있다. 이 논문은 방사선의 역사와 영국과 호주에서 진행되고 있는 방사선사의 직업전문성 연구를 토대로 현재 방사선사의 사회적 위치를 재조명하고 방사선사의 사회적 지휘 향상을 위한 기반을 모색하고자 하였다.

■ 중심어 : | 방사선사 | 전문 의료직 | 단순 기술직 |

Abstract

This article examines the professional status of radiographers in an attempt to answer the question "Radiographers: responsible medical professional or detached employee?" Comparisons are made on the past and present views of radiography with thoughts given into the possible change for the future. It can be clearly seen that the professional rights have been taken away as a result of overwhelming medical dominance but changes are slowly taking to place which are attempting to replace the lost autonomy to place radiography as a profession once again.

■ keyword : | Radiographers | Responsible Professional | Detached Employee |

I. Introduction

This has been a question under constant debate. The question of whether radiographers are professionals or mere technicians. In order to answer this question, one must look into the history, current status and the changes which have taken place in the field of radiography. Also, radiography must be examined on a social level to see how the profession is being viewed, along with the interactions with other occupations in order to better understand the

professional standings of radiography.

According to the Australian Institute of Radiography (AIR), "Radiography is the professional practice of providing a range of diagnostic imaging examinations and therapeutic procedures using ionizing and non-ionizing radiation." [1]. From the above, the key word "professional" can be identified and simply by referring to the definition, one might be able to conclude that radiographers are health care professionals. Now the job description of certified radiographers will be examined. "Radiographers are

health care professionals who provide and interpret a range of medical imaging examinations for diagnosis and management of medical conditions"[2]. Once again, the "professional" is found in the definition of radiographers but there is also an error which can be identified. It is the word "interpret". Interpretation of films is not a role taken on by radiographers but rather the role of radiologists. Due to these discrepancies, before any conclusions can be made, there are many other aspects and issues which need to be addressed.

II. Discussion

With the discovery of x-rays in 1895 by German physics Professor Wilhelm Conrad Roentgen, the medical world immediately recognized the extraordinary importance of the discovery and within months, a multitude of foreign bodies, fractures and calculi had been radiographed. Within this initial period, there were no clear distinctions between what is now known as radiography and radiology. The roles of a radiographer included patient care, operation of the x-ray equipment and most importantly, the reporting of the findings on the radiographs[3]. Had this trend continued to present day, radiographers would have attained a high level of monopoly and firmly established radiography as a profession in its own right. Radiography was on the verge of being a profession in the early 1900's until the Society of Radiographers which was created for the radiographers were forced to limit the professional status of radiographers by prohibiting the interpretation of images as a result of continued pressure from medical dominance[3]. This restricted the roles of radiographers to the production of radiographs as "technicians." This was the result of

radiologists and other physicians being "*alarmed by the prospect of technicians controlling such a strikingly successful diagnostic technique.*"[4]. The Society of Radiographers headed by Sir Archibold Reid and established in 1921 was the organization which brought upon this dramatic impact which broke down the profession of radiography into the status of "allied health professional"[5].

As a result of the reduction in the professional status of radiographers following the 1930's, there has been constant attempts to restore the status of "profession" into the healthcare field. Between the periods of 1930 and 1960, the roles of radiographers had been reduced to mere technicians working for and being maintained by radiologists during an era where medical dominance was emerging. It was only after the 1960's that efforts have been made to re-establish radiography as a profession in its own right once more. The Supplementary to Medicine Act (1960), gave recognition by statute and this Act enabled radiography to hold a full professional status within the National Health Services[5][6]. Unfortunately, it seems as if this Act only restored professional status to radiography on paper as the traditional roles which initially gave radiographers autonomy (reporting by radiographers), still remained in the hands of radiologists.

Currently, the roles of radiographers are somewhat limited when compared to the initial years in which x-rays were discovered. Radiography has become an essential diagnostic tool and is performed in most countries. These roles may vary slightly between countries but most of the tasks performed can be correlated with each other regardless. In Australia, the Australian Institute of Radiography released an updated version of "Competency Based Standards for the Accredited Practitioner." [1]. The general roles of radiographers include the provision of a range of

diagnostic imaging examinations and therapeutic procedures using ionizing and non-ionizing radiation to

- Create an image to confirm or exclude a clinical diagnosis,
- Assist, monitor and manage treatment processes,
- For screening programs and,
- For research.

At present, radiographers are responsible for the production of diagnostic images to aid in the diagnosis of pathology or injury. The rationale for the production of radiographs is to interpret the films to assess whether there is pathology or injury on the radiographs. The production of images without the necessary skills to interpret what is visualized defies the purpose of the radiographic examination[7]. Therefore, it can be seen that the roles of a radiologist, in which the main role is to interpret radiographs and to carry out various procedures for diagnosis, are superior to that of a radiographer. Radiographers still remain in the shadow of radiologists and while they are able to carry out their duties with relative flexibility and without the direct supervision of radiologists, radiographers inevitably must follow instructions given to them by radiologists.

One major factor which is prohibiting radiography from becoming a profession in its own right is the presence and the dominance of radiologists. The radiographer/radiologist relationship can be compared to that of the nurse and doctor relationship. As nurses are seen to be under the direct supervision of doctors, playing an assistant role in the substantial care and support offered to the patients[8], radiographers are also seen as working under the direct supervision of

radiologists. The relationship between radiographer and radiologist is a very interesting one as radiographers have great flexibility on any additional projections which are performed but at the end of the day, must still follow the instructions given to them by radiologists. In this sense, they are in the same situation as nurses, who play an assistant role in the provision of healthcare. Different radiologists have different preferences in the projections they prefer when making a diagnosis and the role of radiographers become one of which is to satisfy the needs of radiologists by performing what is requested by them.

The European Sub-Committee of the International Society of Radiographers and Radiological Technologists (ISRRT) has set out guidelines on the roles of radiographers in European nations[9].

- Is told exactly how to position the patient for each projection,
- Follows defined and precise protocols only adapting under direction,
- Usually follows protocols, but may adapt them without supervision,
- May make independent decisions about adaptations of projections or about the performance of further projections,
- May assess and question the diagnostic need for the examination,
- May suggest that other imaging modalities are more appropriate,
- May describe the radiographic appearances on an image to a clinician at his or her request,
- May give an opinion about the diagnosis to the referring clinician.

The guideline set out above does not correspond directly to the roles undertaken by Australian

radiographers but demonstrate with moderate accuracy the situation of the profession of radiography. As seen above, radiographers are able to exercise a relative amount of flexibility in the decision making process of a diagnostic procedure but the most important fact is that any decision which is made by a radiographer can be overthrown by the radiologist, with the radiologist having the final impact on the decision. As a result, the dominance displayed by the radiologists remains as one of the single largest threats which hinders the move of radiography into the field as a profession.

There have been changes to the roles which are undertaken by radiographers in an attempt to re-establish the occupation as a profession. This has been one of the main strategies in re-establishing the radiographic profession with talks of role expansion. Radiographers are now being offered the chance giving intravenous injections to Computed Tomography (CT) and Intravenous Pyelography (IVP) patients as well as trials of the "Red Dot System" which attempts to restore image interpretation roles which were originally carried out by radiographers. Some radiologists are concerned that such an act would compromise the quality of work provided by the department but talks have been exchanged where reporting sessions can be undertaken by radiographers, provided that this occurs within realistic protocols. An investigation into the costs and benefits of radiographer reporting was undertaken which showed that radiographer reporting took up 25 to 50% of a radiographers time whilst only saving the radiologist only 45 minutes a week on average[10]. From this study, it can be seen that restoring image interpretation roles once performed by radiographers will be very difficult and new strategies are needed.

The field of radiography is still relatively young

when compared to other health care profession and therefore, change is not new but rather a constant feature. With changes in the education system which has seen radiography turn into a tertiary level degree and also with constant technological advances which has seen the rise of state of the art imaging equipment and techniques, radiographers are able to exercise their professional autonomy which was once restricted[6].

This constant change has allowed new alliances to be formed in which radiologist intervention is not necessary. For example, radiographers now work with cardiologists as well as with surgeons in the operating theatre. Some sonographers now work more closely with obstetricians than with radiologists as they have done previously. From the outlined information, it can be seen that radiography is now starting to regain the professional status which was once taken away by the emergence of radiologists.

By examining the history and the current roles which are undertaken by radiographers, it can be seen that the reduction in the professional status of radiography has since shaped the field into one in which many debates has risen. Radiography seems to stand on the borderline of "profession" and "technician". The determinants of a profession must now be looked at in attempt to clarify the situation. There are many documents which attempts to aid in the classification process of professions. These documents require the following criteria to be satisfied in order to for an occupation to be seen as a profession. According to Blane's criteria, an occupation must[11]:

- Be found in the highly skilled sector of the labour market and posses a body of knowledge.
- Espouse a code of ethics/conduct.
- Usually have a monopoly.

- Possess considerable autonomy.

In order to determine the professional status of radiography, one must now compare the current status of radiography with the professional criteria listed above.

First of all, radiography is found in a highly skilled sector of the labour market which possesses a body of knowledge. Radiographers were previously trained as technicians and progressed to being offered as a TAFE (Technical and Further Education) course and finally a university degree known as Medical Radiation Sciences. The Australian Institute of Radiography (AIR) issues graduates with a certificate of accreditation in which radiographers must also obtain a radiation license from the Environmental Protection Agency in order to practice. The Australian Institute of Radiography (AIR) is a body of knowledge representing radiographers, sonographers and radiation therapists and sets out guidelines such as the code of conduct/ethics, competency based standards and educational policies[12].

The first two criteria are therefore met which implies that radiography is a profession but for the following criteria of monopoly and autonomy, the argument is very debatable. The question of whether radiography is a monopoly can be answered by the breach into its professional boundaries by other occupations such as nuclear medicine technologists, cardiologists using ionizing radiation to produce diagnostic images[13]. Therefore, radiography is not a monopoly. Finally, radiography does not completely meet the criteria of being able to exercise autonomy as radiographers work within set protocols and guidelines which have often been set without the involvement of radiographers in issues such as the necessary projections required. However, with health care reforms and changes to the education of

radiography, radiographers have slowly begun to exercise their professional autonomy.

Society has many divided views on the profession of radiography. There are members of the public who do not know the differentiation between radiologists and radiographers and believe that both possess the "doctor" status. This is the result of radiography being a relatively new health care service when compared to other fields such as medicine or dentistry. In Australia, the views on radiography have been changing. Unfortunately, exposure about the field of radiography has been initiated not by the government but rather by individuals. *"Industry that sells full-body scans to detect potential diseases without a doctor's referral is running advertisements that frequently include unsubstantiated claims about the benefits of getting Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) scans, while rarely providing information about the technology's limitations and risks."*[14].

Through the use of television advertisements, the field of radiography has been exposed to the public but as information is withheld from the public on such issues as costs, risks and the necessity of the exams, the society is not getting an accurate view of the profession. The public needs to be given the accurate information for them to understand the roles of radiography in the health care system so that they may better understand the professional status of radiographers. By targeting the public, this will be a great strategy in having radiography being accepted as a profession on the social level.

Finally, the last question which needs to be answered is how radiographers see themselves in the medical world. There seems to be a general trend in which the older generation radiographers of approximately 40 years and over see radiography as simply a job. A job in which they arrive to, perform

their duties throughout the shift then go home. By examining the workplace, there is a trend in which the younger generation radiographers approximately under the age of 40 years see themselves as professionals. This may be due to the differences in education which was received between the two groups. As outlined previously, radiography was not always a university offered degree. It was more of a "trade" which was learnt. This is a vital step for the profession of radiography gaining its professional status. As more graduates join the workforce with the views and thoughts that they are professionals, the radiographers will be able to gain greater political powers than present and be able to exercise a greater amount of autonomy[15].

III. Conclusion

It has been just over a century since the discovery of x-rays in which radiography was fast on its way of becoming a profession. However, due to concerns which had been raised by the medical specialists during a time which was experiencing the vast increase in medical dominance, radiographers did not have the power to stop the "containment" of this field of practice. There is no doubt that radiography is undergoing continuous change both in the technological advancements is making and in its professional status. History shows us the effects in which medical dominance had on the field of radiography and the eventual limitations to its professional status. Efforts to re-establish the professional status following the Professions Supplementary Act of 1960 giving radiography full professional status was limited as other factors had come into play. Such factors as education, the radiographer/radiologist relationship, the views of

society and the views of radiographers on the professional status of their occupation. Radiography is definitely re-establishing itself as a profession but the transition is not yet complete. However, positive changes to the above mentioned points will no doubt see radiography become a profession in its own right in the not too distant future and radiography stands in the strongest position than ever before in the fight to re-claim its professional status.

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