

# Duties and training of dental nurses: How do Irish practices conform to European standards?

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**Aim** The dental nurse is a key member of the dental team, having an important role in the delivery of oral healthcare. Despite this, there is considerable variation throughout Europe in relation to the level of training, permitted duties, and statutory registration of dental nurses. The purpose of this paper is to describe the opinions and attitudes of dental nurses to their roles and suitability of training in one European member state, Ireland, where statutory registration has recently been introduced. **Method** A postal questionnaire was sent to 150 dental practitioners selected from the Irish Register of Dentists. The dentists were asked to distribute questionnaire to dental nurse(s) working in their practice. Information sought from the dental nurses included their employment setting, the nature of their employment, their level of training, additional qualifications held, their views on the key duties and responsibilities of a dental nurse, and the appropriate duration and content of a dental nurse training programme. **Results** Replies were received from 96 dental nurses (response rate=64%). Fifty-five percent of respondents (n=53) were employed in private practice, 39% (n=37) were employed in the Health Board Dental Service, and 6% (n=6) were employed in a dental hospital. Two thirds of respondents (n=62) had been employed as dental nurses for more than five years. Eighty-six percent of respondents (n=83) were in full-time employment. Seventy-three percent of respondents (n=70) held a recognised dental nurse qualification. Sixty-five percent of respondents (n=70) who held a dental nurse qualification felt that the appropriate duration of a dental nurse training programme was one year or less. Thirty-two percent of respondents (n=30) had completed additional training in practice management, administration or computer skills. Ninety-five percent of respondents (n=91) were interested in attending continuing education courses. Eighty-five percent of respondents (n= 82) felt that assistance at the administration of local anaesthetics was a key duty/responsibility for dental nurses, while only 20% of respondents (n=19) felt that infection control procedures was a key duty. **Conclusions** Within the group of dental nurses surveyed, there was a lack of clarity surrounding their perception of their key duties. This could present challenges to the effective delivery of oral healthcare regimens within Ireland. Further investigation of this situation in other European countries is indicated.

*Key words:* Dental nurse, dentistry, education, training, healthcare systems

## Introduction

There is a large variation in oral health status throughout Europe (Kravitz and Treasure, 2004). The consequent challenge to governments and health care providers is to produce and manage an oral healthcare strategy that attends to the needs of all of the European population (Anderson *et al.*, 1998a). While the profession of dentistry in itself is well regulated and established, there are large variations in the recruitment and utilisation of dental nurses in the delivery of oral healthcare programmes within Europe (Eaton, 2003; Kravitz and Treasure, 2004; Widström and Eaton, 2004). Where deployed appropriately, the dental nurse, or dental assistant, can be a key member of the oral healthcare delivery team. It is currently estimated that in addition to the approximately 300,000 registered dentists working in the European Union, there are 300,000 dental nurses (Eaton, 2003). However, there is considerable variation in the role and permitted duties of dental nurses within the European setting (Widström and Eaton, 2004). In some countries such as France and Belgium, dentists often work without any form of chair-side assistance. In other countries such as Spain

and Portugal, with a relatively low ratio of dentists per head of population there has been delegation of duties to dental auxiliaries and nurses (Eaton, 2003; Kravitz and Treasure, 2004). In Ireland, a difficulty encountered by dentists in recruiting suitably trained personnel for employment as dental nurses has been reported (Lynch *et al.*, 2003a). There is variation between many countries in relation to statutory registration for dental nurses (Anderson *et al.*, 1998b). The challenge to European oral healthcare providers is to reduce the inequalities in oral health status of the population, and to raise this to a suitable level (Anderson *et al.*, 1998a; Kravitz and Treasure, 2004). To tackle this problem effectively, policy to support a properly trained and integrated oral health care team needs to be put in place. Confusion surrounding the role of the dental nurse can undermine this approach. Variation within the permitted duties and statutory registration for dental nurses between various member states of the EU can also create difficulties for European dental nurses hoping to migrate between member states (Eaton, 2003).

The practice of dental nursing has developed considerably over the past 150 years. During the nineteenth

century dental assistants were apprentices who became dental mechanics or pupils who trained to become dentists. The introduction of anaesthesia in dentistry after 1850 is one of the reasons for dentists requiring the presence of an assistant and to act as a chaperone for female patients. Towards the end of the nineteenth century, females were employed in dental practices as receptionists and secretaries. Duties of the dental assistant in the surgery began to develop in the early twentieth century. However, at that time little formal training was available for dental assistants. The National Examining Board for Dental Surgery Assistants was established in the United Kingdom in 1943. This formally established dental nurse training (or dental surgery assistants, as this class of worker was then called) on a national level in the UK. Formal training for dental surgery assistants was introduced in the early 1970s in Ireland, under the auspices of the United Kingdom's National Examining Board for Dental Surgery Assistants. This examination has been available in Ireland since then and individual training programmes for dental surgery assistants have been developed in the Cork and Dublin Dental Hospitals.

The regulation of the dental nursing profession in the UK and Ireland has been considerably revised over the past number of years. A voluntary register for dental nurses was introduced by the General Dental Council in the United Kingdom in the 1990s, and in Ireland in 2001 (Dental Council of Ireland, 2001). It has been proposed that in the future there should be a statutory requirement for dental nurses in the United Kingdom to be registered. (General Dental Council, 2002/2003; Wilson, 2003). Future members of this register will be permitted to undertake certain duties, such as impression-making. Entry into such dental nurse registers requires completion of an appropriate training programme. In Ireland, the permitted duties of registered dental nurses include (Dental Council of Ireland, 2001):

- to provide assistance, short of the practice of dentistry in the delivery of dental treatments;
- preparation of surgeries for dental procedures;
- preparation and sterilization of dental instruments and the disinfection of equipment;
- reception, patient welfare, and health promotion.

Little information exists as to the training needs of dental nurses in Ireland. Previous work by the authors (Lynch *et al.*, 2003a) examined the opinions of Irish dental practitioners on dental nurse training. As part of an initiative to devise a national training programme for dental nurses in Ireland, it was decided to extend this study to examine the opinions of Irish dental nurses on dental nurse training. An examination of the views of dental nurses on their key roles and responsibilities was also included in this survey. The findings of this investigation will be of interest to those involved in the delivery of oral healthcare in the European setting.

## Materials and Methods

A questionnaire was devised and piloted on five dental nurses. Following minor amendment, this questionnaire was posted to 150 dental practitioners selected at random from the Irish Register of Dentists. The dentist was asked to pass the questionnaire to the dental nurse working in his/her practice. Information sought from the dental nurse included their employment setting (e.g. private/ Health Board), the nature of their employment (e.g. full-time/ part-time), their degree of training, additional qualifications held, their views on the key skills a dental nurse should be able to perform, and the appropriate duration and content of a dental nurse training programme. The data was entered onto a Microsoft Excel Spreadsheet. Descriptive statistics are reported.

## Results

Completed questionnaires were returned by 96 dental nurses (response rate=64%). The mean age of respondents was 32 years. The age distribution of the sample is shown in Figure 1. The employment profile of respondents is shown in Figure 2. Fifty-five percent of respondents (n=53) were employed in private practice, 39% (n=37) were employed in the Health Board Dental Service, and 6% (n=6) were employed in a dental hospital.

Information relating to the duration of time spent in employment as a dental nurse by respondents is shown in Figure 3. Two thirds of respondents (n=62) had been employed as dental nurses for more than five years.

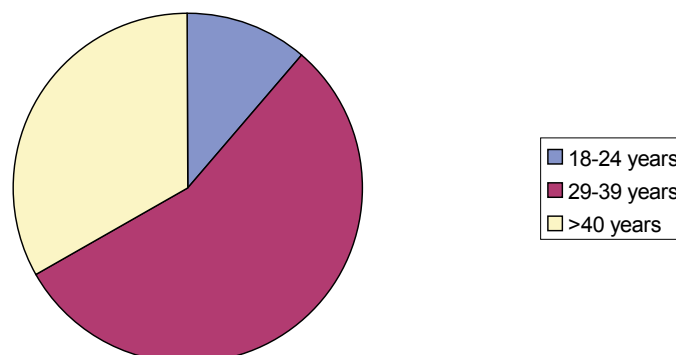
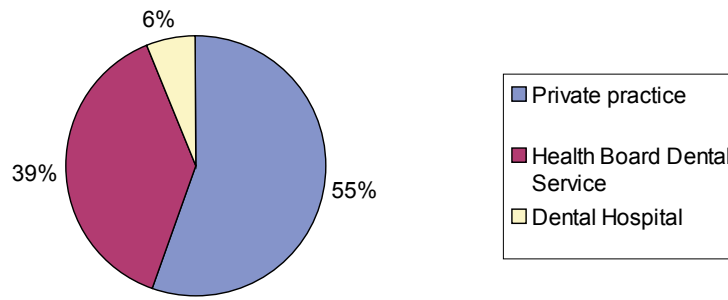
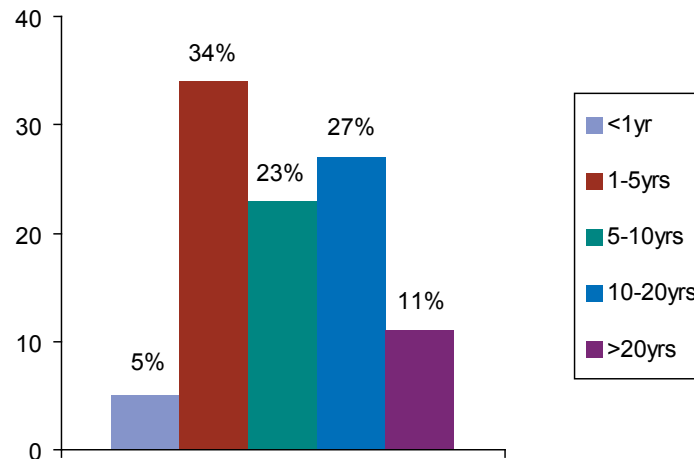


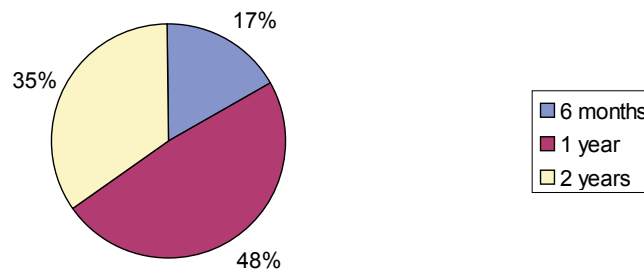
Figure 1. Age distribution of the respondents



**Figure 2.** Employment of profile of respondents (n=96)



**Figure 3.** Duration of time spent in employment as a dental nurse (n=96)



**Figure 4.** Opinion of respondents of appropriate duration of training for dental nurses (n=70)

Eighty-six percent of respondents (n=84) were in full-time employment, 7% (n=6) of respondents were employed on a part-time basis, and 7% (n=6) were employed on a 'job-sharing' contract.

Each respondent had completed the secondary school Leaving Certificate. Seventy-three percent of respondents (n=70) held a recognised dental nurse qualification, of which 76% (n=53) had completed their training on a part-time basis. Seventeen percent of respondents (n=16) who held a dental nurse qualification felt that the appropriate duration of a dental nurse training programme was six months, 48% of respondents (n=46) felt that the appropriate duration was one year, and 35% of respondents (n=34) felt that the appropriate duration was two years (Figure 4). Thirty-two percent of respondents (n=30) had completed additional training in practice management,

administration or computer skills. Ninety-five percent of respondents (n=91) expressed an interest in attending continuing education courses.

Respondents were asked to identify 'key duties' and responsibilities they felt a dental nurse should be able to perform. These responses were analysed and grouped under headings in Table 1. The most commonly identified 'key duties' were assistance at the administration of local anaesthetics (85%, n=82), practice management skills (81%, n=78), and maintenance of instruments and equipment (76%, n=73). Twenty percent of respondents (n=19) felt that infection control procedures were a 'key duty'.

**Table 1.** Opinions of respondents on the ‘key duties’ and responsibilities of dental nurses.

<i>‘Key duty’ and responsibilities</i>	<i>Number of responses</i>	<i>Percentage of total responses (n=96)</i>
Assistance with the administration of local anaesthetics	82	85%
Practice management skills	78	81%
Maintenance of instruments and equipment	73	76%
Assistance at clinical procedures	67	70%
Management of medical emergencies	61	63%
Prepare patient treatment	54	56%
Health and safety	46	48%
Obtain and update patient history	34	35%
Attending to patient comfort	27	28%
Support infection control	19	20%

Note: The total for the number of responses is greater than 96 (in the sample) as respondents may have indicated more than one ‘key duty’ in response to this question.

## Discussion

The postal survey/ questionnaire is regarded as the most common instrument used to collect data in the healthcare field due to the large amounts of data that it can collect over wide geographical areas in a short space of time (Parahoo, 1993; Watson, 1999). One disadvantage of collecting data by means of postal questionnaire is that a low response rate is common (Parahoo, 1993). This can cause problems in establishing how representative the sample is of the whole population. The response rate for this questionnaire was 64%, which was higher than the previous survey of dental practitioners (Lynch *et al.*, 2003a). Questionnaires were sent to dental practitioners and hence the response rate was dependent on the dentist passing the questionnaire on to any dental nurse in their employ. It could be argued that there was a selection bias within the respondents— those who are ‘interested’ in developing the profession of dental nursing replied, and those who were ‘uninterested’ did not. A stamped addressed envelope was not included with the questionnaire, so the response rate is lower than that in other similar postal surveys in the UK (Gallagher and Wright, 2002; Ide and Scanlan, 2003) (which included SAEs and had response rates of 66% (Gallagher and Wright, 2002) and 70% (Ide and Scanlan, 2003).

A previous paper by the authors examined the opinions of Irish dental practitioners on dental nurse training (Lynch *et al.*, 2003a). As part of the initiative to devise a national training programme for dental nurses, this study was extended to examine the views of Irish dental nurses. Until the introduction of the Irish national training scheme, the primary dental nurse training programme in Ireland was the UK ‘National Certificate Examination for Dental Nurses’. This examination had a strong academic/didactic component, and participants received lectures on how to perform certain clinical duties. However the lack of practical ‘hands-on’ training was a serious deficiency, and was criticised in the past by dental practitioners (Lynch *et al.*, 2003a). A few years ago, the UK National Examinations Board moved away from an ‘academic’ type programme, and moved

to integrate their training programme into the established ‘National Vocational Qualification’ (‘NVQ’) framework, placing a greater emphasis on ‘hands-on’ skills. At this juncture, it was felt that it was important to establish a national Irish dental nurse training programme with an emphasis on the acquisition of key skills or competencies by trainees. Such competencies included: being able to implement Universal Precautions, effectively assisting at basic clinical procedures, and basic life support procedures (Lynch *et al.*, 2003b). This programme will facilitate the aim of improving the delivery of oral health care programmes within Ireland. It is heartening that despite a lack of legal guidelines on those working as dental nurses in Ireland to obtain a recognised dental nursing qualification, almost three-quarters of respondents did hold such a qualification

In some regards, the dental nurse, or assistant, is the ‘poor-relation’ of the oral health care delivery team. While they vastly outnumber dental hygienists and therapists, there are few countries with statutory registration of dental nurses compared to other members of the oral health care team (Kravitz and Treasure, 2004). The employment of dental nurses has been shown to increase the number of patients a dentist can provide care for within a specific time frame (Eaton, 2003; Widström and Eaton, 2004). Delegation of many technical duties to the dental nurse will allow the dentist more time for diagnosis, treatment planning, and counselling of patients (Kravitz and Treasure, 2004). While it could be argued that statutory registration is more warranted for workers who perform intra-oral treatments, such as hygienists and therapists, the dental nurse is effectively the foundation / co-ordinator of many aspects of modern dental practice. It is the dental nurse who performs and implements most of the infection control procedures, and who is delegated the task of sterilisation of dental instruments and prosthetic appliances prior to intra-oral use by other members of the team. Statutory registration for dental nurses in other countries would, *de facto*, raise their profile. As a requirement of registration would include completion of a suitable educational programme, it would also ensure that dental nurses were trained in a standardised man-

ner, to a high standard, as it has meant in Ireland. As an added benefit to the introduction of suitable dental nurse educational programmes, satisfactory completion could represent an entry point into an abbreviated training programme for other oral health workers such as therapists or hygienists. The consequent increased organisation of the dental public health / oral health care delivery system would have beneficial effects for the general population.

There was a lack of clarity surrounding the views of dental nurses on their 'key duties' and responsibilities (Table 1). Eighty-five percent of respondents felt that assistance at the administration of local anaesthetics was a key duty/responsibility for dental nurses; 81% identified practice management skills as a key duty; and 76% of respondents listed maintenance of instruments and equipment. In contrast, only 20% of respondents felt that infection control procedures was a key duty. This latter point should be a cause of concern, given that dental nurses routinely prepare the clinical area prior to procedures, assist the dentist during procedures, and dispose of infected materials afterwards. In some sense, this lack of clarity is a reflection of a lack of clarity at a European level.

### Conclusions

A majority of respondents:

- were employed in private practice (55%);
- held a recognised dental nursing qualification (73%);
- were interested in attending continuing education programmes (95%);
- felt that assistance at the administration of local anaesthetics was a key duty for dental nurses (85%). In contrast 20% of respondents felt that infection control procedures were a key duty for dental nurses.

Given the lack of clarity surrounding the key duties of dental nurses, there is a clear need to further define the role of the dental nurse on a European setting. This will facilitate freedom of movement of appropriately trained and qualified personnel through European Union member states, thereby enhancing the delivery of oral healthcare in Europe.

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