Doctors and the nurse endoscopist issue in New Zealand

Mohammad I Khan, Robert Khan, Wanda Owen

Abstract

**Aim** Training and recruitment of Nurse Endoscopists (NEs) is currently actively debated in medical circles. The aim of this survey was to obtain the views of doctors regarding the role of NEs in New Zealand (NZ).

**Methods** A web-based, self-administered questionnaire was sent to 84 endoscopists currently working in 25 public hospitals across all the 20 District Health Boards. The survey period was July 2011. Data was analysed using descriptive statistics.

**Results** The response rate was 47.5%. Fifty percent of the respondents worked in tertiary hospitals. Only 30% had a positive attitude towards the introduction of NEs in NZ. The majority (62%) believed that doctors would deliver better quality of endoscopy services than NEs. Only 37% thought that the introduction of NEs will reduce the cost of services. Forty-one percent thought it was inappropriate for the NEs to be enrolled in the Bowel Cancer Screening Programme and only 6 doctors (18%) thought that NEs should be allowed to perform therapeutic endoscopic procedures.

**Conclusion** Only a minority of doctors had a positive attitude towards the role of NEs. The majority considered doctors to deliver ‘higher’ quality of service and only a minority thought that the introduction of NEs will lower the cost of services.

The recent international trend of training and recruiting non-medical personnel (mainly nurses) in different medical fields has two main drivers. Firstly, there is a chronic shortage of doctors in certain specialities and secondly, health economics has recently been playing an increasingly important role in the healthcare industry. The possibility of cheaper healthcare provision in times of harsh budgetary constraints has attracted many supporters.

In New Zealand (NZ), within the field of Gastroenterology, nurses have taken up the role of Nurse Specialists and are running ‘Dyspepsia clinics’, Inflammatory Bowel diseases clinics’ and ‘Hepatitis Clinics’. However, unlike some of the other developed countries like the United Kingdom and the United States of America, NZ, so far, has no Nurse Endoscopist (NE).

NZ has an established shortage in the provision of colonoscopy services in public hospitals.¹ Although, free endoscopy unit sessions are available they are not utilized because of a nationwide shortage of both trained endoscopy nursing staff and endoscopists. This shortage is likely to increase with the launch of the National Bowel Cancer Screening Programme. Yeoman and Parry¹ have briefly mentioned in their survey that 25% of the NZ public hospitals (including only two of the main centres) will be willing to employ non-medical endoscopists but did not elaborate further on this topic.
The introduction of NEs in NZ can partly cover the capacity shortage of endoscopy services. However, there is no evidence in literature that the introduction of NEs can also save health dollars. The stepped up role of nurses as NEs has created a lot of controversy, especially in medical circles. We carried out a survey of doctors to obtain their views on the role of NEs in NZ.

Methods

Ethical approval for the survey was taken from the Multi-region Ethics Committee. Twenty five public hospitals across all of the 20 District Health Boards in NZ were selected for the study. Small peripheral hospitals with only basic endoscopy facilities were excluded from the study. The survey was carried out in July, 2011. The study population included all of the Gastroenterologists currently working part time or full time in the selected public hospitals. In hospitals without gastroenterologists, the local surgeons providing the endoscopy services were included in the study. Contact data on the participants were obtained from each endoscopy unit. A postal letter with a web-link to the web-based survey (ss Appendix) was sent to each study participant. The letter included an introductory note and an explanation of the anonymous and confidential nature of the survey. Descriptive statistics were used to analyse the data.

Results

Eighty four study participants were identified. Two have since left their public jobs and were removed from the study. Forty doctors completed the survey (response rate of 47.5%). Eighty seven percent of the doctors were male, 50% were working in tertiary centres and 59% percent were practicing endoscopy both in public and private sector.

Sixty-two percent of the doctors thought that they will offer better quality of endoscopy services compared to trained NEs. Reasons included that endoscopy procedures are more than just a technical skill and findings need to be co-related to the clinical scenarios and that NEs will have a lower standard at trouble shooting. Thirty-two percent thought that there will be no difference in the quality of services if the NEs are properly trained (Figure 1).

Figure 1. Clinical quality of endoscopy services

<table>
<thead>
<tr>
<th>Your expectation of the clinical quality of services provided by the Nurse endoscopists compared to medically qualified endoscopists (doctors).</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better performance by the Nurse endoscopists</td>
<td>54%</td>
<td>2</td>
</tr>
<tr>
<td>No difference</td>
<td>22.4%</td>
<td>12</td>
</tr>
<tr>
<td>Better performance by the doctors</td>
<td>62.2%</td>
<td>23</td>
</tr>
</tbody>
</table>

Sixty-one percent of the doctors said that they expect no difference in patient experiences between the services offered by the doctors or NEs while the rest were almost evenly split between moderately better performance by the NEs and doctors (Figure 2).
Forty-seven percent of the doctors thought that there will be no impact on the running cost of endoscopy services while 37% thought that the overall cost will reduce with the introduction of NEs. Thirty-six percent thought the endoscopy practice for nurses should be limited to diagnostic upper endoscopy procedures only while 47% thought that it should be restricted to both upper and lower diagnostic endoscopies. The rest were in favour of full provision of both diagnostic and therapeutic upper and lower endoscopy procedures by the NEs (Figure 3).

Forty-three percent of the doctors thought that it was appropriate to enrol NEs in providing screening colonoscopies as part of the National Bowel Cancer Screening Programme. Forty-three percent thought it was not appropriate while the rest were not sure (Figure 4).
Sixty-seven percent of the doctors were willing to provide voluntary supervision if NEs were recruited in their department. Forty-five percent of the doctors said that they have a neutral attitude towards the introduction of NEs, 25% had a negative attitude and only 30% had a positive attitude (Figure 5).

**Figure 5. Attitude of Doctors to NEs**

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>30.0%</td>
<td>12</td>
</tr>
<tr>
<td>Neutral</td>
<td>45.0%</td>
<td>18</td>
</tr>
<tr>
<td>Negative</td>
<td>25.0%</td>
<td>10</td>
</tr>
</tbody>
</table>

**Discussion**

Worldwide, the role of NEs in the delivery of endoscopy services has probably caused more controversy than the role of any other Nurse Specialist in the field of Gastroenterology.

In some countries, like the UK and the US, NEs have expanded their role to both academic and district level hospitals. The span of procedures they are allowed to perform has also increased from simple diagnostic procedures to a wider array of both diagnostic and therapeutic procedures.

However, in other countries, like Australia and New Zealand, the role of NEs has not established at all. The reasons for these variations in the individual health care systems are unclear. Our survey shows that at present there is little enthusiasm among doctor for the role of NEs in NZ.
There have been many studies on the quality, safety and efficacy of endoscopies delivered by NEs. There is more data in literature for support of the role of NEs in upper gastrointestinal endoscopies and flexible sigmoidoscopies.\textsuperscript{5,6} Data from such studies have shown that NEs are comparable to doctors in terms of the quality, safety and efficacy of endoscopic procedures.

Our survey shows that majority of our doctors want the role of NE to be limited to the diagnostic upper and lower endoscopy. This may be because almost 62\% of the participants thought that, in terms of the quality of endoscopy services, the doctors will perform better than NEs and hence their reluctance to allow NEs the full scope of endoscopic practice. There is no robust literature to support this viewpoint.

A recent feasibility study by Koonstra et al showed that the learning curve of a nurse for training in colonoscopy is similar to that of a doctor trainee and involves 150 supervised colonoscopies.\textsuperscript{7} The colonoscopy procedure generally requires the patient to be sedated and again the evidence so far is that nurses are as good as doctors in supervising sedation.\textsuperscript{8} Dellon, Lippmann, Sandler, & Shaheen, have reported that procedures staffed by less-experienced gastrointestinal endoscopy nurses have increased odds of missing polyps.\textsuperscript{9} However, a different study of well trained NEs has reported a higher adenoma detection rate by the NEs.\textsuperscript{10}

Our survey shows that only 43\% of the doctors thought that it is appropriate to enrol NEs in the National Bowel Cancer Screening programme if they meet accredited standards. Forty-one percent were against it and the rest were not sure. This is less than the 2009 survey of US Gastroenterologist, where the majority were supportive of the role of NE in screening endoscopies.\textsuperscript{11}

In our survey majority of the doctors did not believe that endoscopy costs will decrease with the introduction of NEs. In their open comments they have pointed to two specific issues relevant to the health economics of introducing NEs. Firstly, there will be at least initially, a spike in cost as the training programme for NE is established. Secondly, NEs will still require supervision from doctors (and hence their time) even if they are fully accredited as is happening in other developed countries.

In public hospitals, the reimbursement rate for the endoscopist is a small proportion of the overall cost of endoscopy. Therefore, the potentially lower reimbursement rate for NEs is unlikely to influence the overall cost of delivery of endoscopy services.

Richardson et al, in their MINuEt study, conclude that endoscopy delivered by nurses are unlikely to be more cost effective than doctors.\textsuperscript{12} In their analysis, although endoscopies by doctors were more costly, patients in the doctors group also gained more Quality Adjusted Life Years (QALY) than those in the nurses group.

Potential areas of cost cutting in endoscopy services in certain countries include registered nurse-administered propofol sedation for endoscopy instead of anaesthesiologists.\textsuperscript{13} This, however, does not apply to NZ as conscious sedation is administered in NZ by the doctors performing the procedure and not by the anaesthesiologists.

Patient satisfaction with NEs has been studied in literature with patient satisfaction rates comparable or even better in some surveys, than those of doctors.\textsuperscript{14} Majority of the doctors (62\%) in our survey also thought that patient satisfaction rates will be the
same with NEs as for doctors. However, the same number of doctors also thought that the clinical quality of services will be better delivered by the doctors.

Only 28% of the doctors had a positive attitude towards the introduction of NE in the provision of endoscopy services. One of the objections was the lack of teaching slots for such trainees as they will have to compete with medical/surgical trainees for such positions. Another potential reason may be their perception that NEs will deliver inferior quality of endoscopy services compared to doctors, although, there is clear support for that in literature.

At present, few of the doctors in NZ have exposure to NEs. It will be interesting to observe that, if NEs are introduced in the NZ setting, whether a subsequent survey of doctors will show any change in their opinion. Health Work Force New Zealand (HWNZ) recommends facilitation of nurse specialization including training NEs to free up doctors to do high level procedures but acknowledge that significant barriers have to be overcome.15 HWNZ recommends close collaboration between the involved stakeholders to develop the role of NEs in NZ.

It is important to end the discussion on the potential limitations of the study. It was not possible to obtain an in-depth and wide ranging qualitative data from each respondent. The quantitative nature of the study and the use of survey strategy to obtain data precluded that. The questionnaire was deliberately kept short for a better response rate.

The survey was restricted to the public sector and mainly to the Gastroenterologists, except for the smaller public hospitals without the services of Gastroenterologists, where the surgeons providing the endoscopy services were included in the study. Also, because of the basic version of the survey tool used (Survey monkey) it was not possible to compare the opinions of the respondent Gastroenterologists with the respondent surgeons.

Competing interests: This survey was carried out as a part of a ‘Masters’ degree with the Massey University.

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service-reviews/gastroenterology
APPENDIX

1. Gender
- Male
- Female

2. Type of practice
- Public
- Private
- Both

3. Place of practice
- Tertiary centre
- Non Tertiary centre

4. Other (please specify) [Text box]

4. Your expectation of the clinical quality of services provided by the Nurse endoscopists compared to medically qualified endoscopists (doctors).
- Better performance by the Nurse endoscopists
- No difference
- Better performance by the doctors

5. Any comment [Text box]
5. Your expectation of the patient experiences of endoscopy services provided by the Nurse Endoscopist compared to medical endoscopists

☐ Substantially better performance by the Nurse endoscopist
☐ Moderately better performance by the Nurse endoscopist.
☐ No difference
☐ Moderately better performance by the Medical endoscopist
☐ Substantially better performance by the Medical endoscopist.

Any comment

6. The expected impact on cost upon introduction of Nurse Endoscopists to the endoscopy service

☐ Decrease in cost
☐ No effect
☐ Increase in cost

Any comment

7. In your opinion the appropriate procedures that could be delegated to Nurse endoscopist are

☐ Diagnostic upper endoscopy only
☐ Diagnostic and therapeutic upper endoscopy only
☐ Diagnostic upper and lower endoscopy only
☐ Diagnostic and therapeutic upper and lower endoscopy

Other (please specify)
8. In your opinion, is it appropriate to enrol Nurse endoscopist in the National Bowel Cancer Screening programme.

☐ Yes
☐ No
☐ Not sure

Any comment

9. Your attitude towards the introduction of Nurse endoscopist

☐ Positive
☐ Neutral
☐ Negative

Any comment

10. Will you be willing to provide voluntary supervision for Nurse endoscopist if they are recruited in your department.

☐ Yes
☐ No

Any comment