Providing care for women with gynaecological malignancy: the need for a coordinated national approach

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Abstract

Gynaecological cancer services in New Zealand have followed an evolutionary process rather than being centrally organised according to evidence on best practice. A report was recently commissioned by the Ministry of Health to review gynaecological cancer services and to provide guidance on the most efficient and effective way to delivery high quality, equitable care for women diagnosed with gynaecological cancers.

It is apparent the sustainability of current services is compromised by disparities in access to evidence-based multidisciplinary care, significant workforce shortages and a lack of standardised formal referral protocols. Key recommendations of the report include the establishment of an overarching national gynaecological cancer steering group and ultimately a four centre hub and spoke model of care provision.

Gynaecological cancer services are a small, vulnerable but essential service for New Zealand women and their families. Access to gynaecological cancer services varies throughout the country and the quality of services is inconsistent. In addition resources are unequally distributed.

There are many similarities between public health services in the United Kingdom (UK) and New Zealand. In 1995, following reports of poor survival from cancers of multiple types in the UK as compared to its European neighbours, the Calman-Hine report was published.¹

Cancer services including gynaecological cancers² were subsequently reorganised, with one of the basic premises being the recognition of centres that provide specialist care and the formalisation of referral patterns and communication with referring services. The reorganisation of services is considered to have been successful and there is some evidence of improved outcomes.³

There is increasing recognition within the sector that national coordination of gynaecological cancer services is necessary in order to ensure all women with gynaecological cancer have equal and timely access to appropriate multidisciplinary specialist services into the future.

Recently a report to provide guidance on the configuration of gynaecological cancer services was commissioned by the Ministry of Health. This will soon be made available on the ministry of health website. Some of the major issues discussed in this report are highlighted in this paper.
Gynaecological cancer in New Zealand

Gynaecological cancers account for approximately 10% of cancer registrations and 10% of cancer deaths in New Zealand women. In 2008, 987 women had a new diagnosis of a gynaecological cancer, 413 with endometrial cancer, 296 with ovarian cancer and 173 with cervical cancer (see Figure 1).

Figure 1. Gynaecological cancer new registrations by type and by year, 2004–2008

In addition 107 women developed cancers at other sites including the uterine muscle, fallopian tube, vulva and vagina. An undocumented number of women will also have developed gestational trophoblastic neoplasia (GTN)(molar pregnancy or choriocarcinoma).

In 2007 there were 199 deaths from ovarian cancer, 81 from endometrial cancer, 65 from cervical cancer and 57 from other gynaecological cancers.

Despite the reduction in cervical cancers due to cervical screening and a further anticipated reduction due to the HPV vaccine, a significant increase in gynaecological cancer presentations can be anticipated due to the increasing age and incidence of obesity in our population.
Overview of gynaecological cancers and their treatment

Endometrial cancer, the most common gynaecological cancer, is associated with obesity and nulliparity. It normally occurs in postmenopausal women and comorbidity is a frequent problem. Fortunately the majority of patients present with early stage disease and are cured following hysterectomy. However a significant proportion have advanced disease or high risk histological types which require complex management. In order to optimise care, it is important that multimodality treatment including surgery, radiotherapy and chemotherapy and other medical interventions are considered.

Ovarian cancer is the fifth most common cause of cancer mortality for New Zealand women. It constitutes a remarkably diverse range of diseases with different biological behaviours requiring differing therapeutic approaches. Generally, patients with ovarian cancer present at a mean age of 64 and unfortunately tend to present with advanced stage disease. The best outcomes are achieved through a combination of chemotherapy and radical surgery. However radiotherapy and novel therapeutic drugs have an important therapeutic role.

The cervix remains an important site of cancer where it often occurs in relatively young women. The fact that this is more common and associated with a worse prognosis in Maori women is well documented. Treatment involves careful pretreatment evaluation, radical surgery, radiotherapy and chemotherapy.

The uncommon vulval and vaginal cancers are treated with a combination of radical surgery and radiotherapy. A coordinated approach between gynaecologists and medical oncologists with relevant expertise is also required for the treatment of GTN.

Psychosocial support, palliative care and familial cancer services are essential aspects of care for women with gynaecological cancer. While this is true for many who suffer from cancer there are unique aspects of gynaecological cancers that make coordination between specialty services and community based care a specific requirement.

Personnel and other requirements

To provide an appropriate standard of care, it is clear a team approach is required. This team must include a gynaecological surgeon with specific expertise in gynaecological cancer (gynaecological oncologist), a medical oncologist with specific expertise in gynaecological cancer, a radiation oncologist with expertise in gynaecological cancer and brachytherapy, an expert gynaecological pathologist, a radiologist with experience in the field, and nursing staff with appropriate skills and experience.

For the service to be able to operate 52 weeks a year there needs to be duplication of these personnel and to ensure that the service is sustainable, training positions are required.

In addition external beam radiation and brachytherapy facilities are necessary as well as imaging, operating theatres and high dependency post operative facilities.
These resources can only be assembled in a tertiary referral service. To achieve an adequate case load to maintain expertise and support a comprehensive service, a referral population of approximately 1,000,000 is required.1

Although more recent publications suggest a population of 750,000 may be adequate. While in the past many gynaecologists have offered treatment for gynaecological malignancies, this is no longer considered to be within the field of practice of general obstetrics and gynaecology.

Subspecialty training and accreditation in gynaecological oncology has been recognised by the royal Australia and New Zealand college of Obstetrics and Gynaecology since 1988 and similar subspecialty accreditation exists in the UK, North America and Europe.

To ensure the optimal distribution and use of subspecialty units are achieved it is important that their development is organised and that communication with secondary and primary health services patients and their families is excellent.

Evidence to support tertiary care

The organisation of subspecialty services is rarely without controversy. While the potential advantages are easily argued, potential concerns include costs, unnecessary or unwanted travel for patients, cross DHB funding, disagreement between health professionals regarding who should provide care, down skilling of general specialists and ongoing difficulties staffing small and potentially vulnerable services.

However in the current environment we cannot go without subspecialty gynaecological cancer services. Some treatments can only be offered by subspecialty surgeons and oncologists that have had the appropriate training and have access to appropriate facilities. For other patients there is some degree of choice about where and by whom treatment is delivered. For these women it is important to recognise there are a large number of publications that document that women with ovarian cancer have a better prognosis if they are cared for in a tertiary referral unit and are operated on by a gynaecological oncologist.7–10

A recent Cochrane review adds weight to this argument.11 There is also evidence that multidisciplinary meetings make an important contribution to patient care12,13 and that women with endometrial cancer have improved outcomes when treated in specialist units.14

Cost efficiencies may be gained in larger units due to familiarity with treatments and careful evidence based protocol development.7,15 It is therefore considered important that all women have their case presented at a regional MDM and that decisions regarding treatment are made in conjunction with the regional gynaecological cancer team.

The role of ongoing research in the improvement of patient care must be acknowledged. Tertiary referral units with links to academic institutions are best placed to make a significant contribution to clinical research. Involving more New Zealand women in large international multicentre clinical trials will ensure treatments are consistent with international best practice and will contribute in the long term to improvements and efficiencies in care.
Personnel shortages

Staffing of specialty services in a small nation such as New Zealand represents challenges. It is estimated that the country is currently short of at least 3.7 full time equivalent (FTE) gynaecological oncologists. There are also workforce shortages in all other disciplines including medical and radiation oncology, gynaecological pathology and gynaecological cancer nurse specialists.

In order to plan workforce development, DHBs will need to fund the required FTEs. This will in turn create career pathways for trainees. Training positions for senior registrars in gynaecological oncology and related disciplines need to be developed and where necessary accreditation of overseas trained specialist should be supported.

Distribution of care

It is clear that gynaecological cancer treatment resources are not evenly distributed throughout the country. Figures 2 and 3 demonstrate referral pathways for gynaecological cancer patients receiving gynaecological surgery in New Zealand. These reveal quite significant differences in referral patterns geographically.

Figure 2. Gynae-oncology surgery volumes from 2004–2008 cohort in the South Island
Figure 3 Gynae-oncology surgery volumes from 2004–2008 cohort in the North Island

Figure 2 and 3. Percentage figures represent the percentage of women with gynaecological cancer receiving surgery in that site, for example for women from the Bay of Plenty 65% receive their surgery locally, 14% travel to Waikato Hospital and 19% to Auckland whereas in Nelson and Greymouth 40% is done locally and 58 and 60% of patients travel to Christchurch Hospital.

In the South Island, about 60% of women in smaller centres receive surgery in tertiary subspecialty services. In the North Island where there are only 3 subspecialty accredited gynaecological oncologists in the public sector, all of whom are based in Auckland, a lower and more variable percentage of women are able to access subspecialty services. For example only 37% of women with gynaecological cancer from northland receive surgery in a tertiary centre and from the Bay of Plenty only 19% receive surgery under the care of a gynaecological oncologist.

With a population of about 1 million, well established referral pathways and adequate specialist staffing, the South Island perhaps offers the most functional model of tertiary referral. Christchurch is able to offer a comprehensive service, has a weekly multidisciplinary meeting, its resources include 2 resident subspecialty accredited gynaecological oncologists and brachytherapy services. It operates a hub and spoke type model with a regional service in Dunedin.

In Dunedin a multidisciplinary meeting is held every 2 weeks in conjunction with local gynaecologists, medical and radiation oncologists and a visiting gynaecological
oncologist from Christchurch. Gynaecologists from Southland are able to teleconference into this meeting.

**A four centre model**

The UK has successfully organised its gynaecological oncology services\(^2\), utilising the concept of comprehensive centres and smaller satellite units similar to the model in the South Island. This is backed up with excellent teleconferencing facilities which facilitate multidisciplinary care for patients in smaller centres. The authors believe this model is well-suited to the needs of the New Zealand population and geography.

Following the Ministry’s commissioned review of gynaecological cancer services, extensive discussion with medical practitioners providing care for women with gynaecological cancer, and a survey of interested parties, it was considered that four comprehensive gynaecological cancer centres in Auckland, Hamilton, Wellington and Christchurch would best meet the needs of New Zealand women.

Services in Hamilton and Wellington are particularly vulnerable due to significant staff and resourcing issues. In addition, the referral population for Hamilton (Midland region) is low at 669,000 (in comparison to the 750 thousand to 1 million population required to support a gynaecological cancer centre). It is clear that the establishment of sustainable comprehensive services from these centres is a long term plan. In the interim the support and development of these two centres and ensuring that New Zealand women have equity of access to treatment will be immediate goals.

**Need for national coordination body**

In order to further develop national gynaecological cancer services in a coordinated manner the formal establishment of a gynaecological cancer steering group is proposed. This group would include representatives from all 4 major centres and all key medical and nursing disciplines as well as other key stakeholders including the Royal Australian and New Zealand College of Obstetricians and Gynaecologists. This group would work with the Ministry of Health, regional cancer networks and District Health Boards, to support the establishment of these four comprehensive centres and to facilitate the most efficient use of available resources, until the centres are fully established.

In addition a work program on common treatment protocols referral guidelines and data collection would commence. Similar national approaches to cancer services are underway for lung cancer and paediatric oncology.

**Conclusion**

The reorganisation of New Zealand gynaecological cancer services is necessary to ensure sustainable and more equitable access to high quality care. Lack of clarity regarding models of care has contributed to a fragmented approach to service delineation and service development.

A recent report submitted to the Ministry of Health offers a framework for the development of a sustainable, equitable national gynaecological cancer service. The Ministry of health has recently requested regional health boards establish 8 national tumour stream advisory groups. The gynaecology group has been asked to advise the
ministry on the appropriate number of tertiary gynaecological centres for New Zealand and to develop standards for service provision.

The authors hope that for the sake of New Zealand women and their families that such initiatives will continue to be supported in a way that will lead to a coordinated national approach and improved equitable outcomes for women with gynaecological cancer.

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