Changing a nation: The development and evaluation of a training program for oncology health professionals in the provision of genetic testing for ovarian cancer patients

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BACKGROUND

- Approximately 15% of women with high-grade, non-mucinous, epithelial ovarian/fallopian tube/peritoneal cancer (EOC) carry a germline mutation in *BRCA1/2* with up to 40% of carriers having no significant family history¹.
- Traditional genetic testing models rely on family history of breast and/or ovarian cancer and require referral to a family cancer clinic (FCC), with referral and testing rates remaining poor in most countries.
- Mainstreaming testing, a model of Genetic testing provided through normal oncology services with FCC follow up as required, has been shown to increase the rate and turn around time for results for EOC women^{2,3}.
- We have developed a clinical training initiative to introduce a ‘mainstreaming’ approach to genetic testing for women with EOC cancer in all cancer centres at an Australasian wide effort.

METHODS

- A training module was developed for use by core educators for small group sessions.
- The module includes: a presentation describing the rationale behind and suggested approach to mainstream testing in EOC patients including consenting and providing results, a resource folder containing: a suggested flowchart (Fig 1), site specific consent and request forms developed for each site (Fig 2), suggested script or cue sheets for non genetics specialists and patient information brochures about gene testing (Fig 3)
- Non-genetics, oncology healthcare providers were invited to take part in seminars at their local hospital or at local or national educational meetings with participants being provided with a resource folder at the seminar to use in their local site.
- Genetic testing: Copies of the completed forms were sent to both the testing laboratories and the local FCC with testing results given to the patient by local oncology team members.
- FCC referral was arranged when the result was: mutation positive, a variant of uncertain significance or where there was no mutation identified but additional relevant family history of cancers
- All trainees were surveyed at baseline to assess perceived skills, competence and barriers using a validated tool in offering genetic testing to women with EOC and will be surveyed again at 12 months to determine changes

Request Form for Mainstream Genetic/DNA Testing for BRCA1/BRCA2

• Must be used for non-Medical Benefits Schedule items
• Before testing is commenced the laboratory will require the signed consent form for analysis of Genes Associated with Breast and Ovarian Cancer: BRCA1 and BRCA2

Send to courier/express post to:

Sample Date Drawn: (dd/mm/yyyy)

Collector's signature:

Collection Site:

Blood: EDTA (Collect 2 x 9ml)
Minimum: (Collect 2 x 5ml)
Transport at room temperature (+25°C within 72 hours)

Purpose of Test: BRCA1 & BRCA2 Screen

URGENT

Clinical Notes (see over)

Tests requested by:

Name:

Address:

Telephone:

Signature:

Copy of result to: (Contact at local Family Cancer Service ONLY)
Name:

Address:

FAX:

EMAIL:

Note: Incomplete request slips will not be processed by the laboratory

Figure 2

Figure 3

RESULTS

- All 16 FCCs throughout Australia participated in this clinical and research initiative.
- One hundred and eighty-five oncology health professionals have been trained in 42 workshops.
- Site specific training was carried out in 29 hospitals: 19 of these were within urban areas and 10 from nonurban areas.
- Of these, 12 of the 29 hospitals had no onsite FCC.
- Those trained included: 85 (45.9%) medical oncologists, 27 nurses (14.6%), 42 (22.7%) gynae-oncologists, 7 (3.8%) obstetricians and gynaecologists, and 24 (13%) ‘Other’ (researchers, trial or care coordinators, palliative physicians, radiation oncologists, breast surgeons).
- At baseline, 114 (73.1%) oncology health professionals were aware of national referral and testing guidelines
- Of the oncology health professionals: 47 (30.1%) ‘Always’ referring women who meets guidelines for *BRCA1/2* genetic testing, 51 (32.7%) ‘Nearly always’, 22 (14.1%) ‘Sometimes’, 14 (9%) ‘Very little’ and 19 (12.2%) ‘Never’.

CONCLUSIONS

- Non-genetics specialists have demonstrated a willingness to be involved in the provision of genetic testing for selected high-risk groups such as high grade EOC
- This allows wider testing to individuals without the necessity, in most cases, of additional FCC appointments.
- This model is being trialled in other tumour types with ongoing plans for assessment of patient and clinician preference and economic evaluations

Figure 1

REFERENCES

- 1 Alsop et al J Clin Oncol. 2012 Jul 20;30(21):2654-63
- 2 Kentwell et al, Gynecol Oncol. 2017 Apr;145(1):130-136.
- 3 George et al, Sci Rep. 2016 Jul 13;6:29506

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