

Supplementary materials

Questionnaire

(V2 – 2020)

A cross sectional survey of health care professionals' knowledge, attitude and current behaviours towards female fertility preservation services within the UK

1. Demographic information

a) Age (years)

- | | |
|-------|--------------------------|
| 20-25 | <input type="checkbox"/> |
| 26-30 | <input type="checkbox"/> |
| 31-35 | <input type="checkbox"/> |
| 36-40 | <input type="checkbox"/> |
| 41-45 | <input type="checkbox"/> |
| 46-50 | <input type="checkbox"/> |
| 51-55 | <input type="checkbox"/> |
| >56 | <input type="checkbox"/> |

b) Ethnicity

- | | |
|----------------------|--------------------------|
| White | <input type="checkbox"/> |
| Asian | <input type="checkbox"/> |
| Black | <input type="checkbox"/> |
| Mixed | <input type="checkbox"/> |
| Other | <input type="checkbox"/> |
| Would rather not say | <input type="checkbox"/> |

c) Speciality

- | | |
|---|--------------------------|
| Obstetrics and Gynaecology (General) | <input type="checkbox"/> |
| Subspecialty if applicable: | |
| Gynaecological Oncology | <input type="checkbox"/> |
| Reproductive Medicine | <input type="checkbox"/> |
| Urogynaecology | <input type="checkbox"/> |
| Maternal and Fetal medicine | <input type="checkbox"/> |
| General Practice | <input type="checkbox"/> |

- | | |
|-----------------------|--------------------------|
| Clinical Oncologist | <input type="checkbox"/> |
| Medical Oncologist | <input type="checkbox"/> |
| Haematologist | <input type="checkbox"/> |
| Breast Surgeons | <input type="checkbox"/> |
| Paediatrician | <input type="checkbox"/> |
| Paediatric Oncologist | <input type="checkbox"/> |

d) Current Position

- | | |
|---|--------------------------|
| Consultant | <input type="checkbox"/> |
| Speciality Registrar (ST3-ST5) | <input type="checkbox"/> |
| Speciality Registrar (ST6-ST7) | <input type="checkbox"/> |
| Speciality Senior House officer (ST1-ST2) | <input type="checkbox"/> |
| Subspecialist Trainee | <input type="checkbox"/> |
| Staff Grade registrar | <input type="checkbox"/> |
| Staff Grade SHO | <input type="checkbox"/> |
| Associate specialist | <input type="checkbox"/> |
| Other | <input type="checkbox"/> |

e) Did you complete your undergraduate training in the UK

- | | |
|-----|--------------------------|
| Yes | <input type="checkbox"/> |
| No | <input type="checkbox"/> |

f) Did you complete your speciality training in the UK?

- | | |
|-----|--------------------------|
| Yes | <input type="checkbox"/> |
| No | <input type="checkbox"/> |

g) Type of cancer pathology commonly seen (tick all)

- | | |
|------------------------------|--------------------------|
| Breast | <input type="checkbox"/> |
| Gynaecological | <input type="checkbox"/> |
| Urological | <input type="checkbox"/> |
| Haematological | <input type="checkbox"/> |
| Gastrointestinal | <input type="checkbox"/> |
| Lung | <input type="checkbox"/> |
| Head and neck | <input type="checkbox"/> |
| Central nervous system (CNS) | <input type="checkbox"/> |
| Paediatric | <input type="checkbox"/> |
| Sarcoma | <input type="checkbox"/> |
| Other | <input type="checkbox"/> |

h) Deanery

- | | |
|------------------------------|--------------------------|
| East Midlands | <input type="checkbox"/> |
| East of England | <input type="checkbox"/> |
| Kent Surrey and Sussex | <input type="checkbox"/> |
| London | <input type="checkbox"/> |
| North East and North Cumbria | <input type="checkbox"/> |
| North West | <input type="checkbox"/> |
| Oxford | <input type="checkbox"/> |
| Peninsula | <input type="checkbox"/> |
| Severn | <input type="checkbox"/> |
| West Midlands | <input type="checkbox"/> |
| Wessex | <input type="checkbox"/> |
| Yorkshire and Humber | <input type="checkbox"/> |

Scotland:

- | | |
|------------------|--------------------------|
| North | <input type="checkbox"/> |
| South East | <input type="checkbox"/> |
| East | <input type="checkbox"/> |
| West | <input type="checkbox"/> |
| Wales | <input type="checkbox"/> |
| Northern Ireland | <input type="checkbox"/> |

i) Qualifications

- | | |
|----------------|--------------------------|
| MRCP | <input type="checkbox"/> |
| FRCP | <input type="checkbox"/> |
| MRGP | <input type="checkbox"/> |
| MRCOG | <input type="checkbox"/> |
| FRCOG | <input type="checkbox"/> |
| MRCS | <input type="checkbox"/> |
| FRCS | <input type="checkbox"/> |
| FRCR | <input type="checkbox"/> |
| Other | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

2. Current practice of fertility preservation

- a) How often do you discuss the impact a patient's condition and or treatment might have on their future fertility?**

Never	<input type="checkbox"/>
Once a year	<input type="checkbox"/>
Once a month	<input type="checkbox"/>
Once a week	<input type="checkbox"/>
Everyday	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

- b) How often do you discuss the impact a patient's condition and or treatment might have on their future fertility with their partner/relatives/parents?**

Never	<input type="checkbox"/>
Once a year	<input type="checkbox"/>
Once a month	<input type="checkbox"/>
Once a week	<input type="checkbox"/>
Everyday	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

- c) How often do patients voluntarily initiate discussions regarding the risks of infertility related to treatment?**

Never	<input type="checkbox"/>
Once a year	<input type="checkbox"/>
Once a month	<input type="checkbox"/>
Once a week	<input type="checkbox"/>
Everyday	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

- d) How often do you discuss fertility preservation techniques when counselling patients prior to treatment?**

Never	<input type="checkbox"/>
Once a year	<input type="checkbox"/>
Once a month	<input type="checkbox"/>
Once a week	<input type="checkbox"/>
Everyday	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

- e) If so, what methods of fertility preservation techniques do you routinely discuss?**

- | | |
|---------------------------------|--------------------------|
| Embryo cryopreservation | <input type="checkbox"/> |
| Oocyte cryopreservation | <input type="checkbox"/> |
| Ovarian tissue cryopreservation | <input type="checkbox"/> |
| Transposition of the ovaries | <input type="checkbox"/> |
| GnRH agonist with chemotherapy | <input type="checkbox"/> |

Experimental techniques:

- | | |
|------------------------------|--------------------------|
| Transplantation of the ovary | <input type="checkbox"/> |
| None of the above | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

f) How often do you refer patients to see a fertility specialist?

- | | |
|----------------|--------------------------|
| Never | <input type="checkbox"/> |
| Once a year | <input type="checkbox"/> |
| Once a month | <input type="checkbox"/> |
| Once a week | <input type="checkbox"/> |
| Everyday | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

g) How often do you consult a fertility specialist or a reproductive endocrinologist for advice with questions about potential fertility issues in your patients?

- | | |
|----------------|--------------------------|
| Never | <input type="checkbox"/> |
| Once a year | <input type="checkbox"/> |
| Once a month | <input type="checkbox"/> |
| Once a week | <input type="checkbox"/> |
| Everyday | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

h) Do you provide patients with written information about fertility preservation?

- | | |
|----------------|--------------------------|
| Yes | <input type="checkbox"/> |
| No | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

i) Do you feel patients have enough access to written or online materials regarding fertility preservation e.g. leaflets?

- | | |
|-------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |

Neither agree nor disagree	<input type="checkbox"/>
Agree	<input type="checkbox"/>
Strongly agree	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

j) Do you feel that patients have enough access to fertility preservation auxiliary care e.g. specialist nurses?

Strongly disagree	<input type="checkbox"/>
Disagree	<input type="checkbox"/>
Neither agree nor disagree	<input type="checkbox"/>
Agree	<input type="checkbox"/>
Strongly agree	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

k) Are you satisfied with the amount of fertility preservation discussion with patients within your personal practice?

Very dissatisfied	<input type="checkbox"/>
Dissatisfied	<input type="checkbox"/>
Neither satisfied nor dissatisfied	<input type="checkbox"/>
Satisfied	<input type="checkbox"/>
Very satisfied	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

l) Are you satisfied with the amount of fertility preservation discussion with patients within your unit?

Very dissatisfied	<input type="checkbox"/>
Dissatisfied	<input type="checkbox"/>
Neither satisfied nor dissatisfied	<input type="checkbox"/>
Satisfied	<input type="checkbox"/>
Very satisfied	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

3. Knowledge of Fertility Preservation

a) **Are you aware of the risks of infertility with the treatments you offer to patients of reproductive age routinely? (surgical or medical)**

- | | |
|------------------|--------------------------|
| Not at all aware | <input type="checkbox"/> |
| Slightly aware | <input type="checkbox"/> |
| Moderately aware | <input type="checkbox"/> |
| Very aware | <input type="checkbox"/> |
| Extremely aware | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

b) **How would you agree with the following statements:**

‘I feel confident to counsel a woman of reproductive age about fertility preservation?’

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

c) **How would you describe your level of knowledge of the following fertility preservation techniques:**

Embryo cryopreservation:

- | | |
|----------------|--------------------------|
| Very poor | <input type="checkbox"/> |
| Poor | <input type="checkbox"/> |
| Fair | <input type="checkbox"/> |
| Good | <input type="checkbox"/> |
| Excellent | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

Oocyte cryopreservation:

- | | |
|----------------|--------------------------|
| Very poor | <input type="checkbox"/> |
| Poor | <input type="checkbox"/> |
| Fair | <input type="checkbox"/> |
| Good | <input type="checkbox"/> |
| Excellent | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

Ovarian tissue cryopreservation:

Very poor	<input type="checkbox"/>
Poor	<input type="checkbox"/>
Fair	<input type="checkbox"/>
Good	<input type="checkbox"/>
Excellent	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

Transposition of the ovaries:

Very poor	<input type="checkbox"/>
Poor	<input type="checkbox"/>
Fair	<input type="checkbox"/>
Good	<input type="checkbox"/>
Excellent	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

GnRH agonist with chemotherapy:

Very poor	<input type="checkbox"/>
Poor	<input type="checkbox"/>
Fair	<input type="checkbox"/>
Good	<input type="checkbox"/>
Excellent	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

Experimental techniques

Transplantation of the ovary:

Very poor	<input type="checkbox"/>
Poor	<input type="checkbox"/>
Fair	<input type="checkbox"/>
Good	<input type="checkbox"/>
Excellent	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

d) Do you think fertility preservation would delay the patient undergoing treatment for their underlying condition?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Unsure	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

- e) **Are you aware of the health risks to the mother associated with pregnancy after completing treatment for cancer?**

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Unsure	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

4. Attitudes towards fertility preservation

- a) **Do you think it is your responsibility to discuss fertility preservation with your patient prior to undergoing treatment?**

Strongly disagree	<input type="checkbox"/>
Disagree	<input type="checkbox"/>
Neither agree nor disagree	<input type="checkbox"/>
Agree	<input type="checkbox"/>
Strongly agree	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

- b) **Do you think it is your responsibility to discuss fertility preservation with your patient's partner/close relatives prior to undergoing treatment?**

Strongly disagree	<input type="checkbox"/>
Disagree	<input type="checkbox"/>
Neither agree nor disagree	<input type="checkbox"/>
Agree	<input type="checkbox"/>
Strongly agree	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

- c) **Which of the following best represents the age up to which you would consider fertility preservation advice relevant for a woman?**

20-25	<input type="checkbox"/>
26-30	<input type="checkbox"/>
31-35	<input type="checkbox"/>
36-40	<input type="checkbox"/>
41-45	<input type="checkbox"/>
46-50	<input type="checkbox"/>

- d) **How would you rate the following statements:**

'Fertility preservation is a high priority for me to discuss with newly diagnosed cancer patients'

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

e) 'Fertility preservation is a high priority for me to discuss with the partner or relative of a newly diagnosed cancer patient'

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

f) 'I am willing to provide a less effective cancer treatment regimen in order to attempt to preserve a patient's fertility'

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

g) 'Treating the underlying condition is more important than fertility preservation'

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

h) 'When I plan the patient's treatment regimen I take into account their desire for future fertility'

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |

Agree ☐

Strongly agree ☐

Not applicable ☐

i) 'Patients with a poor prognosis should not pursue fertility preservation'

Strongly disagree ☐

Disagree ☐

Neither agree nor disagree ☐

Agree ☐

Strongly agree ☐

Not applicable ☐

j) 'Offering information about fertility preservation during my consultation upsets patients'

Strongly disagree ☐

Disagree ☐

Neither agree nor disagree ☐

Agree ☐

Strongly agree ☐

Not applicable ☐

k) 'Fertility preservation is not necessary in women who already have children'

Strongly disagree ☐

Disagree ☐

Neither agree nor disagree ☐

Agree ☐

Strongly agree ☐

Not applicable ☐

l) 'The success rates of fertility preservation are not good enough to make it a viable option'

Strongly disagree ☐

Disagree ☐

Neither agree nor disagree ☐

Agree ☐

Strongly agree ☐

m) Do you think it is important to provide psychological counselling to patients who have risk of infertility before or during cancer treatment?

Strongly disagree ☐

Disagree ☐

- Neither agree nor disagree ☐
- Agree ☐
- Strongly agree ☐

n) Do you think patients would benefit from access to further auxiliary care e.g. specialist fertility nurse within your unit?

- Strongly disagree ☐
- Disagree ☐
- Neither agree nor disagree ☐
- Agree ☐
- Strongly agree ☐
- Not applicable ☐

5. Barriers to fertility preservation

a) What factors influence your decision to discuss fertility preservation:

Patient's age

- Strongly disagree ☐
- Disagree ☐
- Neither agree nor disagree ☐
- Agree ☐
- Strongly agree ☐
- Not applicable ☐

b) Relationship status of the patient

- Strongly disagree ☐
- Disagree ☐
- Neither agree nor disagree ☐
- Agree ☐
- Strongly agree ☐
- Not applicable ☐

c) If the patient already has children

- Strongly disagree ☐
- Disagree ☐
- Neither agree nor disagree ☐

- | | |
|----------------|--------------------------|
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

d) Time constraints in clinic

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

e) Lack of knowledge regarding available options

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

f) Concerns that fertility treatment would compromise success of cancer treatment

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |
| Not applicable | <input type="checkbox"/> |

g) Concerns that fertility treatment would delay cancer treatment

- | | |
|----------------------------|--------------------------|
| Strongly disagree | <input type="checkbox"/> |
| Disagree | <input type="checkbox"/> |
| Neither agree nor disagree | <input type="checkbox"/> |
| Agree | <input type="checkbox"/> |
| Strongly agree | <input type="checkbox"/> |

Not applicable ☐

h) Lack of fertility services within the area

Strongly disagree ☐

Disagree ☐

Neither agree nor disagree ☐

Agree ☐

Strongly agree ☐

Not applicable ☐

i) Patient does not express their interest

Strongly disagree ☐

Disagree ☐

Neither agree nor disagree ☐

Agree ☐

Strongly agree ☐

Not applicable ☐

j) The patient has a high risk of recurrence or poor prognosis

Strongly disagree ☐

Disagree ☐

Neither agree nor disagree ☐

Agree ☐

Strongly agree ☐

Not applicable ☐

k) The patient appears distressed or overwhelmed about her diagnosis and or treatment

Strongly disagree ☐

Disagree ☐

Neither agree nor disagree ☐

Agree ☐

Strongly agree ☐

Not applicable ☐

6. Knowledge of local fertility preservation services

- a) **Do you have the facility to perform the following fertility preservation techniques within your local trust on the NHS?**

Embryo cryopreservation

- Yes ☐
- No ☐
- Unsure ☐
- Not applicable ☐

Oocyte cryopreservation

- Yes ☐
- No ☐
- Unsure ☐
- Not applicable ☐

Ovarian tissue cryopreservation

- Yes ☐
- No ☐
- Unsure ☐
- Not applicable ☐

Transposition of the ovaries

- Yes ☐
- No ☐
- Unsure ☐
- Not applicable ☐

GnRH agonist with chemotherapy

- Yes ☐
- No ☐
- Unsure ☐
- Not applicable ☐

**Experimental techniques:
Transplantation of the ovary**

- Yes ☐
- No ☐
- Unsure ☐

Not applicable ☐

b) If not, for each of the following fertility preservation techniques, do you know where to refer patients locally?

Embryo cryopreservation

Yes ☐

No ☐

Unsure ☐

Not applicable ☐

Oocyte cryopreservation

Yes ☐

No ☐

Unsure ☐

Not applicable ☐

Ovarian tissue cryopreservation

Yes ☐

No ☐

Unsure ☐

Not applicable ☐

Transposition of the ovaries

Yes ☐

No ☐

Unsure ☐

Not applicable ☐

GnRH agonist with chemotherapy

Yes ☐

No ☐

Unsure ☐

Not applicable ☐

Experimental techniques-Transplantation of the ovary

Yes ☐

No ☐

Unsure ☐

Not applicable ☐

c) Do you have clear referral pathways within your trust to fertility preservation specialists?

Yes ☐

No ☐

Unsure ☐

Not applicable ☐

d) Does your trust have any local guidelines regarding fertility preservation in women of reproductive age diagnosed with cancer?

Yes ☐

No ☐

Unsure ☐

Not applicable ☐

e) How would you rate access to fertility preservation for patients within your unit?

Very poor ☐

Poor ☐

Fair ☐

Good ☐

Excellent ☐

Not applicable ☐

f) How would you rate access to fertility preservation for patients within your local trust?

Very poor ☐

Poor ☐

Fair ☐

Good ☐

Excellent ☐

Not applicable ☐

g) Which of the following best describes your professional links with the reproductive medicine unit that is closest to you?

Very poor ☐

Poor ☐

Fair ☐

Good ☐

Excellent ☐

Not applicable ☐

7. Training of Fertility preservation

a) Have you ever had formal training on fertility preservation?

Yes ☐

No ☐

Not applicable ☐

b) Do you feel you need more knowledge/formal training on fertility preservation options?

Yes ☐

No ☐

Not applicable ☐

c) Do you feel your unit needs more knowledge/formal training on fertility preservation options?

Yes ☐

No ☐

Not applicable ☐

d) Have you consulted any of the following resources for further information on fertility issues?

NICE fertility guidelines CG156 (2013)

Yes ☐

No ☐

Not applicable ☐

ESHRE Female Fertility Preservation Guideline 2020

Yes ☐

No ☐

Not applicable ☐

Peer reviewed literature

Yes ☐

No ☐

Not applicable ☐

Patient education materials

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

**Education materials provided by professional training body
(e.g. CPD/E- learning modules)**

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

Other

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>