National audit of incontinence surgery in the United Kingdom

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GYNAECOLOGY

National audit of incontinence surgery in the United Kingdom

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Summary
The aim of the study was to describe the experience, current trends and management of incontinence surgery for urodynamic stress incontinence (USI) in the United Kingdom. The study was a postal questionnaire survey that was sent to a cohort of surgeons known to be performing continence surgery. The subjects addressed included the considered role of the surgeon, the total number and type of operations performed in the last year, urodynamics and physiotherapy prior to incontinence surgery, operative complications, post-operative advice and follow-up (lengths and methods). The response rate was 54%. Large variations were found in all areas. The survey provides evidence of the number of incontinence operations performed, potentially important trends and differences in the practice and management of incontinence in the United Kingdom. This survey may be helpful in making guidelines and standards for audit at regional, local and individual levels as well as recommendations for strategies to enhance professional expertise in urogynaecology in the United Kingdom.

Introduction
Urinary incontinence is an important health problem and affects 14% of the adult female population in the United Kingdom (Brocklehurst, 1993). Urodynamic stress incontinence (USI) is the most common form of urinary incontinence in women (Keane et al., 1992). Cure rates of around 50% have been reported with physiotherapy (Bo et al., 1999) and surgery is recommended for those who fail to respond. Many surgical procedures have been described to treat USI depending upon the group of patients, the surgeon’s choice and the availability of the procedure in the National Health Service (NHS). Burch colposuspension has been widely used in uncomplicated primary cases (Burch, 1961), sling procedures in recurrent and low pressure urethra cases (Jarvis, 1994) and needle suspension in elderly patients (Peattie and Stanton, 1989). The less invasive techniques include peri-urethral injections of different bulking agents (Monga et al., 1995) and the tension-free vaginal tape (TVT) procedure (Ulmsten et al., 1999). This paper attempts to outline the incontinence operations, experience and practices prevailing in the United Kingdom. This is the first national survey to report the management of USI in the United Kingdom.

Materials and methods
Between February 2002 and October 2002, questionnaires were mailed across the United Kingdom to a recognised cohort of 1066 consultants who perform incontinence surgery. A second mailing was sent to non-responders. Ethicon Ltd facilitated this study, as they possess a database of surgeons in the United Kingdom known to be performing continence surgery—members of the female section of British Association of Urological Surgeons (BAUS), members of the British Society of Urogynaecology (BSUG), users of their products and potential customers for their products. Although the database may not include all surgeons performing continence surgery in the United Kingdom, there are currently no other methods of identifying continence surgeons. Department of Health statistics may under-report continence surgery. There may be difficulty in defining whether an anterior repair has been performed for prolapse or incontinence. Only the major operation in combined surgery is recorded and a TVT performed with another operation may not be identified. A TVT performed with an anterior repair will be coded as anterior repair and a colposuspension with a hysterectomy may be coded as a hysterectomy.

A four-page, 29-item, self-administered questionnaire was formulated and sent to all surgeons who perform continence surgery. The questionnaire consisted of a general section on continence surgery and a second shorter section looking specifically at TVT. This paper relates to the data collected from the general section of the questionnaire. The Department of Health urinary incontinence health outcomes indicators document (Brocklehurst et al., 1999) was used to derive general questions regarding auditable standards for continence services in the secondary care setting. The questionnaire was anonymised to encourage the supply of honest results, but consultants completing the questionnaire had the option of supplying their names. All the replies were sent to the authors and Ethicon had no access to unanonymised data. Ethicon representatives were not involved in the preparation of any publications relating to the questionnaire.

The questionnaire was designed to identify the surgical preferences among a cohort of recognised continence surgeons. It was divided into two sections. The first section dealt with respondents’ speciality and degree of specialisation. Surgeons were asked to class their practice as that of a general gynaecologist, subspecialist urogynaecologist, special interest urogynaecologist or urologist. The length of time as a consultant was identified. The surgeons were...
queried about the total number and type of operations performed in the previous year and the preferred surgical method for USI. They were also asked about the urodynamics and physiotherapy prior to incontinence surgery, operative complications, postoperative advice and follow-up protocols. Surgeons were asked whether they would be willing to audit their outcome data and also which data should be collected. All responses were assessed on mainly three points, namely yes, no and don’t know, and if the answer was yes, more detailed answers were needed.

Three clerks entered data into a database (Access, Microsoft). A manual check was made of 70% of the questionnaires by one of the authors (AT) and any discrepancies amended. The questionnaire is available from the principal author upon request. The questionnaire was commissioned by the BSUG Audit Committee on the basis that it would give evidence of current practice and would identify further areas for formal research.

Results

One thousand and sixty-six surgeons were contacted and 578 (54%) completed and returned the questionnaire. The response rate was higher for TVT users, with 81% of this group responding. Ninety-one per cent of BSUG members responded. Of the 578 responding surgeons, 230 (40%) identified themselves as primary general gynaecologists, 179 (31%) described themselves as special interest urogynaecologists, 136 (25%) were urologists and 19 (3%) classified themselves as having a subspecialist urogynaecological practice. Fourteen surgeons (2%) did not classify themselves. Of 578 respondents, 25% had been consultants for less than 5 years, 31% between 5 and 10 years and 44% had worked for more than 10 years.

The number of operations performed by surgeons in the study year (year ended 1 January 2002) for women with USI was estimated to be 16412. The operations performed for urodynamic stress incontinence were colposuspension, TVT, needle suspension procedures, periurethral injections, anterior repairs and sling procedures. The most common operation was tension-free vaginal tape (45%, 7336 cases), followed by colposuspension (27%, 4430 cases), anterior repair (13%, 2132 cases), periurethral injection (9%, 1449 cases), sling procedure (4%, 603 cases) and needle suspension (0.05%, 75 cases). TVTs are performed in larger numbers than colposuspension. Twenty-six surgeons perform more than 50 TVTs each year, with a further 68 performing more than 25 (Table I). Only 28 surgeons perform more than 25 colposuspensions each year. Periurethral injections seem to be more popular with the urologists than the gynaecologists. Only 3% of the general gynaecologists perform any periurethral injections but 74% of the urologists perform this surgery. Large numbers of general gynaecologists perform small volumes of continence surgery (Tables I–IV).

The anterior repair is not generally considered as an operation for USI (nine) and therefore the responses for this group were analysed in more detail. The general gynaecologists comprised 40% of the responding surgeons but they performed 63% of the anterior repairs. Subspecialists constituted 3% of the population studied and they performed 3% of the anterior repairs. The 31% special interest urogynaecologists performed 33% of the reported anterior repairs. The urologists consisted of 24% of the responding surgeons but performed less than 1% of the anterior repairs for stress incontinence (Table I). Surgeons performing anterior repairs were stratified further by length of time as a consultant. Surgeons qualified as consultants for more than 10 years were no more likely to perform anterior repairs for stress incontinence than those qualified for between 5 and 10 years or less than 5 years.

The majority of respondents performed less than 25 continence procedures each year (55%). Twenty-seven per cent of surgeons performed 25–50 continence procedures in the study year and 18% performed more than 50 repairs.

### Table I. Number of TVTs by speciality

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1–10</td>
<td>72</td>
<td>44</td>
<td>5</td>
</tr>
<tr>
<td>11–25</td>
<td>35</td>
<td>42</td>
<td>4</td>
</tr>
<tr>
<td>26–50</td>
<td>11</td>
<td>46</td>
<td>5</td>
</tr>
<tr>
<td>&gt; 50</td>
<td>21</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>118</td>
<td>153</td>
<td>19</td>
</tr>
</tbody>
</table>

GG = general gynaecologist; Sp. Interest = special interest urogynaecologist; Urol. = urologist; Subsp = subspecialist urogynaecologist.

### Table II. Number of colposuspensions by speciality

<table>
<thead>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1–10</td>
<td>123</td>
<td>88</td>
<td>6</td>
</tr>
<tr>
<td>11–25</td>
<td>28</td>
<td>41</td>
<td>3</td>
</tr>
<tr>
<td>26–50</td>
<td>4</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>&gt; 50</td>
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<td></td>
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<tr>
<td>Total</td>
<td>155</td>
<td>143</td>
<td>17</td>
</tr>
</tbody>
</table>

GG = general gynaecologist; Sp. Interest = special interest urogynaecologist; Urol. = urologist; Subsp = subspecialist uro-gynaecologist.

### Table III. Number of anterior repairs by speciality

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1–10</td>
<td>74</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>11–25</td>
<td>24</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>26–50</td>
<td>11</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>109</td>
<td>57</td>
<td>6</td>
</tr>
</tbody>
</table>

GG = general gynaecologist; Sp. Interest = special interest urogynaecologist; Urol. = urologist; Subsp = subspecialist uro-gynaecologist.

### Table IV. Number of periurethrals by speciality

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1–10</td>
<td>9</td>
<td>47</td>
<td>4</td>
</tr>
<tr>
<td>11–25</td>
<td>2</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>26–50</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 50</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>61</td>
<td>12</td>
</tr>
</tbody>
</table>

GG = general gynaecologist; Sp. Interest = special interest urogynaecologist; Urol. = urologist; Subsp = subspecialist uro-gynaecologist.
operations. The majority of the general gynaecologists (75%) and urologists (67%) performed less than 25 operations for incontinence in each year. Seventy-six per cent of the special-interest urogynaecologists and 89% of the subspecialists performed more than 25 operations each year. Sixty-five per cent of the figures provided by the respondents regarding volumes of surgery were estimates.

According to the Royal College of Obstetricians and Gynaecologists (RCOG) recommendations, preoperative evaluation should consist of urodynamic assessment and initial treatment should be pelvic floor retraining (MacLean and Cardozo, 2002). Preoperative urodynamic studies were performed by 91% of respondents. This varied from 100% among the subspecialists in urogynaecology to 86% among the general gynaecologists. Ninety-three per cent of the special interest gynaecologists and 92% of the urologists always perform urodynamics prior to surgery. Overall, 76% of surgeons reported that all women were instructed in pelvic floor exercises before being offered surgery. Among those who responded, 77% of general gynaecologists, 78% special interest urogynaecologists, 89% subspecialists and 71% of urologists instructed all women in pelvic floor exercises prior to surgery. Sixty-three per cent of surgeons would offer a woman a continence procedure if she had not completed her family.

The Department of Health Good Practice in Continence Services document states that the best surgical results are achieved by teams who perform an adequate volume of operations (Department of Health, 2000). This document does not define the number that constitutes an adequate number of continence operations. We asked surgeons to define the number of operations that they considered would be adequate. The number stated depended on the degree of specialisation of the surgeon. The majority of general gynaecologists (61%) considered 10–20 operations per annum adequate, whereas 68% of the subspecialists considered 20–50 operations adequate and 16% thought more than 50 operations were necessary. The majority of special-interest gynaecologists (61%) thought 20–50 operations were necessary to maintain competence. Of the urologists, 59% thought that 10–20 operations was sufficient and 36% though 20–50 operations was necessary. Overall, 50% of surgeons thought that less than 20 operations was sufficient and 50% thought more than 20 operations were required.

Small numbers of different operative complications were reported. Interpretation of accurate figures was difficult, making volume or surgeon specific complication rates impossible to determine. Two per cent reported patients requiring an emergency laparotomy that was not part of the original surgery. Intraoperative haemorrhage of more than 500 ml was reported by 14% of surgeons. Erosion of an artificial substance was reported by 10% of surgeons. Emergency readmission within 28 days of surgery was reported by 16%. Persistent suprapubic pain was reported by 13% of surgeons; recurrent urinary tract infections were reported as a complication by 25%; the development of urgency or urge incontinence was reported by 47%; bladder perforations were reported by 29%.

The incidence of the voiding difficulties after incontinence surgery was low. Again due to the difficulty in interpreting the results, obtaining accurate figures on operation- or surgeon-specific rates was not possible. Persistent voiding abnormalities for more than 6 weeks was reported by only 19% of consultants performing continence surgery in 2001. Of the surgeons who reported a voiding abnormality persisting for more than 6 weeks, this affected less than 5% of their patients in 45%, 5–10% of their patients in 40% and more than 10% in 15%. Patients with voiding difficulties were treated in a variety of ways. The most common method of managing abnormal voiding persisting more than 2 weeks after surgery was catheterisation (84%). Urethral dilatation would be considered by 24%. Cutting of the tape, sling or sutures would be considered by 25% of surgeons. Removal of the tape/sling or sutures would be considered by 4% of surgeons.

There was no consensus on the most appropriate time for follow-up after continence surgery. Among the respondents, 26% of surgeons follow patients for 6–8 weeks after the surgery. Forty-three per cent followed-up their patients routinely between 2 and 6 months and only 31% followed-up women for more than 6 months. In the majority of cases, the follow-up was performed by the consultant themselves (91%). Nurse-led clinics were used in only 3% of follow-ups. Three per cent do not follow-up patients routinely.

When assessing the outcome of a surgery, a combination of subjective and objective assessment give accurate results. In a normal clinical set-up this is not always possible. A variety of different follow-up tools were used (Table V). The more specialist surgeons used a greater variety of follow-up assessments. For example, urodynamic studies were used routinely by 26% of subspecialists, 9% of urologists, 8% of special interest urogynaecologists but only 3% of general gynaecologists.

Despite the fact that only 35% of surgeons were able to provide accurate figures regarding the number of operations that they performed, the vast majority (81%) would be willing to audit their results. However, only 46% would be in favour of a registration scheme. There was more enthusiasm for collecting subjective rather than objective data. Seventy per cent of surgeons suggested collecting subjective outcome data at 1 year. Forty-seven per cent suggested subjective data at 6 weeks and 57% at 5 years. Eighteen per cent suggested that objective data should be collected at 6 weeks, 42% at 1 year and 32% at 5 years.

Most healthcare professionals working in the NHS are aware of increasing demands on their time to perform administration, therefore we asked respondents which resources they considered necessary to audit outcomes. Information technology support was considered the area that was most lacking, with 65% of surgeons needing more support. The BSUG audit and outcome committee is currently working on a database to help with this requirement. Other extra resources required included secretarial support by 58%, medical staff by 21%, equipment by 26% and a research nurse by 50% of respondents.

**Table V. Method of patient follow-up in percentage.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>QOL</td>
<td>3</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td>Pad test</td>
<td>&lt; 1</td>
<td>8</td>
<td>58</td>
</tr>
<tr>
<td>UDS</td>
<td>3</td>
<td>8</td>
<td>26</td>
</tr>
</tbody>
</table>

Gg = general gynaecologist; Sp. Interest = special interest urogynaecologist; Urol. = urologist; Subsp. = subspecialist uro-gynaecologist; QOL = quality of life questionnaire; UDS = urodynamics.
Discussion
As far as we know, this national survey provides the first detailed picture of the management of continence surgery in the United Kingdom. This study has several limitations inherent in survey research. The use of the database is both a strength and weakness of the study. Mailing all urologists and gynaecologists in the United Kingdom would have resulted in a far lower response rate. By trying to identify continence surgeons, we have achieved good response rates in certain groups, with 81% of TVT users and 91% of BSU/G members replying. These groups are (by definition) involved in providing services for incontinence and we suspect that generally those surgeons more interested in continence surgery are those most likely to reply. There is probably a large number of surgeons performing small volume surgery who have not been identified or who have not replied. This limits the generalisability of the results but does not detract from the broader findings.

A variety of different operations have been used for USI in the past, with the popularity of different procedures rising and falling. Colposuspension was considered previously the gold standard for continence surgery, but TVT is now the most commonly performed operation for USI in the United Kingdom. TVT was only introduced into the United Kingdom in 1997 and the numbers of operations performed is changing rapidly and can be expected to continue to do so over the next few years. In addition, several other midurethral slings placed either retropubically or by the transobturator route are in increasing clinical usage. Needle suspensions were performed commonly in the past, but they are now rarely used in the United Kingdom. Although the initial results with needle suspensions were promising, the long-term results were disappointing (Bergman and Elia, 1995). The lesson regarding the poor success of needle suspensions has been incorporated quickly into clinical practice but the similar finding regarding the poor success with anterior repairs has not been learnt. When the Department of Health reviewed continence surgery they did not make a recommendation regarding the most appropriate operation for the treatment of uncomplicated USI. The percentage of women without prolapse undergoing anterior repairs for stress incontinence was used as a marker of poor practice (indicator 11) (Brocklehurst et al., 1999). In this study 13% of surgeons report using the anterior repair in 2132 women despite evidence that only 50–70% of women are continent 1 year after an anterior repair, and this figure diminishes with time (Downs and Black, 1996). General gynaecologists are more likely to use the anterior repair and the continued use of this operation may reflect the lack of specialist training.

Symptom assessment to identify the type of incontinence (overactivity or USI) is disappointing. According to the recommendations by the RCOG, preoperative evaluation should consist of urodynamic assessment (MacLean and Cardozo, 2002). Although urodynamic studies are not perfect and there is debate regarding their usefulness, they remain the mainstay of diagnosis. Reassuringly, 90% of surgeons are performing preoperative urodynamics studies; but worryingly, 10% perform continence surgery without proper evaluation. Preoperative cystometry in women undergoing surgery for urinary incontinence is considered a marker of good practice (Brocklehurst et al., 1999), but 14% of general gynaecologists do not always perform urodynamic investigations. A proportion of women undergoing surgery will not have USI and the outcome for these women will be difficult to predict.

Evidence-based practice publications support the use of pelvic floor exercises before continence surgery (Brocklehurst et al., 1999; MacLean and Cardozo, 2002). The majority of surgeons offer pelvic floor exercises to all women, but 22% do not. Pelvic floor exercises may not be offered for a number of reasons. Some hospital trusts have shortages of appropriately trained physiotherapists and there may be waiting-lists, making access to appropriate care difficult. Multidisciplinary working may help to define more accurately those women who the physiotherapists and surgeons regard as most likely to benefit from pelvic floor exercises. Although physiotherapy may be recommended for all women, there are some women who may be unlikely to benefit and hence may not be referred. There is debate regarding the women most suitable to respond to physiotherapy and where there are limited physiotherapy resources, focused referrals are appropriate. Women with strong pelvic floor contractions or with previous surgery may be perceived as poor candidates for pelvic floor exercises.

There is wide variation in opinion among surgeons regarding the experience needed to maintain competence for continence surgery. The more specialist surgeons performing more operations believe that more operations are necessary to maintain competence. In contract, those surgeons performing less operations believe that skill can be maintained with fewer operations. Whichever opinion is correct, a specific volume of work is necessary to give valid outcome data.

The majority of the respondents were interested in auditing their outcome. Extra resources are required to support audit, but the exact resources depend on the complexity of the audit/registration scheme. The findings of the survey show enthusiasm for prospective detailed evaluation of continence surgery outcomes.

This audit provides the first national estimates of the number and rate of incontinence procedures in the United Kingdom. There is wide variation in the attitudes and practices among surgeons performing surgery for USI. These findings of the audit may have important implications for the future efforts directed at increasing the success rate of operations and for the evaluation of practice parameters in general. This survey may be helpful in refining guidelines and standards for audit at regional, local and individual level as well as recommendations for strategies to enhance professional expertise in urogynaecology in United Kingdom.

Acknowledgement
We are grateful to the Clinical Effectiveness Unit of Medway Maritime Hospital for their help in inputting and analysing the data.

References


**Continence QUESTIONNAIRE**

*Indicate your answer by ticking the appropriate box for each question*

**Part one**

1a- What do you consider you are?
- General gynaecologist
- Sub specialist urogynaecologist
- Special interest urogynaecologist
- Urologist

1b- How long have you been a consultant?  
- <5 Yrs.....  
- 5-10Yrs.....  
- >10Yrs.....

2- How many operations have you performed in the last year (1/1/2001-31/12/2001) for women with incontinence?
- <25
- 25-50
- >50

3- In the last year (1/1/2001-31/12/2001) how many of the following operations for stress incontinence have you performed?

<table>
<thead>
<tr>
<th>Operation</th>
<th>Figures derived are:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colposuspension</td>
<td>Actual</td>
</tr>
<tr>
<td>TVT</td>
<td>Estimate</td>
</tr>
<tr>
<td>Needle suspension</td>
<td></td>
</tr>
<tr>
<td>Perurethral injection</td>
<td></td>
</tr>
<tr>
<td>Anterior repairs</td>
<td></td>
</tr>
<tr>
<td>Slings (Aldridge/synthetic)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Do not know</td>
<td></td>
</tr>
</tbody>
</table>

4- Do you always perform urodynamics prior to continence surgery?
- Yes
- No

5- Do all women have physiotherapy/exercises prior to being offered surgery?
- Yes
- No
- Do not know

6- Would you offer a woman who has not completed her family a continence operation?
- Yes
- No
- Do not know

7- Do you think continence operations should be performed by generalists or those with a special interest in urogynaecology/urology
- Yes
- No
- Do not know

8- How many antiincontinence procedures do you think you should be doing per year to maintain competence/skill level?  
- 10-20
- 20-50
- >50
National audit of incontinence surgery

Considering your most common continence procedure
Please restate your most common continence procedure

Operative Complications
9. What number of women in the last year (1/1/2001-31/12/2001):
   - Sustained a bladder perforation
   - Have intra-operative bleeding > 500 mls
   - Required laparotomy (if not part of the initial operation)
   - Returned to theatre for a complication, eg Bleeding
   - Developed a postoperative haematoma
   - Developed urgency/urge incontinence
   - Developed recurrent UTI
   - Developed persistent suprapubic pain > 3 months
   - Suffered an erosion extrusion of an artificial substance
   - Needed emergency readmission within 28 days of surgery

   Don’t know □

Voiding abnormalities:
10. How many women in the last year:
   - Were unable to void at all for > 1 week
   - Had a voiding abnormality greater than 2 weeks
   - Had a voiding abnormality greater than 6 weeks

   %

   Don’t know □

11. What do you do with patients who develop voiding difficulty with complete inability to void 2 weeks after surgery? Please mark those which you would consider.
   - Dilate the urethra □
   - Cut the tape/sling/sutures □
   - Remove the tape/sling/sutures □
   - Urethral catheter; readmit for trial without catheter □
   - Insert a supra-pubic catheter □
   - Teach self-catheterisation □
   - Refer the patient elsewhere □
   - Nothing □
   - Do not know □

   How long latter? ... days

12a- How long do you routinely follow up patients? ...weeks ...months ...years

   I don’t follow up patients □

12b- How do you audit your outcome presently?
   History/Examination in out-patients □
   If so, by whom? Surgeon □
   Other □
   If so, when? ..............

   Quality of life data □
   Pad test □
   Urodynamic studies □

13- How many weeks do you recommend off work/normal activities?

   ...weeks Don’t advise

14- How many weeks do you recommend before a patient can drive a car?

   ...weeks Don’t advise
15- How long do you suggest that patients should abstain from sexual intercourse?  
...weeks Don’t advise

16- Would you be willing to prospectively audit your outcome data for continence procedures? Yes/No/Don’t Know

17- Do you think there should be a national registration scheme of all continence procedures? Yes/No/Don’t Know

18- What data do you think should be collected?

<table>
<thead>
<tr>
<th>Subjective outcome at 6 weeks</th>
<th>Yes/No/Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective outcome at 1 year</td>
<td>Yes/No/Don’t Know</td>
</tr>
<tr>
<td>Subjective outcome at 5 years</td>
<td>Yes/No/Don’t Know</td>
</tr>
<tr>
<td>Objective outcome at 6 weeks</td>
<td>Yes/No/Don’t Know</td>
</tr>
<tr>
<td>Objective outcome at 1 year</td>
<td>Yes/No/Don’t Know</td>
</tr>
<tr>
<td>Objective outcome at 5 years</td>
<td>Yes/No/Don’t Know</td>
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</tbody>
</table>

19- What extra resources would you need to file yearly outcome data?

<table>
<thead>
<tr>
<th>Staff - secretarial</th>
<th>Yes/No</th>
<th>Equipment</th>
<th>Yes/No</th>
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<tr>
<td>Staff - medical</td>
<td>Yes/No</td>
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<td>Yes/No</td>
</tr>
<tr>
<td>Staff - nonmedical</td>
<td>Yes/No</td>
<td>Research nurse</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>
**Part Two  TVT:**

20- Do you currently or have you ever performed TVT?  Yes/No

21 – If yes, approx how many cases have you performed      ........

22- Do you think there is a learning curve for TVT?  
Yes ☐ No ☐ Do not know ☐

23- What constitutes an appropriate number of cases (under direct supervision) to train?  
........... Cases.

24- What anaesthetic do you use for the majority of your cases?  
GA ☐ Spinal ☐ Local + Sedation ☐

25- Do you routinely infiltrate the cavity of retzius and periurethral space when not using a local anaesthetic technique?  
Yes ☐ No ☐ Do not know ☐

26. What cystoscope(s) do you use?  \(0^\circ\) ...... \(30^\circ\) ...... \(70^\circ\) ......

27- Do you routinely give prophylactic antibiotics?  
Yes ☐ No ☐ Intra-operatively ☐ Post-operatively ☐ Both ☐

28- Do you perform TVT with other operations?  
Yes ☐ No ☐ Do not know ☐

29- If the answer to previous question is yes; which operations?  
- Anterior repair ☐
- Posterior repair ☐
- Sacrospinous fixation ☐
- Vaginal hysterectomy ☐
- Abdominal hysterectomy ☐
- Other ☐
- Specify..................................................

Comments
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Please enclose your name and hospital if you would like feedback or do not want to remain anonymous.

Name

Hospital