



BRITISH SOCIETY OF
UROGYNAECOLOGY (BSUG)

PELVIC FLOOR REPAIR IN THE UK 2008-2017

ANTERIOR REPAIR REPORT

BSUG AUDIT AND DATABASE COMMITTEE 2019

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ABBREVIATIONS

British Society of Urogynaecology (BSUG)

National Institute for Health and Care Excellence (NICE)

National Health Service (NHS)

Global impression of improvement (GII)

Hospital Episode Statistics (HES)

Royal College of Obstetricians and Gynaecologists (RCOG)

Preface

The British Society of Urogynaecology (BSUG) database has been available online since 2007. It allows BSUG members to record details of procedures performed to treat urinary incontinence and pelvic organ prolapse. Although voluntary, use of the database is recommended by The National Institute for Health and Care Excellence (NICE). In addition, since July 2018, its use is required for 'high vigilance restriction' procedures [1].

The main aim of the BSUG database is to allow outcomes of individual operations to be studied in detail. Thanks to the commitment of BSUG members - and the patients who kindly allowed their data to be recorded – the database has been extremely successful. Currently more than 140 000 individual surgical episodes have been recorded by many consultants and centres. There have also been many publications which are listed on the BSUG website.

Individual consultants use the BSUG database to examine their own practice and for annual appraisal. It is also one of the requirements to become a BSUG accredited urogynaecology centre.

Continual improvements have been made to the BSUG database by many consultants who have worked in their own time without payment. While not perfect, the large number of cases entered by many consultants allows a valid assessment of the outcome of prolapse and incontinence procedures in the UK to be made.

This is the first National Report on Anterior Vaginal Repair from the BSUG Audit and Database Committee and includes the first full 10 years of data collection (2008 – 2017). We have included information on national trends and details on anterior vaginal repair. A conscious decision was taken to not interpret or comment on the results apart from where an explanation is necessary.

Thank you again to the patients and BSUG members who have contributed to this report which we hope you will find useful.

BSUG Audit and Database Committee 2019

CHAPTER 1: Introduction

1.1 BSUG DATABASE

The British Society of Urogynaecology (BSUG) database was established in 2004 and launched online in 2007. It collects data on operations for urinary incontinence and pelvic organ prolapse from the UK and is open to BSUG members. Access to the database is password-protected and the database is held within the secure NHS N3 network. Data entry is self-reported and voluntary but is recommended by NICE and is currently required for a centre to be accredited in urogynaecology by BSUG. Patient consent is required for data entry.

1.2 DATABASE USAGE

From 2008 to 2017, 116 037 procedures for urinary incontinence and prolapse were entered onto the database. There were 145 centres which entered data and these included teaching hospitals, district general hospitals and private hospitals. The cases entered also include operations carried out by trainees on patients under the care of consultants. These cases are included in the audit as they cannot be easily separated.

1.3 AUDIT TIMEFRAME AND OPERATIONS INCLUDED

The timeframe of the audit was from the start of 2008 (the first full year of online data collection) to the end of 2017. We have also shown the number of procedures undertaken in 2018 but have not analysed their outcomes because at the time of writing this report many patients had not completed their follow up.

Only sole anterior vaginal repairs without concomitant procedures were analysed. Repairs with mesh were excluded. Anterior vaginal repairs carried out in conjunction with vaginal hysterectomies, vault suspension procedures and continence procedures were included in datasets that have been analysed and reported in other BSUG National Reports on incontinence and prolapse surgery.

1.4 OUTCOMES

1.4.1 FOLLOW-UP INTERVAL AFTER SURGERY

The database records the 1st follow-up after surgery at 4 prespecified intervals of 6 weeks, 3 months, 6 months and 1 year. How the follow-up was carried out can also be recorded (*Table 1*).

Table 1: *Method of follow-up.*

Outpatient visit
Postal questionnaire
Online questionnaire
Telephone follow-up
Follow-up at the GP practice
As per local agreement

1.4.2 GLOBAL IMPRESSION OF IMPROVEMENT (GII) AFTER SURGERY

The outcome of surgery was assessed by looking at the patient-reported global impression of improvement (GII). The scale has 7 outcome categories and is specific to an improvement in prolapse (*Table 2*).

Table 2: *Global impression of improvement after surgery.*

Very much better
Much better
A little better
No change
A little worse
Much worse
Very much worse

1.4.3 SURGICAL COMPLICATIONS

The database records prespecified intraoperative and postoperative complications (Table 3 & 4).

Table 3: *Intraoperative complications.*

Ureteric injury
Bladder injury
Bowel injury
Urethral injury
Nerve injury
Estimated blood loss > 500 ml

Table 4: *Postoperative complications.*

Graft complications (where relevant)
Blood transfusion
Thromboembolism
Return to theatre within 72 hours of the procedure
Catheterisation > 10 days
Readmission within 30 days of the procedure
Death

1.4.4 ASSIGNMENT OF RISK FOR COMPLICATIONS

The incidence of each intraoperative and postoperative complication was assigned a level of risk based on guidance by the Royal College of Obstetricians and Gynaecologists [2] (Table 5).

Table 5: *Assignment of risk for complications.*

Term	Equivalent numerical ratio	Colloquial equivalent
Very common	1/1 to 1/10	A person in a family
Common	1/10 to 1/100	A person in a street
Uncommon	1/100 to 1/1000	A person in a village
Rare	1/1000 to 1/10 000	A person in a small town
Very rare	Less than 1/10 000	A person in a large town

CHAPTER 2: Number of procedures and trends

2.1 NUMBER OF PROCEDURES 2008-2017

There were 7727 anterior vaginal repairs.

Figure 1, Table 6 shows the number of anterior repairs per year. Although not included in the audit, the number of anterior repairs in 2018 is also shown as all continence and some prolapse operations were designated as 'high vigilance restriction' procedures by NHS England in July 2018 [1]. This may have influenced the number of anterior repairs performed that year.

2.2 TRENDS 2008-2018

There was a rise in the number of episodes entered into the database from 2008 to 2014. The number of anterior repairs remained stable from 2014 to 2018.

Figure 1: Number of anterior vaginal repair procedures added to the BSUG database per year 2008-2018.

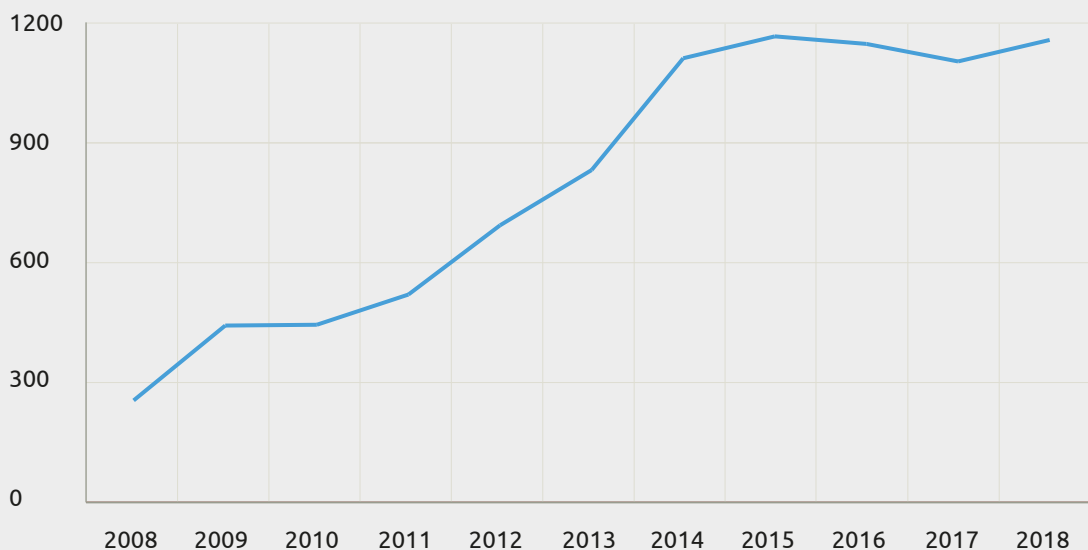


Table 6: Number of anterior vaginal repair procedures added to the BSUG database per year 2008-2018.

	Anterior repair
2008	255
2009	442
2010	444
2011	520
2012	694
2013	833
2014	1114
2015	1169
2016	1150
2017	1106
2018	1160
Total	8887

Note: Figures from 2018 excluded from audit analysis

CHAPTER 3: Primary and repeat operations for prolapse

3.1 SURGERY FOR RECURRENT PROLAPSE

21.5% of anterior repairs were for recurrent prolapse. 78.5% were primary procedures (Figure 2, Table 7).

Figure 2: Anterior vaginal repair: Primary and repeat procedures for prolapse.

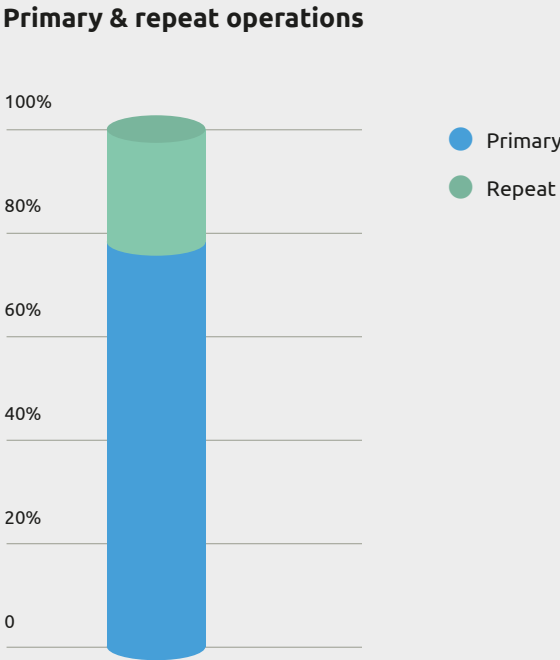


Table 7: Anterior vaginal repair: Primary and repeat procedures for prolapse.

Anterior repair	
Primary	5038 (78.5%)
Repeat	1379 (21.5%)
Unanswered	1310
Total	7727

CHAPTER 4: Follow-up after surgery

4.1 FOLLOW-UP METHOD

Prespecified methods of follow-up can be recorded in the database (*Table 8*).

4605 (59.6%) of anterior repairs had the follow-up method recorded. Of these, 4106 (89.2%) were followed-up in clinic.

Table 8: Anterior vaginal repair: Method of follow-up.

	Anterior repair
As per local agreement	21 (0.5%)
GP Practice	25 (0.5%)
Online	3 (0.07%)
Outpatient visit	4106 (89.2%)
Postal questionnaire	380 (8.3%)
Telephone response	70 (1.5%)
Unanswered	3122
Total	7727

4.2 FOLLOW-UP INTERVAL AFTER SURGERY

The database records the interval to the 1st follow-up after surgery at 4 prespecified intervals; 6 weeks, 3 months, 6 months and 1 year (*Table 9*).

4545 (58.8%) of anterior repairs had the 1st follow-up interval recorded. The 1st follow-up occurred most frequently at 3 months (43.5%).

Table 9: Anterior vaginal repair: Follow-up interval after surgery.

	Anterior repair
6 Weeks	1243 (27.3%)
3 Months	1976 (43.5%)
6 Months	1129 (24.8%)
12 Months	197 (4.3%)
Unanswered	3182
Total	7727

CHAPTER 5: Global impression of improvement (GII) after surgery

The efficacy of surgery was assessed using patient-reported global impression of improvement (GII).

5.1 GII AT 1ST FOLLOW-UP

GII at the 1st follow-up was recorded in 53.7% (4148) episodes (*Table 10*).

Overall, 88.2% (3658) episodes were Very Much Better or Much Better after anterior repairs.

Table 10: Anterior repair GII at 1st follow-up.

	Anterior repair
Very much better	2604 (62.8%)
Much better	1054 (25.4%)
A little better	289 (7.0%)
No change	160 (3.9%)
A little worse	19 (0.5%)
Much worse	14 (0.3%)
Very much worse	8 (0.2%)
Unanswered	3579
Total	7727

5.2 GII AT DIFFERENT FOLLOW-UP INTERVALS

53.2% (4113) of anterior vaginal repairs had both GII and the 1st follow-up interval recorded (*Table 11, shaded area*). At 6 weeks, 90.1% of patients were Very Much Better or Much Better. Of the much smaller number of reviews at 12 months, 77.9% were Very Much Better or Much Better.

Table 11: Anterior repair GII at different time intervals. n (%)

	Unanswered	VMB	MB	ALB	NC	ALW	MW	VMW	Total
Unanswered	3147	15	14	4	2	0	0	0	3182
6 weeks	176	670 (62.8)	300 (28.1)	64 (6.0)	28 (2.6)	2 (0.2)	0	3 (0.3)	1243
3 months	166	1193 (65.9)	424 (23.4)	110 (6.1)	64 (3.5)	8 (0.4)	8 (0.4)	3 (0.2)	1976
6 months	79	614 (58.5)	283 (27.0)	91 (8.7)	49 (4.7)	7 (0.7)	5 (0.5)	1 (0.1)	1129
12 months	11	112 (60.2)	33 (17.7)	20 (10.8)	17 (9.1)	2 (1.1)	1 (0.5)	1 (0.5)	197
Total	3570	2604	1054	289	160	19	14	8	7727

CHAPTER 6: Complications of surgery

6.1 INTRAOPERATIVE COMPLICATIONS

The most common intraoperative complications for anterior repair procedures were bladder injury (0.3%) and urethral injury (0.02%) (*Table 12*).

Table 12: Anterior repair intraoperative complications.

	Incidence %	Risk	No	Yes	Unrecorded	Total
Ureteric injury	0.01	Rare	7624	1	102	7727
Bladder injury	0.3	Uncommon	7607	20	100	7727
Urethral injury	0.02	Rare	6271	1	1455	7727
Bowel injury	0.01	Rare	7623	1	103	7727
Vascular injury	0.01	Rare	7623	1	103	7727
Nerve injury	0.01	Rare	7624	1	102	7727
Estimated blood loss > 500 ml	0.1	Uncommon	7616	10	101	7727

6.2 POSTOPERATIVE COMPLICATIONS

The most common postoperative complications for anterior repair were readmission within 30 days of the procedure (5.2%) and catheterisation for > 10 days (2.3%) (*Table 13*).

Table 13: Anterior repair postoperative complications.

	Incidence %	Risk	No	Yes	Unrecorded	Total
Blood transfusion	0.03	Rare	7623	2	102	7727
Venous thromboembolism	0.01	Rare	7406	1	320	7727
Death	0	Very rare	7406	0	321	7727
Return to theatre within 72 hrs	0.2	Uncommon	4881	12	2834	7727
Catheter for > 10 days	2.3	Common	4762	110	2855	7727
Readmission within 30 days	5.2	Common	2144	118	5465	7727
Readmission - 118 readmissions - 63 planned, 55 emergency						

CHAPTER 7: Limitations of the audit

Not every anterior vaginal repair over the last 10 years has been included in this analysis as use of the database is voluntary and open only to BSUG members. Some procedures will have been performed by Consultants who are not members of BSUG. A comparison to Hospital Episode Statistics (HES) has not been made.

In addition, caution must be applied to the use and interpretation of this report because of missing data and the limited recording of long-term outcomes – both positive and negative. This is particularly so for long-term complications which may arise after the initial period of follow-up and which may have been treated in other units.

REFERENCES

1. Letter from NHS England and NHS Improvement to trust medical directors regarding 'high vigilance restriction' procedures. NHS England & NHS Improvement. July 2018.

https://i.emlfiles4.com/cmpdoc/9/7/2/8/1/1/files/47633_mesh-letter-to-acute-ceos-and-mds.pdf

2. Understanding how risk is discussed in healthcare. Royal College of Obstetricians and Gynaecologists (RCOG). 2015.

<https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pi-understanding-risk.pdf>