

**THE BRITISH ASSOCIATION OF  
UROLOGICAL SURGEONS  
Section of Female, Neurological & Urodynamic Urology**

**Analyses of procedures performed for Female Stress Urinary Incontinence between  
January 1<sup>st</sup> and December 31<sup>st</sup> 2014**

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## AUDIT RESULTS SUMMARY – Stress Urinary Incontinence dataset

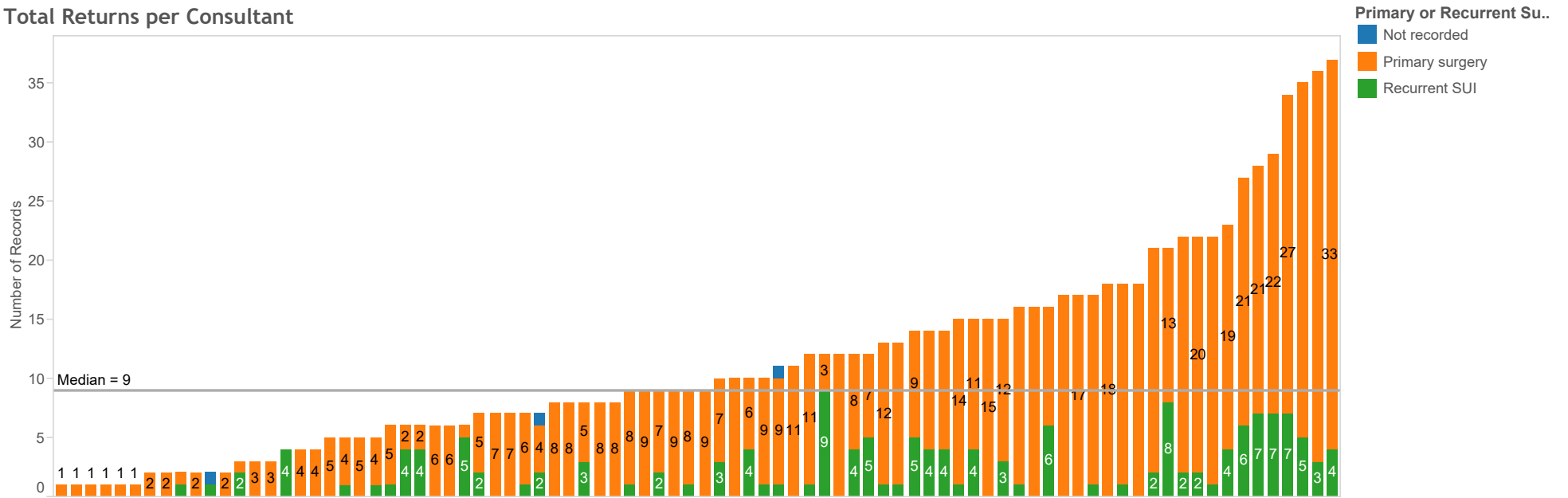
All the data presented here are a summary of the data extracted from the web-based database on 31<sup>st</sup> March 2015 and relate to operations performed during the whole of 2014. Once extracted the data was transferred to an Access<sup>TM</sup> database for validation before being imported into Tableau<sup>TM</sup> for generation of the analyses. The validation mainly comprised checks for duplicate and / or empty entries and invalid / inappropriate dates.

The data collection period was from 1 January 2014 to 31 December 2014.

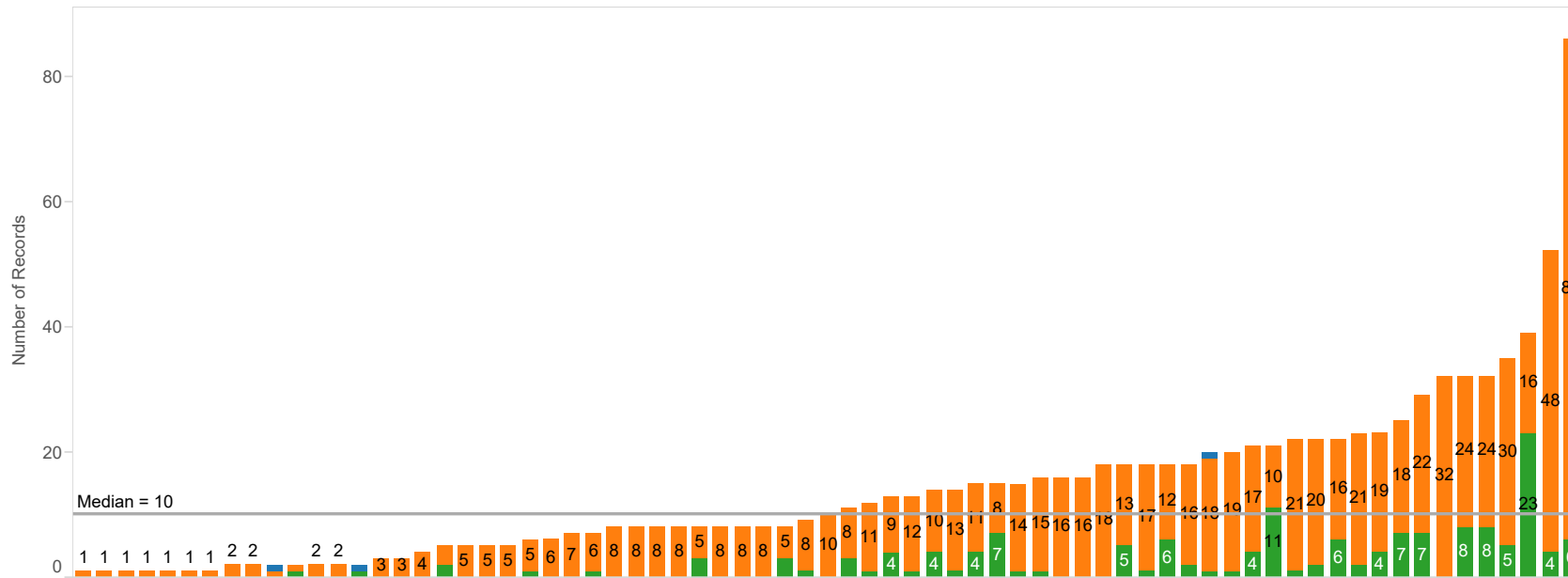
- 984 procedures were recorded from 87 consultants at 70 centres in the United Kingdom including 86 private patients from 25 consultants. 4 of the consultants returning data are not BAUS members.
- 90% of the operations (885) proceeded with no reported complications. There were 37 cases (4%) in which a peri-operative complication was recorded. There were no deaths.
- Of the 558 patients who have follow-up recorded, 532 (95%) of these recorded whether or not there was a post operative complication. For 468 (88%) no post-operative complications occurred.
- **Hospital Episode Statistics (HES)** for 2014 indicate that there were 1,318 stress urinary incontinence (SUI) procedures undertaken by urologists in England of which the BAUS audit has captured data on 69%. Gynaecologists undertook 7,445 SUI procedures in England.
- Median number of cases per consultant: 9 (range 1 - 37)
- Median number of cases per centre: 10 (range 1 - 86)
  
- 84% (827) of the procedures were performed for primary SUI and 16% (154) were for recurrent SUI. All data were entered by hand and there was no bulk uploading of data from other systems.

Total procedures reported - 984 from 84 consultants at 70 centres including 86 private patients reported by 25 consultants  
558 patients have follow-up recorded

Total Returns per Consultant

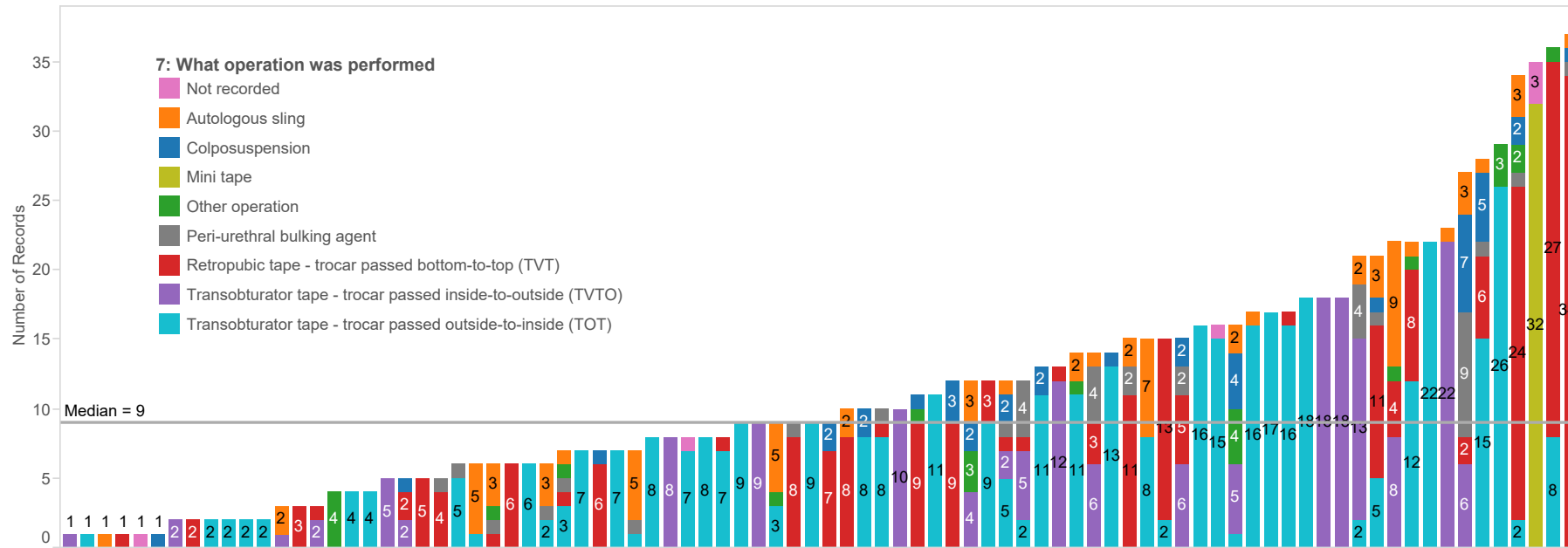


Total Returns per Centre

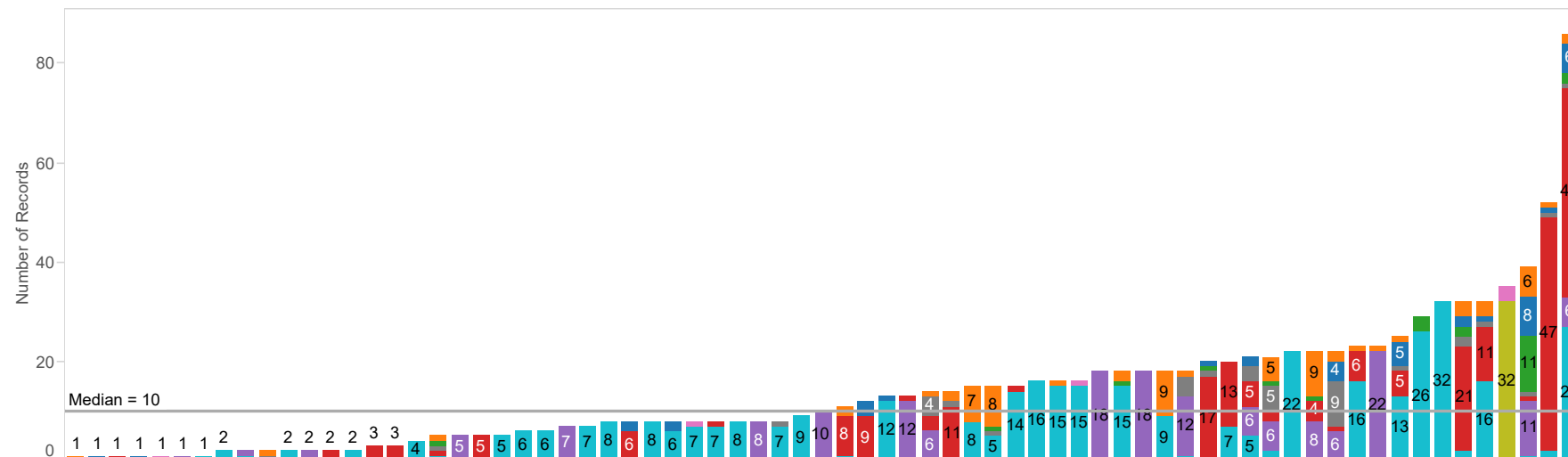


Total procedures reported - 984 from 84 consultants at 70 centres including 86 private patients reported by 25 consultants  
558 patients have follow-up recorded

### Total returns by Procedure by Consultant



### Total Returns by Procedure by Centre



## Peri-operative complications

20: Peri-operative complications (group)	N	% Total
None	885	89.9%
Bladder perforation	12	1.2%
Procedure abandoned	1	0.1%
Other	24	2.4%
Not recorded	62	6.3%
<b>Grand Total</b>	<b>984</b>	<b>100.0%</b>

## Peri-operative Complications by Surgery

20: Peri-operative complications (group)	Primary or Recurrent Surgery							
	Primary surgery		Recurrent SUI		Not recorded		Grand Total	
	N	% Total	N	% Total	N	% Total	N	% Total
None	751	90.8%	132	85.7%	2	66.7%	885	89.9%
Bladder perforation	10	1.2%	2	1.3%			12	1.2%
Procedure abandoned			1	0.6%			1	0.1%
Not recorded	50	6.0%	11	7.1%	1	33.3%	62	6.3%
Other	16	1.9%	8	5.2%			24	2.4%
<b>Grand Total</b>	<b>827</b>	<b>100.0%</b>	<b>154</b>	<b>100.0%</b>	<b>3</b>	<b>100.0%</b>	<b>984</b>	<b>100.0%</b>

## Other peri-operative complications

22: Specify Other peri-operative complication(s)	N	% Total
bleeding	1	4.2%
blood loss 500ml	1	4.2%
Brief episode of type 2 respiratory compromise - had ..	1	4.2%
Chest infection	1	4.2%
Haematoma	1	4.2%
Injury small bowel -repair at time of operation	1	4.2%
leg pain muscle injury	1	4.2%
Pelvic haematoma and return to theatre for evacuation	1	4.2%
Post op pneumonia requiring antibiotics	1	4.2%
right sided vaginal fornix perforation-sutured	1	4.2%
small bowel injury	1	4.2%
Small button-hole in vaginal skin right side.	1	4.2%
some blood loss	1	4.2%
tape required repositioning as 2nd needle passed sli..	1	4.2%
TIA (Previous history of TIAs)	1	4.2%
Transient ileus of the bowel	1	4.2%
TWOC post op failed. Catheterised, TWOC successful..	1	4.2%
Urinary retention	1	4.2%
Vaginal fornix breach - repositioned	1	4.2%
Vaginal perforation	1	4.2%
vaginal perforation repaired	1	4.2%
vaginal skin perforation - immediately closed with vic..	1	4.2%
wound infection needing debridement 2 weeks post op	1	4.2%
Not recorded	1	4.2%
<b>Grand Total</b>	<b>24</b>	<b>100.0%</b>

## BMI

BMI	N	% Total
Underweight	4	0.4%
Normal	114	11.6%
Overweight	206	20.9%
Obese	208	21.1%
Not recorded	452	45.9%
<b>Grand Total</b>	<b>984</b>	<b>100.0%</b>

## Co-morbidities - catheter dependent &/or neuropathic bladder

45: Charlson co-morbidity (check all that apply)	N	% Total
Catheter dependent prior to surgery	6	30.0%
Neuropathic bladder	10	50.0%
Neuropathic bladder; Catheter dependent prior to surgery	4	20.0%
<b>Grand Total</b>	<b>20</b>	<b>100.0%</b>

## Age at Operation

Primary or Recurrent Surgery	N	Median	Minimum	Maximum
Primary surgery	818	53	22	92
Recurrent SUI	153	58	29	89
Not recorded	3	71	54	71
<b>Grand Total</b>	<b>974</b>	<b>54</b>	<b>22</b>	<b>92</b>

## Surgery type

Primary or Recurrent Surge..	N	% Total
Primary surgery	827	84.0%
Recurrent SUI	154	15.7%
Not recorded	3	0.3%
<b>Grand Total</b>	<b>984</b>	<b>100.0%</b>

## Patient reported Severity of Incontinence

14: Patient reported severity of incontinence pre-op	N	% Total
0 - 1 pad per day	92	9.3%
2 - 3 pads per day	331	33.6%
4 - 5 pads per day	208	21.1%
> 5 pads per day	119	12.1%
Not recorded	234	23.8%
<b>Grand Total</b>	<b>984</b>	<b>100.0%</b>

## Previous surgery

2: What operation was performed previously	3: If Yes, to Tape above - please speci..	N	% Total
<b>Tape</b>	TOT	16	10.4%
	TVT	14	9.1%
	TVT-O	5	3.2%
	Advance	1	0.6%
	Aris	3	1.9%
	Ethicon	1	0.6%
	SPARC	1	0.6%
	Ethicon TVT	1	0.6%
	tvf and tvf-o	1	0.6%
	N/A	28	18.2%
<b>Colposuspension</b>	N/A	32	20.8%
<b>Peri-urethral bulking agent</b>	N/A	17	11.0%
<b>Autologous sling</b>	N/A	7	4.5%
<b>Other</b>	N/A	25	16.2%
<b>Not known</b>	N/A	2	1.3%
<b>Grand Total</b>		154	100.0%

## Pre-operative Urodynamics

10: Pre-operative urodynamics performed?	N	% Total
<b>Yes</b>	905	92.0%
<b>No</b>	42	4.3%
<b>Not recorded</b>	37	3.8%
<b>Grand Total</b>	984	100.0%

## Pre-operative Urodynamics Results

10: Pre-operative urodynamics performed?	11: Results of pre-operative urodynamics	N	% Total
<b>Yes</b>	Urodynamic stress urinary incontinence	659	72.8%
	Urodynamic mixed urinary incontinence	157	17.3%
	Urodynamic detrusor overactivity/incontinence	5	0.6%
	Normal	13	1.4%
	Other	26	2.9%
	Not recorded	45	5.0%
<b>Grand Total</b>		905	100.0%

## What Surgery was performed this time

7: What operation was performed	Primary or Recurrent Surgery							
	Primary surgery		Recurrent SUI		Not recorded		Grand Total	
	N	% Total	N	% Total	N	% Total	N	% Total
Retropubic tape - trocar passed bottom-to-top (TVT)	212	25.6%	18	11.7%			230	23.4%
Transobturator tape - trocar passed outside-to-inside (TOT)	351	42.4%	27	17.5%	1	33.3%	379	38.5%
Transobturator tape - trocar passed inside-to-outside (TVTO)	154	18.6%	11	7.1%			165	16.8%
Mini tape	27	3.3%	5	3.2%			32	3.3%
Colposuspension	25	3.0%	14	9.1%	1	33.3%	40	4.1%
Peri-urethral bulking agent	17	2.1%	20	13.0%	1	33.3%	38	3.9%
Autologous sling	31	3.7%	39	25.3%			70	7.1%
Other operation	5	0.6%	19	12.3%			24	2.4%
Not recorded	5	0.6%	1	0.6%			6	0.6%
<b>Grand Total</b>	827	100.0%	154	100.0%	3	100.0%	984	100.0%



## Patient able to void post-operatively

26: Was patient able to void post-operatively after ta	28: What management was offered for urinary retention	N	% Total
<b>Yes</b>	No catheter	192	19.5%
	Intermittent self-catheteris..	36	3.7%
	Indwelling urethral catheter	5	0.5%
	Tape pull down	17	1.7%
	Suprapubic catheter	4	0.4%
	Other	1	0.1%
	Not recorded / applicable	502	51.0%
	<b>Total</b>	<b>757</b>	<b>76.9%</b>
<b>No</b>	No catheter	7	0.7%
	Intermittent self-catheteris..	37	3.8%
	Indwelling urethral catheter	32	3.3%
	Tape pull down	3	0.3%
	Suprapubic catheter	5	0.5%
	Tape division / excision	2	0.2%
	Other	2	0.2%
	Not recorded / applicable	13	1.3%
<b>Total</b>	<b>101</b>	<b>10.3%</b>	
<b>Not recorded</b>	No catheter	10	1.0%
	Intermittent self-catheteris..	5	0.5%
	Indwelling urethral catheter	3	0.3%
	Tape pull down	1	0.1%
	Suprapubic catheter	5	0.5%
	Other	1	0.1%
Not recorded / applicable	101	10.3%	
<b>Total</b>	<b>126</b>	<b>12.8%</b>	
<b>Grand Total</b>		<b>984</b>	<b>100.0%</b>

## Did patient leave theatre with catheter in situ

24: Did Patient leave theatre with a catheter in situ?	25:When was TWC performed?	N	% Total
<b>Yes</b>	< 6 hours post-op	83	8.4%
	6 - 24 hours post-op	244	24.8%
	> 24 hours post-op	110	11.2%
	Not recorded / N/A	35	3.6%
<b>No</b>	Not recorded / N/A	473	48.1%
<b>Not recorded</b>	> 24 hours post-op	1	0.1%
	Not recorded / N/A	38	3.9%
<b>Grand Total</b>		<b>984</b>	<b>100.0%</b>

## Median Length of Stay

Primary or Recurrent Surgery	N	Median LOS	Minimum LOS	Maximum LOS
<b>Primary surgery</b>	827	1	0	23
<b>Recurrent SUI</b>	154	1	0	14
<b>Not recorded</b>	3			
<b>Grand Total</b>	<b>984</b>	<b>1</b>	<b>0</b>	<b>23</b>

## Unintended CISC

30: Did the patient start unintended CISC?	N	% Total
<b>Yes</b>	16	2.9%
<b>No</b>	316	56.6%
<b>Not recorded</b>	226	40.5%
<b>Grand Total</b>	<b>558</b>	<b>100.0%</b>

## Length of Stay

33: Length of stay	N	% Total
<b>0</b>	286	29.1%
<b>1</b>	217	22.1%
<b>2</b>	48	4.9%
<b>3</b>	13	1.3%
<b>4</b>	14	1.4%
<b>5</b>	3	0.3%
<b>6</b>	7	0.7%
<b>7</b>	3	0.3%
<b>8</b>	1	0.1%
<b>9</b>	3	0.3%
<b>10</b>	2	0.2%
<b>11</b>	1	0.1%
<b>14</b>	1	0.1%
<b>23</b>	1	0.1%
<b>Null</b>	384	39.0%
<b>Grand Total</b>	<b>984</b>	<b>100.0%</b>

## Follow-up

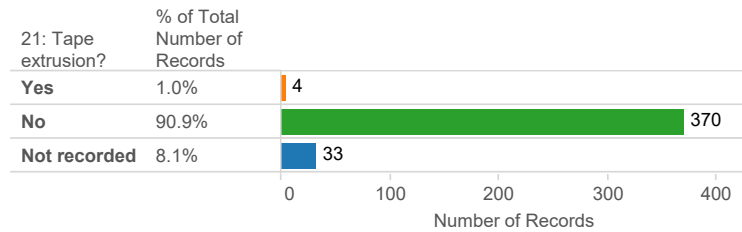
### UTI

14: Patient reported complications - UTI	15: Antibiotics given?	N	% Total
Yes	Yes	41	7.3%
	No	2	0.4%
No	Not recorded ..	496	88.9%
	No	1	0.2%
Not recorded	Not recorded ..	18	3.2%
<b>Grand Total</b>		<b>558</b>	<b>100.0%</b>

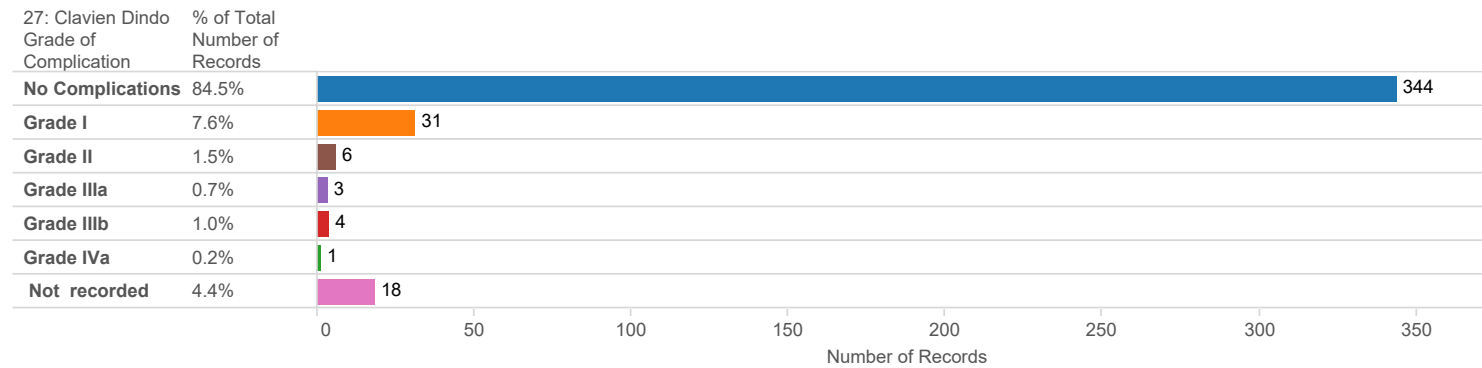
### Overactive bladder

Overactive bladder symptoms - New / de novo urgency?	Overactive bladder symptoms - Was pre-existing urgency improved	N	% Total
Yes	Better	5	0.9%
	No change	38	6.8%
	Worse	21	3.8%
	Not recorded	22	3.9%
	<b>Total</b>	<b>86</b>	<b>15.4%</b>
No	Better	62	11.1%
	No change	179	32.1%
	Worse	29	5.2%
	Not recorded	171	30.6%
	<b>Total</b>	<b>441</b>	<b>79.0%</b>
Not recorded	Better	2	0.4%
	No change	7	1.3%
	Not recorded	22	3.9%
	<b>Total</b>	<b>31</b>	<b>5.6%</b>
<b>Grand Total</b>		<b>558</b>	<b>100.0%</b>

### Tape Extrusion

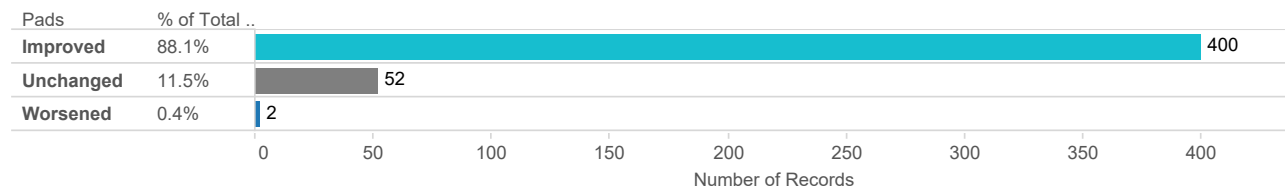


### Clavien Dindo Grade of Complications

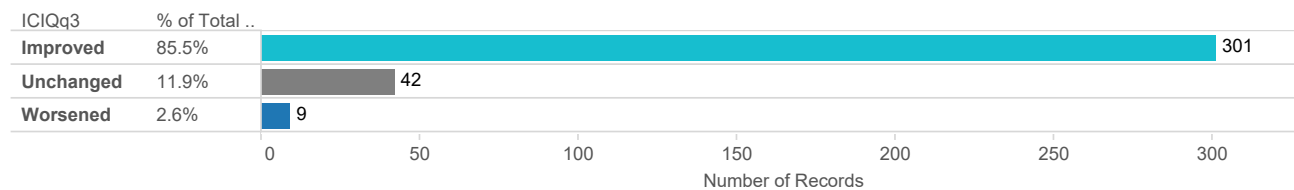


# Patient Reported Outcome Measures

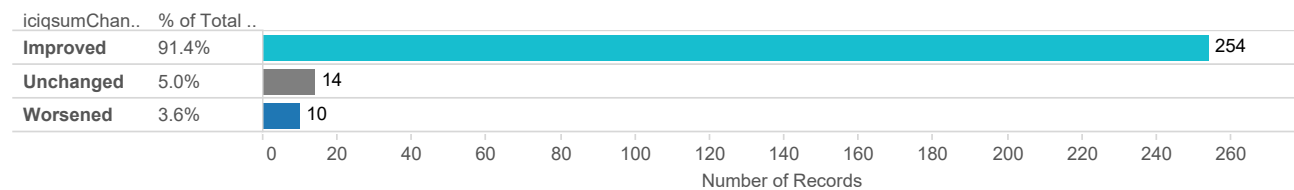
## Patient reported outcomes of Continence at Follow up



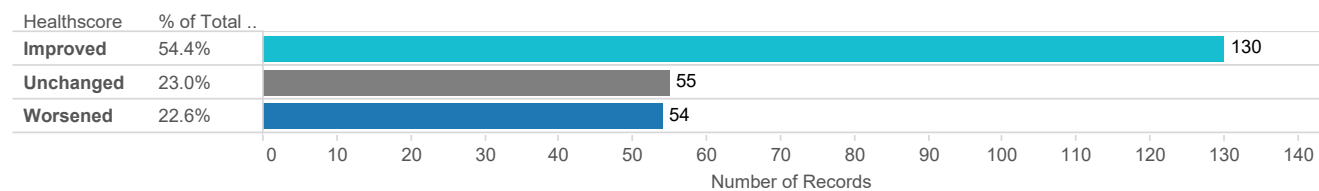
## ICIQ3 Change



## ICIQ SumScore Change



## Thermometer Health Score



## Participating Hospital Centres 2014

We are grateful to consultants from the following Centres / trusts who returned data for these analyses:

Addenbrooke's Hospital	Leighton Hospital	Royal Sussex County Hospital
Barking, Havering and Redbridge University Hospitals NHS Trust	Lister Hospital	Royal West Sussex NHS Trust, St Richard's Hospital
Bedford Hospital	Manchester Royal Infirmary	Salford Royal NHS Foundation Trust
Belfast City Hospital	Medway Maritime Hospital	Salisbury District Hospital
Blackpool Victoria Hospital	Norfolk & Norwich Hospital	Sandwell District General Hospital
Borders General Hospital	North Bristol NHS Trust (Southmead)	Southend University Hospital NHS Trust
Bradford Teaching Hospitals	Northern General Hospital	Southern General Hospital
Castle Hill Hospital	Northwick Park Hospital; Central Middlesex Hospital	St James's University Hospital
City Hospitals Sunderland NHS Foundation Trust	Nottingham City Hospital	Stepping Hill Hospital
Doncaster & Bassetlaw Hospitals NHS Trust	Peterborough and Stamford Hospitals NHS Foundation Trust	Stirling Royal Infirmary / Forth Valley Royal
East Lancashire Hospitals NHS Trust	Pinderfields Hospital	Taunton And Somerset Hospital
East Sussex Hospitals NHS Trust	Portsmouth Hospitals NHS Trust	The Ipswich Hospital
Epsom and St Helier University Hospitals	Princess Alexandra Hospital, Harlow	The Royal Oldham Hospital
Freeman Hospital	Princess Of Wales Hospital, Bridgend	University College Hospital London
Frimley Park Hospital	Queen Elizabeth Hospital, B'ham	Walsgrave Hospital
Gartnavel General Hospital	Queen's Hospital Burton	West Herts Hospitals NHS Trust
Guy's & Thomas's Hospital	Rotherham NHS Foundation Trust	Western General Hospital, Edinburgh
Harrogate District Hospital	Royal Berkshire NHS Foundation Trust	Weston Area Health NHS Trust
Heatherwood & Wexham Park NHS Trust	Royal Bolton Hospital NHS Foundation Trust	Whiston Hospital
Huddersfield Royal Infirmary	Royal Devon And Exeter Hospital	Withington Hospital
James Cook University Hospital	Royal Free London NHS Foundation Trust	Worthing Hospital
Kingston Hospital	Royal Hallamshire Hospital	Wrightington, Wigan and Leigh NHS Foundation Trust
Leicester General Hospital	Royal National Orthopaedic Hospital, Stanmore	York District Hospital
	Royal Preston Hospital	