Surveillance:  Tonsillectomy and Adenoidectomy single-use instrument surveillance

Report:  Annual report

Time period:  1st January to 31st December 2012

Health Board:  All Wales

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INTRODUCTION

In 2000 the Spongiform Encephalopathy Advisory Committee (SEAC) identified a theoretical risk of transmission of vCJD from reusable surgical instruments\(^1\). Tonsillectomy surgery was identified as high risk to patients due to the procedure being performed, mainly on children and young adults. Wales opted to use single-use instruments and the mechanism to deliver safe surgery in Wales, and free of risk from vCJD, resulted in the establishment of the Surgical Instrument Surveillance Programme (SISP\(^*\)) in 2003\(^2\). The programme is delivered through Public Health Wales in collaboration with the Welsh Government, Welsh Otorhinolaryngological Association, Wealth Health Supplies and the Surgical Materials Testing Laboratory. The surveillance system was designed in order to monitor all surgery performed with the specified single-use tonsillectomy and adenoidectomy instruments. The initial study design and core dataset were similar to the audit established in Scotland and in England and Northern Ireland \(^3,4\). Wales was alone, however, in its approach to the reintroduction and subsequent monitoring of the instruments themselves.

As the concerns about the risks of healthcare increase, the need for good quality systems to assure patient safety are unlikely to reduce. The collaborative systems approach based on surveillance has now demonstrated that with suitable mechanisms surgeons can be assured that single use instruments are safe for them to use however, continuous careful monitoring of their use is essential. The SISP has been fully established for nine years and during this time the surveillance has gathered information on over 341,000 single-use tonsillectomy instruments with over 34,000 operations recorded (data up to the end of 2012). In addition, the programme has been utilised as a model for the set-up and deliverance of other healthcare surveillances, especially with regard to clinician ownership of the data collected. It is also important to remember that this surveillance is quite unique as it has achieved this status whilst still remaining a voluntary scheme.

This is the eighth national report on the use of single-use tonsillectomy instruments and provides data for 2012.

\(^*\) From 2014 the programme will be known as the Clinical Instrument Surveillance Programme (CISP)
ALL WALES SUMMARY

This report on all Wales surveillance of single use instruments utilised for tonsillectomy and adenoidectomy surgery, includes operation data, instrument usage / instrument problems and all complications associated with operations carried out between 1st January 2012 and 31st December 2012.

Form feedback

- A total of 3076 operation / instrument forms were returned to SISP for operations carried out in 2012.
- A total of 47 complication forms were returned to SISP for the same period.
- Surgeons in Wales continue to provide accurate data on the forms with the majority of questions being completed.
- 84% of operations were captured by the surveillance for 2012 however, only 22% of major haemorrhage complications were captured for the same time period. It is essential that complication forms are returned to SISP in order to monitor bleed rates with the single use instruments in place.

Operation data

- The total number of operations using single use instruments reported to SISP for 2012 was 2892 with 2070 tonsillectomy operations carried out.
- On average approximately 241 operations were captured per month for Wales. Numbers for 2012 are similar to 2011, but have decreased compared with previous years.

Patient demographics

- 59% of surgery was performed on female patients; 70% of patients undergoing surgery were below 20 years of age for Wales 2012.
- Operation numbers peaked at the age group of 5-9 years. This is comparable with previous SISP annual reports as well as within the literature.

Complications

- The number of initial returns (R1), readmission returns (R2) and postoperative haemorrhage repairs captured by the surveillance in 2012 was 6, 9 and 14, respectively.
- The patient specific bleed rate for Wales for the same time period was 1.1%. Note this may be an underestimation of the rate as only 22% of the data were captured.
- Utilising data from the Patient Episode Database for Wales (PEDW), a crude bleed rate of 2.5% was noted for Wales for 2012. This was not patient specific and cannot be directly compared to the SISP patient specific bleed rate as it may also include adenoid bleeds.
- Trend data (using PEDW data) shows the patient bleed rate to have increased in 2012.

Instrument data

- Approximately 27360 instruments were utilised in Wales for 2012.
- One or more problems were noted for 84% (16 out of 19) of the instruments available within the tonsillectomy set. However most of failure rates were below 0.5%.
- Total instrument problem rates (excluding diathermy) for all Wales (2012) were 0.18% (0.13% minor; <0.05% major).
- The Meditech diathermy problem rate for Wales was 1.90% (0.81% minor; 1.09% major)
- The Waugh's non-toothed, Eves Tonsil Snare and Luca, were the most problematic instruments with overall problem rates of 1.72, 0.65 and 0.60%, respectively. However only a small number of Waugh's non-toothed instruments were utilised
- Overall, instrument problems (including diathermy) have stabilised or reduced since 2005. However there has been an increase in diathermy problems in 2011 and 2012. These problems are also recorded as major.
- Continued reporting of instrument malfunctions and their return to SMTL is essential to prevent ongoing problems. Removal of problematic instrument stock is essential to prevent artificial inflation of instrument problem rates.
ALL WALES RESULTS

SECTION 1. Form feedback

Form returns

The number of operation / instrument forms returned to SISP for operations carried out between 01/01/2012 and 31/12/2012 was 3076. All data items were completed well on the forms. Table 1.1 provides details on the number of complication forms returned.

Table 1.1 All Wales number of complication forms returned to SISP for operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Number of complication forms returned to SISP matching an operation</th>
<th>Number of ‘orphan’ complication forms returned to SISP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>1</td>
</tr>
</tbody>
</table>

*Forms that were imported into the tonsils database but did not have a matching operation form

Compliance with the surveillance

The compliance with the surveillance is carried out utilising data obtained from the Patient Database Episode for Wales (PEDW) held by NHS Wales Informatics Service (NWIS). Compliance with the surveillance can be obtained by comparing the number of operation and complication forms returned to SISP with the number of reported operations and complications from the PEDW data.

Table 1.2 All Wales comparison of the number of operation forms* returned to SISP compared to the number of operations from the PEDW data for operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Number of operation forms returned to SISP*</th>
<th>Number of operations from the PEDW data</th>
<th>% Compliance**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2875</td>
<td>3406</td>
<td>84%</td>
</tr>
</tbody>
</table>

*Operations included in this figure are tonsillectomy, adenotonsillectomy, adenoidectomy and UVPPP only. Private hospital data is also excluded

**% Compliance = number of operation forms returned to SISP / the number of operations from the PEDW data x 100

Table 1.3 All Wales comparison of the number of complication forms reporting a major haemorrhage returned to SISP compared to the number of major haemorrhages from the PEDW data following operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Complication</th>
<th>Number of major haemorrhage complication forms returned to SISP*</th>
<th>Number of major haemorrhages from the PEDW data</th>
<th>% Compliance**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial return to theatre (R1)</td>
<td>6</td>
<td>30</td>
<td>20%</td>
</tr>
<tr>
<td>Readmission return to theatre (R2)</td>
<td>10</td>
<td>43</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>73</strong></td>
<td><strong>22%</strong></td>
</tr>
</tbody>
</table>

*Excludes ‘orphan’ complications

** % Compliance = number of major haemorrhage complication forms returned to SISP / number of major haemorrhages from the PEDW data x 100
Key summary points

- The total number of operation / instrument forms returned to SISP for 2012 was 3076.
- A total of 46 (includes 1 ‘orphan’ record) complication forms were returned for the same period.
- An operation compliance of 84% was noted for the surveillance for 2012.
- Only 22% of complication forms relating to a major hemorrhage were returned for 2012.
SECTION 2. Operation details

Note: Operations with biopsy as the indication for an operation are excluded from this data analysis.

Table 2.1 provides details on the number of operations carried out by year since the start of the surveillance in 2003. The numbers tabulated in this report may differ from previous annual reports as data may have been updated in the database since the reports were issued. The reader is advised to use the most up-to-date report when quoting such operation figures.

Table 2.1 All Wales summary of the number* of operations reported to SISP carried out between 2003 and 2012

<table>
<thead>
<tr>
<th>Procedure</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenotonsillectomy</td>
<td>415</td>
<td>842</td>
<td>657</td>
<td>588</td>
<td>597</td>
<td>652</td>
<td>513</td>
<td>399</td>
<td>423</td>
<td>463</td>
<td>5549</td>
</tr>
<tr>
<td>Adenoidectomy</td>
<td>155</td>
<td>470</td>
<td>415</td>
<td>365</td>
<td>350</td>
<td>366</td>
<td>379</td>
<td>309</td>
<td>250</td>
<td>306</td>
<td>3365</td>
</tr>
<tr>
<td>Tonsillectomy</td>
<td>1503</td>
<td>3530</td>
<td>2649</td>
<td>2301</td>
<td>2839</td>
<td>2670</td>
<td>2817</td>
<td>2276</td>
<td>2141</td>
<td>2070</td>
<td>24796</td>
</tr>
<tr>
<td>UVPPP</td>
<td>20</td>
<td>55</td>
<td>34</td>
<td>38</td>
<td>30</td>
<td>27</td>
<td>38</td>
<td>29</td>
<td>17</td>
<td>28</td>
<td>316</td>
</tr>
<tr>
<td>Unknown</td>
<td>11</td>
<td>55</td>
<td>48</td>
<td>38</td>
<td>30</td>
<td>27</td>
<td>38</td>
<td>29</td>
<td>17</td>
<td>28</td>
<td>358</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2104</td>
<td>4952</td>
<td>3803</td>
<td>3334</td>
<td>3853</td>
<td>3746</td>
<td>3800</td>
<td>3049</td>
<td>2851</td>
<td>2892</td>
<td>34384</td>
</tr>
</tbody>
</table>

*The operative numbers are based on an operation being marked on the form or where the operation can be determined by the technique utilised.

Figure 2.1 All Wales annual trend of operations reported to SISP carried out between 2003 and 2012

Figure 2.2 All Wales monthly trend of operations reported to SISP carried out between 01/01/2012 and 31/12/2012
Key summary points

- The total number of operations recorded by the surveillance (2003 – 2012) is 34384. The operations include tonsillectomy, adenoidectomy, adenotonsillectomy, UVPPP and unknown operations.
- The number of operations carried out for 2012 was 2892.
- The all Wales trend graph shows the number of operations for 2012 is similar to the numbers reported for 2011.
- On average approximately 241 procedures per month were carried out for 2012.
SECTION 3. Patient demographics

The tables below provide information on patient sex and age.

Table 3.1 All Wales number of operations reported to SISP broken down by gender carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Gender</th>
<th>Adenoidectomy</th>
<th>Adenotonsillectomy</th>
<th>Tonsillectomy</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>152</td>
<td>192</td>
<td>1345</td>
<td>1689</td>
</tr>
<tr>
<td>Male</td>
<td>142</td>
<td>258</td>
<td>669</td>
<td>1069</td>
</tr>
<tr>
<td>Unknown</td>
<td>12</td>
<td>13</td>
<td>56</td>
<td>81</td>
</tr>
<tr>
<td>Total</td>
<td>306</td>
<td>463</td>
<td>2070</td>
<td>2839</td>
</tr>
</tbody>
</table>

Table 3.2 All Wales number of operations reported to SISP broken down by age group carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Age group</th>
<th>Adenoidectomy</th>
<th>Adenotonsillectomy</th>
<th>Tonsillectomy</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>66</td>
<td>211</td>
<td>139</td>
<td>416</td>
</tr>
<tr>
<td>5-9</td>
<td>155</td>
<td>194</td>
<td>449</td>
<td>798</td>
</tr>
<tr>
<td>10-14</td>
<td>44</td>
<td>32</td>
<td>277</td>
<td>353</td>
</tr>
<tr>
<td>15-19</td>
<td>12</td>
<td>8</td>
<td>409</td>
<td>429</td>
</tr>
<tr>
<td>20 and over</td>
<td>22</td>
<td>6</td>
<td>736</td>
<td>764</td>
</tr>
<tr>
<td>Unknown</td>
<td>7</td>
<td>12</td>
<td>60</td>
<td>79</td>
</tr>
<tr>
<td>Total</td>
<td>306</td>
<td>463</td>
<td>2070</td>
<td>2839</td>
</tr>
</tbody>
</table>

Key summary points

- 59% of patients undergoing surgery in 2012 were female.
- The female population attending for tonsil and adenoid surgery outnumbers the male population. The cause of this difference remains unknown.
- 70% of patients undergoing surgery in 2012 were under 20 years of age with operation numbers peaking at the age group of 5-9 years. This has also been noted in the literature.
SECTION 4. Complications

This section provides results on the number of major haemorrhage bleeds following tonsillectomy and adenotonsillectomy procedures in Wales for 2012.

Definitions of the captured complications:

The complications captured by the surveillance are known as post operative haemorrhages. They are categorised as either major or minor.

- A major haemorrhage is defined as bleeding requiring a return to theatre for cessation of bleeding (R).
- A minor haemorrhage does not require a surgical intervention (N).

A major haemorrhage can be further categorised into a primary (R1) or secondary (R2) bleed:

- **R1 - Primary major haemorrhage**, is a haemorrhage requiring a return to theatre that occurs within the first 24 hours following primary surgery.
- **R2 - Secondary major haemorrhage**, is a haemorrhage requiring a return to theatre that occurs more than 24hrs following primary surgery and up to 28 days following surgery.

A minor haemorrhage can be further categorised into a primary (N1) or secondary (N2) bleed:

- **N1 - Primary minor haemorrhage**, is a haemorrhage not requiring a return to theatre that occurs within the first 24 hours following primary surgery.
- **N2 - Secondary minor haemorrhage**, is a haemorrhage not requiring a return to theatre that occurs more than 24hrs following primary surgery and up to 28 days following surgery.

R1, R2 and post operative haemorrhage repairs

Table 4.1 All Wales number of major haemorrhages reported to SISP following operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Major haemorrhage</th>
<th>Number of complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial return to theatre (R1)*</td>
<td>6</td>
</tr>
<tr>
<td>Readmission return to theatre (R2)**</td>
<td>9</td>
</tr>
<tr>
<td>Post-operative haemorrhage repair***</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29</strong></td>
</tr>
</tbody>
</table>

*Haemorrhage that occurs within the first 24 hours following primary surgery. The complication is noted by returning a complication form.

**Haemorrhage that occurs more than 24 hours following primary surgery and up to 28 days following surgery. The complication is noted by returning a complication form.

***Noted on the operation form as the reason for a return to theatre for an operation but has no corresponding complication form.
**Patient specific bleed rate**

Table 4.2 All Wales number* and rate (%) of patients who were reported to SISP to have had a major haemorrhage following operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Number* of patient specific major haemorrhages reported to SISP</th>
<th>Patient specific bleed rate (%)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>1.1</td>
</tr>
</tbody>
</table>

*The major haemorrhage number is based on the number of patient specific complication forms returned to SISP reporting a major haemorrhage (R1 and R2), occurring up to 28 days after the primary operation or alternatively patients which have a post-operative haemorrhage repair identified but have no corresponding complication form are also included.

**Bleed rate (%) = number of patient specific major haemorrhages reported to SISP / (number of tonsillectomy + adenotonsillectomy operations reported to SISP) x 100

Table 4.3 All Wales number* and rate (%) of major haemorrhages reported by NWIS (PEDW data) following operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Number of complications reported to NWIS</th>
<th>Bleed rate (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Bleed rate (%) = number of patient specific major haemorrhages from the PEDW data / (number of tonsillectomy + adenotonsillectomy operations from the PEDW data) x 100

Note: The rate provided in table 4.3 is a crude estimate of the bleed rate utilising the PEDW data. It does not take into consideration if a patient has had more than one complication and cannot be directly compared with the SISP patient specific bleed rate as it may also include adenoid bleeds.

**Major haemorrhage trends**

![Figure 4.1 All Wales patient specific bleed rate (%) trend using SISP data for operations carried out between 2003 and 2012](image-url)
Figure 4.2 All Wales crude bleed rate (%) trend using PEDW data for operations carried out between 2003 and 2012 (this data may also include adenoid bleeds in addition to tonsil bleeds)

Figure 4.3 All Wales number of major haemorrhages (R1 and R2) trend using SISP data for operations carried out between 2003 and 2012

Figure 4.4 All Wales number of major haemorrhages (R1 and R2) trend using PEDW data for operations carried out between 2003 and 2012 (this data may include adenoid bleeds in addition to tonsil bleeds)
Key summary points

- There were 28 major haemorrhages (including initial, readmission and post-operative haemorrhage repairs) reported to the surveillance during 2012. From the compliance figures quoted utilising the PEDW data, the numbers reported have been under estimated.
- A patient specific bleed rate of 1.1% was noted for 2012 utilising the surveillance data.
- A crude bleed rate was also provided utilising the PEDW data due to poor compliance with the surveillance. The crude rate for 2012 was 2.5%.
- Figure 4.1 shows an increase in the patient specific bleed rate in 2007 and 2008. By using the PEDW data, Figure 4.2 also shows an increase in the crude bleed rate for the same time period. This increase may be associated with a change in dissection technique. It is difficult to ascertain if this trend has continued after this time period as a drop in compliance with the surveillance may skew the results.
- Note: the PEDW data should be treated with caution as the return to theatre complications may include adenoid bleeds in addition to tonsil bleeds.
SECTION 5. Instrument usage and problems

All instruments (excluding diathermy)

Note, comments for all problematic instruments (2012) can be found in the Appendix.

Table 5.1 All Wales instrument usage (excluding diathermy) reported to SISP for operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Total used</th>
<th>Problems</th>
<th>% Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Minor</td>
<td>Major</td>
</tr>
<tr>
<td>Beckmann 75 curette</td>
<td>304</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Birkett</td>
<td>2161</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Blade</td>
<td>3002</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>DBrowne</td>
<td>2096</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Draffin rod support</td>
<td>211</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Draffin rods</td>
<td>2782</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Eves tonsil snare</td>
<td>465</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Gag adult</td>
<td>1425</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Gag child</td>
<td>1629</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Gwynne Evans</td>
<td>1909</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Lucas</td>
<td>665</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Metzenbaum scissors</td>
<td>2081</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Mollison tonsil pillar</td>
<td>2445</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Negus knot pusher</td>
<td>1675</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Negus large curved</td>
<td>1964</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>SCT 45 unguarded</td>
<td>230</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Waughs non-toothed</td>
<td>58</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Waughs toothed</td>
<td>202</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Yankauer suction</td>
<td>2056</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Total          | 27360      | 36       | 13         | 0.13  | 0.05  | 0.18 |

Figure 5.1 All Wales instrument problems (excluding diathermy) reported to SISP for operations carried out between 01/01/2012 and 31/12/2012
Figure 5.2 All Wales instrument problems (excluding diathermy) reported to SISP for operations carried out between 2003 and 2012

Diathermy

Table 5.2 All Wales diathermy usage reported to SISP for operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Total used</th>
<th>Problems</th>
<th>% Problems</th>
<th>Instrument</th>
<th>Total used</th>
<th>Problems</th>
<th>% Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Minor</td>
<td>Major</td>
<td>Minor</td>
<td></td>
<td>Minor</td>
<td>Major</td>
</tr>
<tr>
<td>Diathermy (meditech)*</td>
<td>1724</td>
<td>14</td>
<td>19</td>
<td>0.80</td>
<td>1.09</td>
<td>1.90</td>
<td></td>
</tr>
<tr>
<td>Non-specified diathermy, monopolar**</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Total 1738 14 19 0.81 1.09 1.90

* Diathermy usage is based on all hospitals in Wales currently using the specified Meditech forceps.
** Diathermy currently not included in the specified single-use instrumentation set

Figure 5.3 All Wales diathermy problems reported to SISP for operations carried out between 2003 and 2012
Key summary points

- One or more problems were noted for 84% (16 out of 19) of the instruments available within the tonsils set. However, 69% (11 out of 16) failure rates of instruments were below 0.5%.
- Total instrument problem rates (excluding diathermy) for all Wales (2012) were 0.18% (0.05% major problems).
- The Waugh’s non-toothed, Eves Tonsil Snare and Lucas, were the most problematic instruments with overall problem rates of 1.72, 0.65 and 0.60%, respectively. However, it must be noted that low numbers of the Waugh’s non-toothed instrument were utilised.
- The total Meditech diathermy problem rate for Wales (2012) was 1.90% (1.09% major problems).
- Overall, instrument problems in general have stabilised or reduced since 2005 (including diathermy). However, there has been an increase in diathermy problems for 2011 and 2012 with major problems noted.
- There has been continual reporting of problematic instruments along with useful comments to the SISP. Such data are important for instrument investigations carried out by SMTL.
- Many of the reported problems occurred in clusters. Although the instrument problems are rectified, problems may still be noted in small numbers if the problematic instruments have not been removed from stock.
- Removal of problematic instruments from stock is essential to prevent ‘artificial’ inflation of instrument problem rates.
CONCLUSION

SISP has adopted a unique surveillance allowing problematic instruments to be detected efficiently without compromising patient safety. In addition, the surveillance allows for the evaluation of the operations undertaken and provides details of any associated complications. However, there has been a decrease in the number of return to theatre complications captured by the surveillance. Although figures can be obtained from the PEDW, we are unable to match these records to existing operations or previous complications. Such information is useful to the surveillance as this allows for patient demographics to be captured in addition to links to complications as a result of a problematic instrument. One of the key purposes of this surveillance is to monitor bleeds associated with the single use instruments and it is essential that these complications are captured by the return of the complication forms.

This report has shown that there has been an increase in the major haemorrhage rates for 2012 utilising the PEDW data. The rate should be treated with caution as the PEDW data may include bleeds associated with adenoid procedures as well as tonsillectomy. Any small change in the rates does require further careful monitoring and investigation by the surveillance team.

Instrument problems will continue to occur and due to their mass production, continuing appraisal and notification of failures/ errors are an essential part of preventing ongoing problems. Reporting of instrument problems and return of the problematic instrument itself to SMTL is essential to rectify the instrument fault. Diathermy forceps (Meditech) continue to be a problematic instrument but the surveillance has shown that numbers have increased in 2011 and 2012, especially major problems. This will require further investigation. Other problematic instruments included the Eves tonsil snare, Waugh's non-toothed and Lucs (note Waugh's non-toothed had low utilization). The many comments provided by the surgeons will be reported to SMTL and the manufacturer. In particular the adult and child gag was problematic with the gags not holding.

The report also confirms that a greater percentage of the female population attends for tonsil and adenoid surgery. In addition, 70% of patients are under 20 years of age with operation numbers peaking at the age group of 5 – 9 years.

The continued support of the surgeons of Wales is essential to maintain and further improve the data collected and to reduce instrument problems. The majority of tables and graphs detailed in this report are available to surgeons and their teams and can be run at a hospital level. This will allow teams to look at their data more regularly and have information that may be of use within audit meetings or presentations. Please contact the SISP team if you do not already have access to these web reports (John.twiddy@wales.nhs.uk).
REFERENCES


http://www.scottish-otolaryngological-society.co.uk/audit.html (date of last access June 2004).


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Miss Victoria McClure Information Analyst, Public Health Wales
Mr David Owens SpR ENT
Ms Sarah Farmer SpR ENT
Mr Pete Phillips Director of SMTL
Mr Dominic Worsey and Healthcare Standards, Quality Standards and Safety Improvement
Mr Philip Reardon Smith Directorate, Welsh Assembly Government
# APPENDIX

**All Wales instrument problems for all operations**

All Wales instrument problem comments (excluding diathermy) reported to SISP for operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Month</th>
<th>Problems</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blade</td>
<td>Jul</td>
<td>Minor</td>
<td>Size not marked on blade</td>
</tr>
<tr>
<td>Eves tonsil snare</td>
<td>Oct</td>
<td>Minor</td>
<td>New snare used as first one didn’t work</td>
</tr>
<tr>
<td>Gag adult</td>
<td>Jan</td>
<td>Major</td>
<td>Gag clip didn’t ratchet enough to catch on blade</td>
</tr>
<tr>
<td></td>
<td>Jun</td>
<td>Major</td>
<td>Ratchet not working, slipping as too short</td>
</tr>
<tr>
<td></td>
<td>Jul</td>
<td>Major</td>
<td>Spring catch didn’t project through hole to catch or bloke ratchet</td>
</tr>
<tr>
<td>Gag child</td>
<td>Feb</td>
<td>Major</td>
<td>Spring on gag too weak to hold tongue plate</td>
</tr>
<tr>
<td></td>
<td>Feb</td>
<td>Major</td>
<td>Weak spring that didn’t allow blade to be held</td>
</tr>
<tr>
<td></td>
<td>Apr</td>
<td>Minor</td>
<td>Ratchet not catching</td>
</tr>
<tr>
<td></td>
<td>Apr</td>
<td>Major</td>
<td>Not holding plate</td>
</tr>
<tr>
<td></td>
<td>Aug</td>
<td>Major</td>
<td>Spring clip not passing through the hole to engage in groove on tongue blade</td>
</tr>
<tr>
<td>Gwynne Evans</td>
<td>Nov</td>
<td>Major</td>
<td>Rusty</td>
</tr>
<tr>
<td></td>
<td>Dec</td>
<td>Minor</td>
<td>Felt blunt but not replaced</td>
</tr>
<tr>
<td>Metzenbaum scissors</td>
<td>Dec</td>
<td>Major</td>
<td>Scissors blunt replaced</td>
</tr>
</tbody>
</table>

All Wales diathermy problem comments reported to SISP for operations carried out between 01/01/2012 and 31/12/2012

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Month</th>
<th>Problems</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diathermy (meditech)</td>
<td>Mar</td>
<td>Major</td>
<td>Not functioning</td>
</tr>
<tr>
<td></td>
<td>Aug</td>
<td>Major</td>
<td>Forceps would not work</td>
</tr>
<tr>
<td></td>
<td>Sep</td>
<td>Major</td>
<td>Connection on bipolar forceps were loosely connected</td>
</tr>
<tr>
<td></td>
<td>Nov</td>
<td>Minor</td>
<td>First bipolar didn’t work</td>
</tr>
<tr>
<td></td>
<td>Nov</td>
<td>Minor</td>
<td>Diathermy ends crossing</td>
</tr>
<tr>
<td></td>
<td>Nov</td>
<td>Major</td>
<td>Not working</td>
</tr>
</tbody>
</table>