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Iechyd Cyhoeddus  
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Public Health  
Wales

**Surveillance:** **Surgical Site Infection (SSI)**

**Report:** **Annual Report**

**Time period:** **1<sup>st</sup> January to 31<sup>st</sup> December 2012**

**Health Board:** **All Wales**

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**Issued by:** **Welsh Healthcare Associated Infection Programme (WHAIP)**

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## **INTRODUCTION**

Surgical site infections (SSI) are a substantial cause of mortality and morbidity among hospitalised patients. Studies on orthopaedic surgical site infections have shown them to result in considerable increases in lengths of stay, high re-hospitalisation rates, and significant reductions in health-related quality of life<sup>1,2</sup>. SSI is the second most common infection following a Caesarean section within a group of patients who are generally considered to be young, fit and well females<sup>3</sup>. Complications of both surgery have high human and financial costs<sup>1,2,4</sup>.

The following annual rate report is a summary of information provided by the six Health Boards in Wales performing orthopaedic surgery and / or caesarean section procedures. The report includes data captured both during the hospital stay and post-discharge. The surveillance incorporates data collected by clinical teams (and midwives for c section surveillance) and uses internationally agreed definitions<sup>4</sup>, allowing Welsh data to be compared with and be incorporated into other international databases, such as the ECDC SSI database<sup>5</sup>.

The purpose of this report is to provide an all Wales trend rate report of infections over time and for individual Health Boards to have the opportunity to monitor their own trends over time.

# **1. ORTHOPAEDIC SSI SURVEILLANCE**

## **ALL WALES SUMMARY**

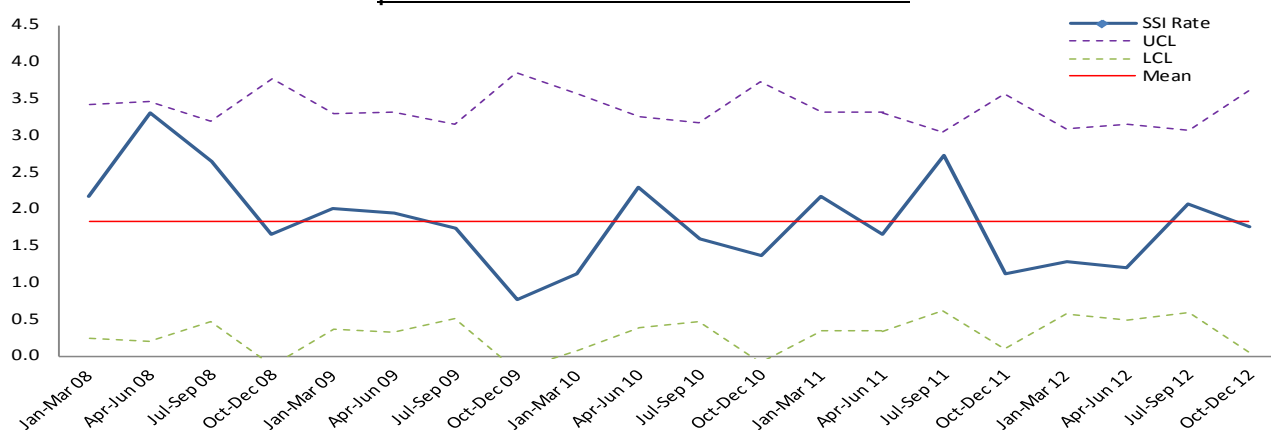
- This annual report covers SSI associated with elective primary hip arthroplasty and elective primary knee arthroplasty.
- A total of 3523 questionnaires were received for hip arthroplasties in 2012. 3513 (99%) of forms could be further analysed for determining the overall SSI rate for 2012.
- 19 inpatient infections and 36 post-discharge infections were detected following hip arthroplasties in 2012, giving a crude overall SSI rate of 1.6%. This rate has decreased since 2011 (2.1%).
- A total of 4177 questionnaires were received for knee arthroplasties in 2012. 4167 (99%) of forms could be further analysed for determining the overall SSI rate for 2012.
- 19 inpatient infections and 59 post-discharge infections were detected following knee arthroplasties in 2012, giving a crude overall SSI rate of 1.9%. This rate is similar to 2011 (1.8%).
- Annual / quarterly trend rates (2008 – 2012) have shown elective primary hip arthroplasty rates to decrease between 2008 and 2009 but remain similar after this time.
- Annual / quarterly trend rates (2008 – 2012) have shown elective primary knee arthroplasty rates have decreased since 2008 with approximately a 40% reduction in the rate.

## ALL WALES RESULTS

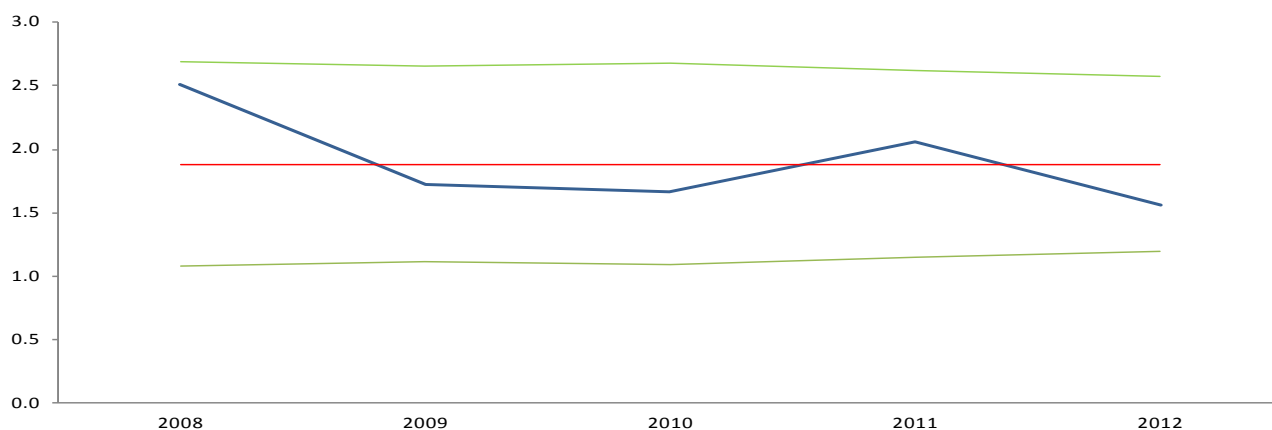
All Wales orthopaedic SSI rates for the period 01/01/2012 - 31/12/2012

Mandatory procedure	Number of forms received	Number of valid forms received	Number of inpatient SSI	Number of post-discharge SSI	Overall SSI Rate
Elective primary hip arthroplasty	3523	3513	19	36	1.6%
Elective primary knee arthroplasty	4177	4167	19	59	1.9%
<b>Total</b>	<b>7700</b>	<b>7680</b>	<b>38</b>	<b>95</b>	<b>1.7%</b>

All Wales elective primary hip arthroplasty overall quarterly SSI rates for the period 01/01/2008 - 31/12/2012



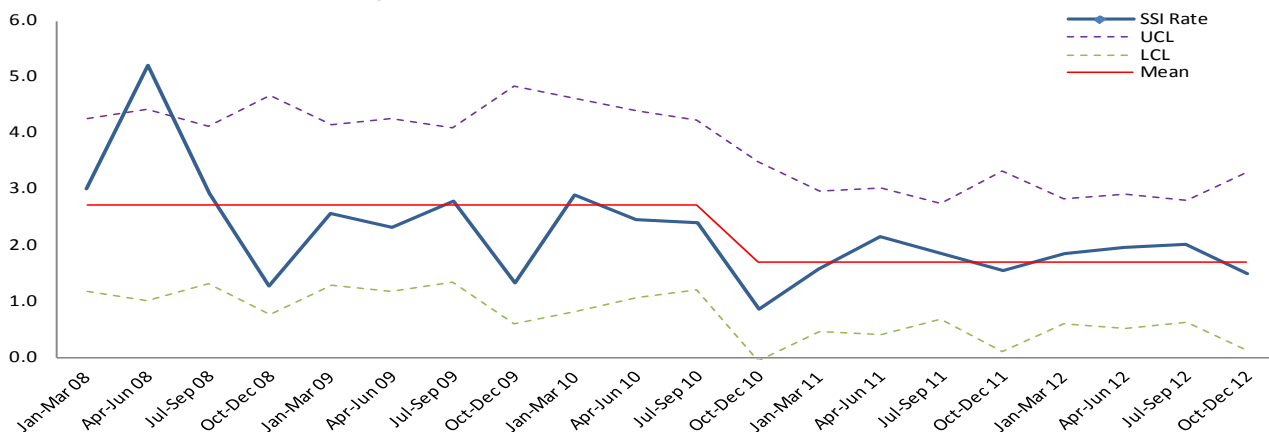
All Wales elective primary hip arthroplasty annual overall SSI numbers and rates for the period 01/01/2008 - 31/12/2012



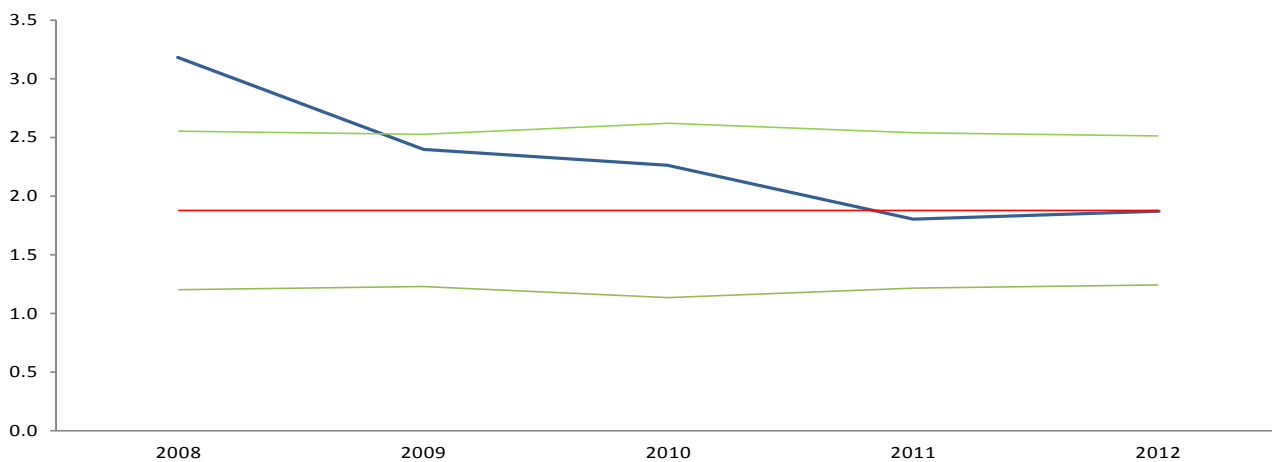
Year	Number of valid forms received	Number of overall SSI
2008	2545	64
2009	2793	48
2010	2639	44
2011	3109	64
2012	3513	55

N.B. These numbers may differ from the previously published annual reports if more forms have been received after the annual report for that time period was published

All Wales elective primary knee arthroplasty overall quarterly SSI rates for the period 01/01/2008 - 31/12/2012



All Wales elective primary knee arthroplasty annual overall SSI numbers and rates for the period 01/01/2008 - 31/12/2012



Year	Number of valid forms received	Number of overall SSI
<b>2008</b>	3650	116
<b>2009</b>	3951	95
<b>2010</b>	3037	69
<b>2011</b>	3828	69
<b>2012</b>	4167	78

N.B. These numbers may differ from the previously published annual reports if more forms have been received after the annual report for that time period was published

## **2. CAESAREAN SECTION SSI SURVEILLANCE**

### **ALL WALES SUMMARY**

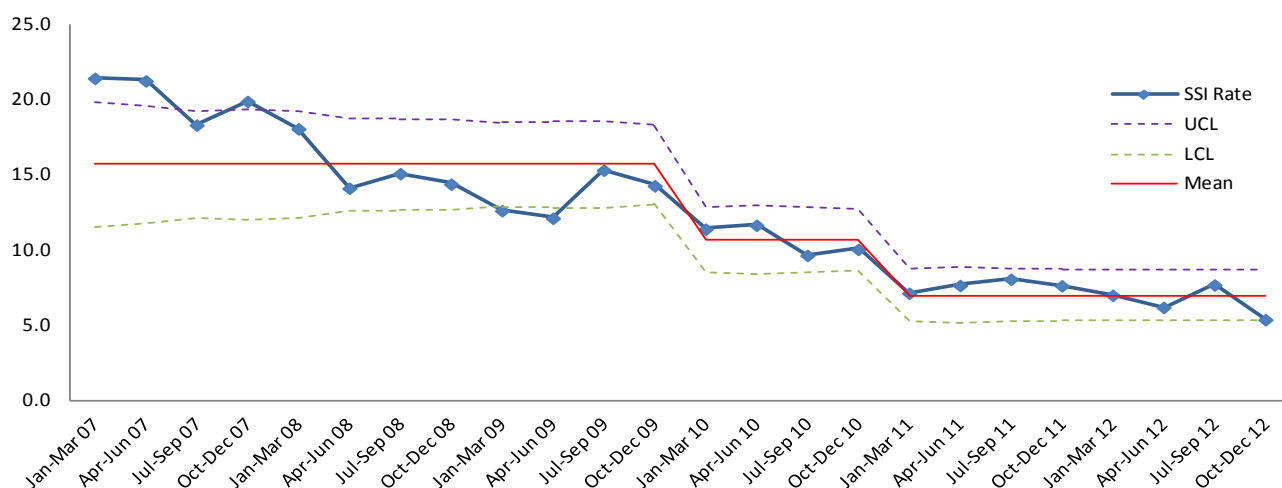
- This annual reports covers SSI associated with lower and upper uterine segment c section procedures and excludes c section hysterectomy.
- A total of 8276 questionnaires were received for 2012. 8073 (98%) of forms could be further analysed for determining the overall SSI rate for 2012.
- 39 inpatient SSI and 497 post discharge SSI were detected for 2012, giving a crude overall SSI rate of 6.6%. This is approximately a 14% decrease in the rate when compared to 2011 (7.7%).
- Annual / quarterly trend data over time has shown the SSI rate to decrease since 2007. Furthermore the overall SSI rate has decreased by 67% when comparing data for 2012 with 2007.

## ALL WALES RESULTS

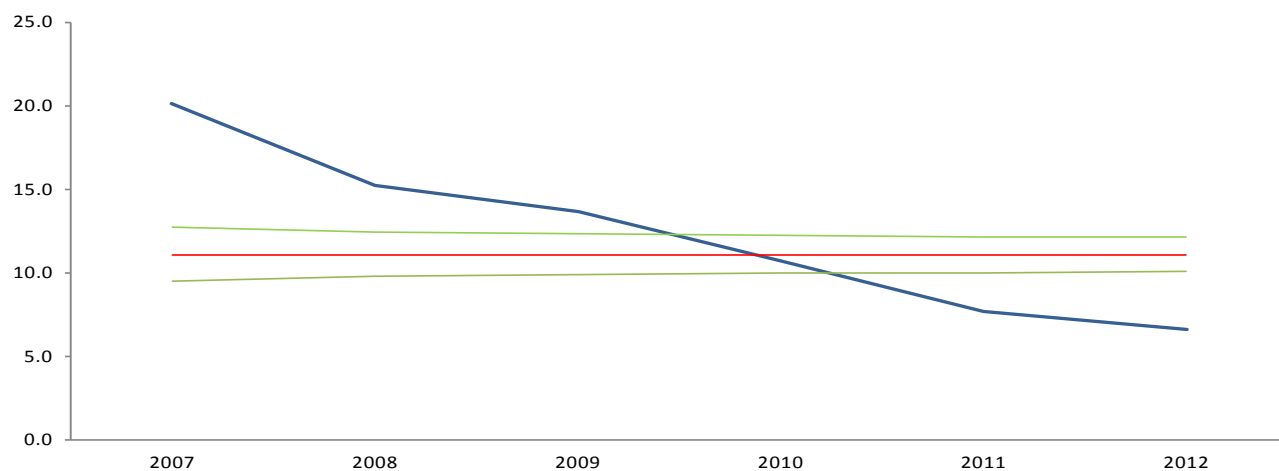
All Wales caesarean section SSI rate for the period 01/01/2012 - 31/12/2012

Number of forms received	Number of valid forms received	Number of inpatient SSI	Number of post-discharge SSI	Overall SSI Rate
8276	8073	39	497	6.6%

All Wales caesarean section overall quarterly SSI rates for the period 01/01/2007 - 31/12/2012



All Wales caesarean section overall annual SSI numbers and rates for the period 01/01/2007 - 31/12/2012



Year	Number of valid forms received	Number of overall SSI
2007	3318	668
2008	4855	741
2009	6221	851
2010	7344	787
2011	7605	585
2012	8073	536

N.B. These numbers may differ from the previously published annual reports if more forms have been received after the annual report for that time period was published

## **REFERENCES**

1. Whitehouse JD *et al.* The impact of SSI following orthopaedic surgery at a community hospital and a university hospital: Adverse quality of life, excess length of stay and extra cost. *Infection Control & Hospital Epidemiology* 2002; 23: 183-189.
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