



GIG
CYMRU
NHS
WALES

lechyd Cyhoeddus
Cymru
Public Health
Wales

**ORTHOPAEDIC
AND
CAESAREAN SECTION
SURGICAL SITE INFECTION
ANNUAL
SURVEILLANCE REPORT
2009 and 2010
ALL WALES**

Author: Welsh Healthcare Associated Infection Programme

Issued Date: 30 Sept 2011

Version: 1

INDEX

INTRODUCTION	3
1. <u>ORTHOPAEDIC SSI SURVEILLANCE</u>	
ALL WALES SUMMARY	4
ALL WALES RESULTS	5
<ul style="list-style-type: none">• Table: All Wales orthopaedic SSI rates for the period 01/01/2009 - 31/12/2009• Table: All Wales orthopaedic SSI rates for the period 01/01/2010 - 31/12/2010• Chart: All Wales elective primary hip arthroplasty overall quarterly SSI rates for the period 01/01/2008 - 31/12/2010• Chart: All Wales elective primary knee arthroplasty overall quarterly SSI rates for the period 01/01/2008 - 31/12/2010	
2. <u>CAESAREAN SECTION SSI SURVEILLANCE</u>	
ALL WALES SUMMARY	7
ALL WALES RESULTS	8
<ul style="list-style-type: none">• Table: All Wales caesarean section SSI rates for the period 01/01/2009 - 31/12/2009• Table: All Wales caesarean section SSI rates for the period 01/01/2010 - 31/12/2010• Chart: All Wales caesarean section overall quarterly SSI rates for the period 01/01/2008 - 31/12/2010	
REFERENCES	9

INTRODUCTION

In November 2002 the NHS Management Board in Wales agreed to adopt measures to reduce healthcare associated infections. The first step was to make orthopaedic surgical site infection surveillance mandatory in all sites in Wales performing joint replacement. A Welsh Health Circular (WHC (2003) 43) was issued to Chief Executives informing them of this and the Welsh Healthcare Associated Infection Programme (WHAIP) was instructed to develop and support the implementation of the surveillance. In September 2004, the Welsh Assembly Government launched 'Healthcare Associated Infections – A Strategy for Hospitals in Wales', stating that current mandatory surgical site infection surveillance involving orthopaedic surgery would be extended to other specialities (section 5.8, page 30). WHAIP again developed and supported the implementation of surveillance of infections following Caesarean section procedures undertaken in NHS hospitals in Wales. A Welsh Health Circular was issued to Chief Executives informing them of this (WHC (2005) 093).

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^{1,2}. SSI is the second most common infection following a C-section within a group of patients who are generally considered to be young, fit and well females³. Complications of both surgery have high human and financial costs^{1,2,4}.

The data presented here 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 definitions⁴, allowing Welsh data to be compared with and be incorporated into other international databases, such as the HELICS European SSI database⁵. The purpose of the surveillance is to assist sites in monitoring their infection rates over time, to assess the risk and communicate this locally.

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 2833 questionnaires were received for hip arthroplasties in 2009 and 2714 in 2010. 2779 (98%) and 2599 (96%) of forms could be further analysed for determining the overall SSI rate for 2009 and 2010.
- 14 inpatient infections and 34 post-discharge infections were detected following hip arthroplasties in 2009, giving a crude overall SSI rate of 1.7%. In 2010, 14 inpatient infections and 31 post-discharge infections were detected following hip arthroplasties, giving a crude overall SSI rate of 1.7%.
- A total of 3979 questionnaires were received for knee arthroplasties in 2009 and 3030 in 2010. 3941 (99%) and 2991 (91%) of forms could be further analysed for determining the overall SSI rate for 2009 and 2010.
- 22 inpatient infections and 74 post-discharge infections were detected following knee arthroplasties in 2009, giving a crude overall SSI rate of 2.4%. In 2010, 22 inpatient infections and 43 post-discharge infections were detected following knee arthroplasties, giving a crude overall SSI rate of 2.2%.
- The SSI rates should be treated with caution due to the varying compliance with the surveillance coupled with some data being invalid.
- There has been no significant decrease in the quarterly rate of SSI following hip or knee arthroplasties since 2008.

ALL WALES RESULTS

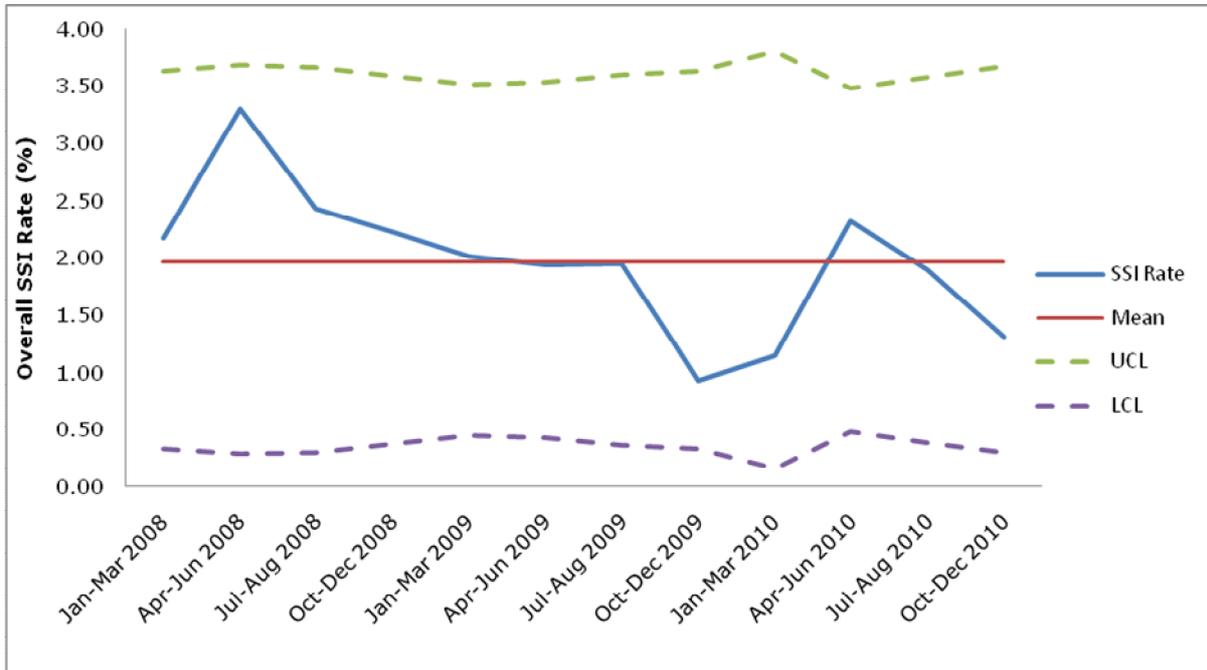
All Wales orthopaedic SSI rates for the period 01/01/2009 - 31/12/2009

	Total forms received	Valid forms	No. of inpatient SSI	No. of post-discharge SSI	Overall SSI Rate
Elective primary hip arthroplasty	2833	2779	14	34	1.7%
Elective primary knee arthroplasty	3979	3941	22	74	2.4%
TOTAL	6812	6720	36	108	2.1%

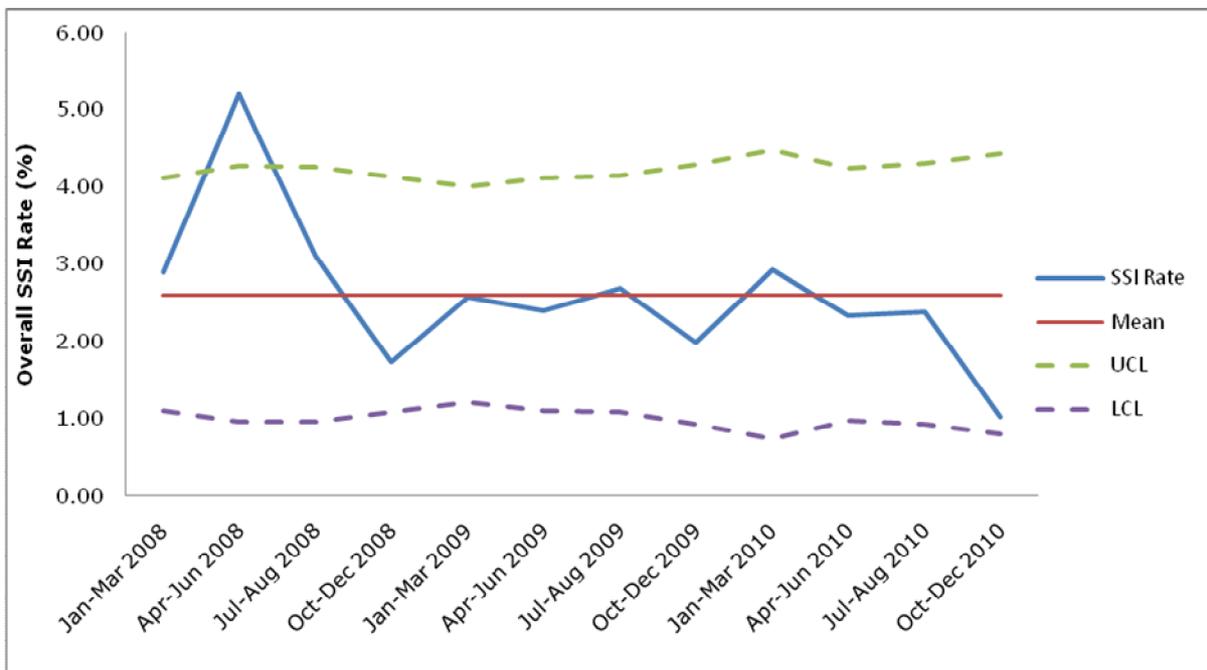
All Wales orthopaedic SSI rates for the period 01/01/2010 - 31/12/2010

	Total forms received	Valid forms	No. of inpatient SSI	No. of post-discharge SSI	Overall SSI Rate
Elective primary hip arthroplasty	2714	2599	14	31	1.7%
Elective primary knee arthroplasty	3030	2991	22	43	2.2%
TOTAL	5744	5590	36	74	2.0%

All Wales elective primary hip arthroplasty overall quarterly SSI rates for the period 01/01/2008 - 31/12/2010



All Wales elective primary knee arthroplasty overall quarterly SSI rates for the period 01/01/2008 - 31/12/2010



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 6801 and 7611 questionnaires were received for 2009 and 2010, respectively. 6237 (92%) and 7336 (96%) of forms could be further analysed for determining the overall SSI rate for 2009 and 2010.
- 80 inpatient SSI and 771 post discharge SSI were detected for 2009, giving a crude overall SSI rate of 13.6%. For 2010 48 inpatient SSI and 738 post discharge SSI were detected, giving a crude overall SSI rate of 10.7%.
- The SSI rates should be treated with caution due to the varying compliance with the surveillance coupled with some data being invalid.
- Trend data over time has shown the SSI rate to decrease since 2007. Furthermore the overall SSI rate has halved when comparing data for 2010 with 2007.

ALL WALES RESULTS

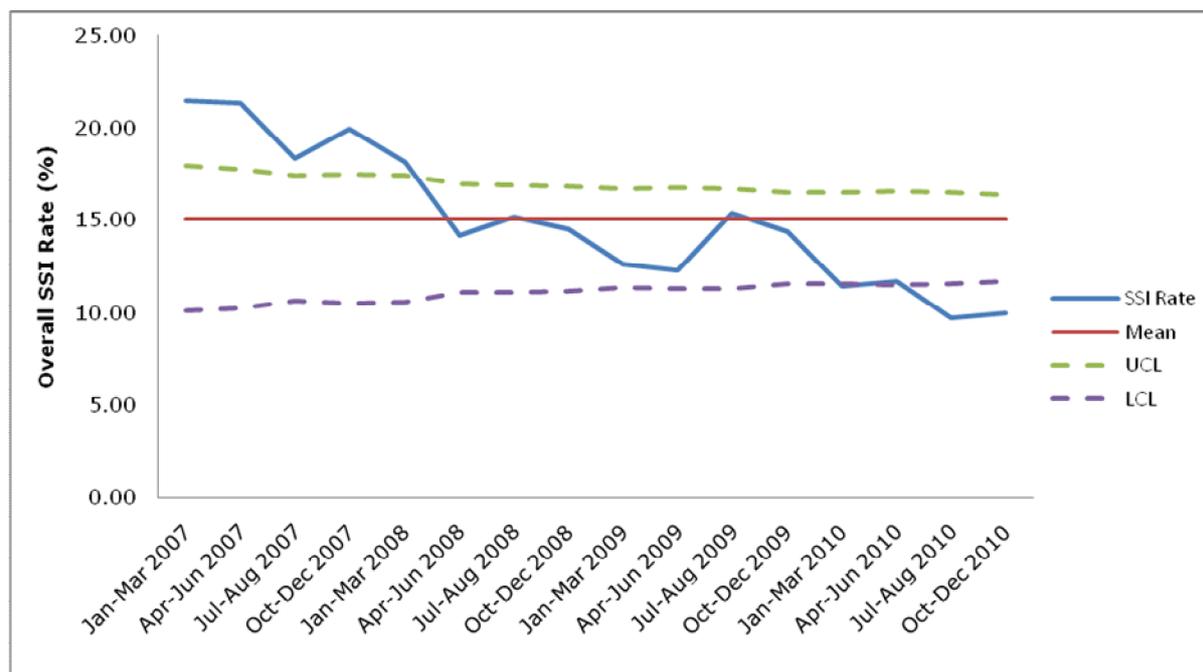
All Wales caesarean section SSI rate for the period
01/01/2009 - 31/12/2009

Total forms received	Valid forms	No. of inpatient SSI	No. of post-discharge SSI	Overall SSI Rate
6801	6237	80	771	13.6%

All Wales caesarean section SSI rate for the period
01/01/2010 - 31/12/2010

Total forms received	Valid forms	No. of inpatient SSI	No. of post-discharge SSI	Overall SSI Rate
7611	7336	48	738	10.7%

All Wales caesarean section overall quarterly SSI rates for the period
01/01/2007 - 31/12/2010



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.
2. O'Donoghue MA & Allen KD. Costs of an outbreak of wound infections in an orthopaedic ward. *Journal of Hospital Infection* 1992; 22: 73-79.
3. Plowman *et al.* The Socio-economic Burden of Hospital Acquired Infection .Public Health Laboratory Service 1999, London.
4. Horan T *et al.* CDC Definitions of Surgical Site Infections, 1992: A modification of CDC Definitions of Surgical Wound Infections. *Infection Control & Hospital Epidemiology* 1992; 13: 606-608.
5. Hospitals in Europe Link for Infection Control through Surveillance (HELICS). Available at: www.helics.univ-lyon1.fr/home.htm