



# Guidance on Antimicrobial Prophylaxis Related to Caesarean Section

## **This resource has been retired (January 2025)**

**This resource has been retired and is no longer considered an AWMSG-endorsed resource.**

**The resource underwent an assessment for review in June 2024. At that time, members of the All Wales Prescribing Advisory Group (AWPAG) considered it appropriate to retire the resource.**

**The content contained within the resource was considered to be out of date and, without an indication that an updated version of the resource would be of significant benefit to NHS Wales, AWPAG members considered it most appropriate for the resource to be retired at this time.**

**If you think this resource should be reconsidered for review, please get in touch with AWTTC by emailing [AWTTC@wales.nhs.uk](mailto:AWTTC@wales.nhs.uk).**

This report has been prepared by the All Wales Antimicrobial Guidance Group, with support from the All Wales Prescribing Advisory Group (AWPAG) and the All Wales Therapeutics and Toxicology Centre (AWTTC), and has subsequently been endorsed by the All Wales Medicines Strategy Group (AWMSG).

**This resource has now been retired and is no longer considered an AWMSG endorsed resource.**

Please direct any queries to AWTTC:

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This document should be cited as:

All Wales Medicines Strategy Group, All Wales Antimicrobial Guidance Group. Guidance on Antimicrobial Prophylaxis Related to Caesarean Section. September 2015.



## 1.0 BACKGROUND

### 1.1 Purpose

This document is intended to provide guidance regarding the timing and type of antimicrobial prophylaxis that should be offered to women undergoing caesarean section (CS) in Wales.

Guidance relating to Antimicrobial Prophylaxis for Caesarean Section was published by NICE in 2011.

### 1.2 Recommendations from NICE Clinical Guideline (CG) 132 (November 2011)

**90** Offer women prophylactic antibiotics at CS before skin incision. Inform them that this reduces the risk of maternal infection more than prophylactic antibiotics given after skin incision, and that no effect on the baby has been demonstrated. [new 2011]

**91** Offer women prophylactic antibiotics at CS to reduce the risk of postoperative infections. Choose antibiotics effective against endometritis, urinary tract and wound infections, which occur in about 8% of women who have had a CS. [A] [2004, amended 2011]

**92** Do not use co-amoxiclav when giving antibiotics before skin incision. [new 2011]

Within NICE CG132 there is extensive discussion of the pros and cons of antimicrobial prophylaxis, with particular focus on the timing of prophylaxis to maximise the benefit to the mother (i.e. administer prior to skin incision), and selection of antimicrobial to minimise risk to the baby (i.e. avoid the use of co-amoxiclav).

Currently there is variation between health boards in the antimicrobials used and the timing of administration. Current antimicrobial choices are given in Table 1. They are given prior to incision in most, but not all, health boards.

**Table 1. Current antimicrobial choices for health boards**

Health board	Current antimicrobial choices
Abertawe Bro Morgannwg	Co-amoxiclav or cefuroxime
Aneurin Bevan	Cefuroxime + metronidazole
Betsi Cadwaladr	Cefuroxime + metronidazole
Cardiff & Vale	Cefuroxime or co-amoxiclav
Cwm Taf	Cefuroxime + metronidazole
Hywel Dda	Co-amoxiclav or cefuroxime

A brief survey of practices across the UK was performed through the UK and Ireland Surveillance Group. The findings were:

#### Northern Ireland

*Five out of nine hospitals use co-amoxiclav immediately after cord clamping; 4/9 use cefuroxime within 1 hour prior to incision or they use clindamycin.*

#### Scotland

*As we have moved to light surveillance, we only collect this information for those patients that have developed an SSI. We last published this information for full surveillance in our annual report for January 2003 to December 2011 ([www.documents.hps.scot.nhs.uk/hai/sshaip/publications/ssi/ssi-2011.pdf](http://www.documents.hps.scot.nhs.uk/hai/sshaip/publications/ssi/ssi-2011.pdf)); however, the data were only available for the first half of the year as light surveillance began on 1 July 2011.*

A total of 8,081 antimicrobials were prescribed to patients undergoing CS procedures during the period 1 January to 30 June 2011 (Table 2).

**Table 2: Number and percentage of antimicrobials prescribed for patients undergoing CS procedures 1 January–30 June 2011**

Antimicrobial	First antimicrobial	Second antimicrobial	Total	Percent usage
Co-amoxiclav	4,415	22	4,437	54.9
Cefuroxime	1,779	2	1,781	22.0
Benzylpenicillin	569	12	581	7.2
Clindamycin	422	17	439	5.4
Gentamicin	59	615	674	8.3
Other	68	91	159	2.0
Not recorded	9	1	10	0.1
<b>Total</b>	<b>7,321</b>	<b>760</b>	<b>8,081</b>	<b>100.0</b>

The five most commonly prescribed antimicrobials accounted for 97.9% of all antimicrobials prescribed for CS procedures ( $n = 7,912$ ). Co-amoxiclav was the most commonly prescribed antimicrobial ( $n = 4,437$ ). However, some antimicrobials were given in combination: 545 patients received both benzylpenicillin and gentamicin, 75 patients received both clindamycin and gentamicin and 39 patients received both cefuroxime and metronidazole.

## England

Our pilot in 2009 (NB prior to NICE guidance in 2011) for surveillance of SSI following CS collected information on antibiotic prophylaxis from 3,776 of the 4,107 women in the study (at 14 NHS hospitals).

Ninety-eight percent (3,699/3,776) of women for whom information was collected were given antimicrobial prophylaxis. In most hospitals (9/14) the first choice of antibiotic agent was co-amoxiclav. A further four hospitals used cefuroxime and one used a combination of cefradine and metronidazole. The timing of administration of the antibiotic varied between hospitals, with eight hospitals administering antibiotics after delivery of the baby, of which three specified that this was after cord clamping. A further three hospitals administered the antibiotic at induction of anaesthesia and three gave it during the operation.

The variation in practice observed in Wales reflects variation elsewhere in the UK, although this may have changed since the publication of NICE CG132.

## 2.0 RECOMMENDATION

Antimicrobial prophylaxis should be offered prior to skin incision.

The antimicrobials recommended are shown in Table 3.

**Table 3. Antimicrobials recommended as prophylaxis prior to skin incision**

1 <sup>st</sup> line		2 <sup>nd</sup> line (if penicillin allergic)	
Cefuroxime	1.5 g IV	Clindamycin	600 mg IV/PO
<b>PLUS</b>		<b>PLUS</b>	
Metronidazole	500 mg IV	Gentamicin	1.5 mg/kg IV