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Briefing for the Public Petitions Committee

Petition Number: PE01505

Main Petitioner: Jackie Watt

Subject: Awareness of Strep B in Pregnancy and Infants

Calls on the Parliament to urge the Scottish Government to introduce new guidelines advising that all expectant mothers are given information about Strep B and are either screened for Strep B as a matter of routine or given information on where to go if they wish to be tested privately.

BACKGROUND

Group B Streptococcus (also known as *Streptococcus agalactiae*, GBS or Strep B) is a bacterium that is naturally present in the bodies of about one quarter of the UK population (National Screening Committee (NCS), 2012). It usually inhabits the digestive system and/or the female reproductive tract and is normally completely harmless. GBS is present in the vagina of about 21% of pregnant women in the UK and can be transferred to newborn infants at the time of delivery (Group B Strep Support, 2013). The majority of women who carry GBS give birth to healthy babies, but occasionally a newborn's immune system can be overcome and the bacteria can cause infection, illness and death.

Out of 700,000 babies born each year across the UK, approximately 350-400 of these will develop GBS[1] (an incidence of 0.5–0.57 per 1,000 births) (NSC, 2012). The incidence of GBS in Scotland in 2012 is estimated to be slightly lower (0.47 per 1,000 births[2]). Thus, although GBS is considered rare, it is recognised by the Royal College of Obstetricians and Gynaecologists (RCOG) as the leading cause of life-threatening infections in newborn infants (RCOG, 2012).

The majority of babies infected with GBS are successfully treated and make a full recovery with no long-term health consequences. However, data for the UK show that GBS causes the deaths of about 40 babies per year, with a

[1] The subject of the petition, and thus also this briefing, is concerned primarily with 'early-onset GBS', defined as a GBS infection that occurs within the first 7 days of life, as the incidence of late-onset GBS is not impacted by maternal screening procedures.
[2] Figures produced by Health Protection Scotland (HPS) as part of Ministerial response to Parliamentary Question S4W-1805.

further 25 babies per year suffering long term disabilities (NSC, 2012). GBS infections can lead to serious illnesses such as blood poisoning (septicaemia), lung infections (pneumonia) and infection of the lining of the brain (meningitis), as well as long term health problems such as cerebral palsy, deafness, blindness and learning difficulties. In addition, GBS infection can cause miscarriage and stillbirth, although clear data on the incidence of prenatal death due to GBS is not available.

The case for routine screening

The introduction of routine screening in the UK is supported by the organisation Group B Strep Support (GBSS). GBSS advocates for "every pregnant woman in the UK [to be] offered the opportunity to be tested for group B Strep using sensitive tests", in addition to improved access to information about GBS for both expectant mothers and health professionals.

Its 2013 report notes that routine screening in many countries, including the US, Canada, Germany, France and Spain, has coincided with a reduction in the incidence of neonatal GBS infections. For example, in the US the American College of Obstetricians and Gynaecologists (ACOG) first issued guidelines outlining a routine screening strategy in 1996 (revised and published by the Center for Disease Control, 2010, available here). The following 15 years saw a reduction in the incidence of early-onset GBS in the US from 1.7 per 1,000 live births in the early 1990's to 0.34–0.37 per 1,000 live births in recent years – a reduction of about 80% (see fig. 1 of CDC, 2010). Similarly, neonatal GBS disease has reduced in Spain by 86% and in Australia by 82% (GBSS, 2013). In addition, it notes a recent survey that finds that 92% of expectant mothers would welcome routine GBS screening and believe that it should be offered (ComRes, 2011).

GBSS recommends a screening strategy whereby all low-risk expectant mothers are screened for the presence of GBS at 35–37 weeks of gestation. Women found to be carrying GBS, as well as women who are defined as 'high-risk' (see below), regardless of whether they are known to carry GBS or not, would be offered treatment in the form of intravenous antibiotics administered during labour (GBSS, 2012). GBSS calculates that this strategy would result in about 27% of all women receiving antibiotics, and would prevent more than 80–90% of GBS infections in neonates (pg. 24, GBSS, 2012). In comparison, it calculates that the current practise prevents around 50–60% GBS infections with 18% of all women receiving treatment (pg. 24, GBSS, 2012).

Current practise for the prevention of neonatal GBS

Currently, there is no national testing programme for GBS in the UK, and expectant mothers are not routinely screened for the presence of GBS.

The UK currently operates a risk-factor based strategy to combat neonatal GBS disease. Risk factors are incidences that are known to increase the likelihood of early-onset GBS disease, and include mothers that test positive for GBS during current pregnancy, mothers with a previous baby that suffered

from early-onset GBS, maternal fever (>38°C) during labour, and premature (<37 weeks) or prolonged (>18 hours) labour. These are outlined in the RCOG's Green Top Guideline No 36, updated in 2012.

In these cases, treatment is offered in the form of intrapartum antibiotic prophylaxis (IAP), which involves the administration of intravenous antibiotics to the mother during labour to prevent the transmission of bacteria from mother to child.

Why is screening not practised in the UK?

The UK National Screening Committee (NSC) is a part of Public Health England, an executive agency of the Department of Health. Its role is to advise Ministers and the NHS in the four UK countries regarding all aspects of screening, including reviewing evidence for implementing new population level screening programmes. The Scottish Government chooses to participate in the UK NSC but is not bound by its recommendations.

The NSC recently reviewed the current guideline and decided against the introduction of routine screening for GBS. It concludes:

> "Screening for GBS should not be offered to all pregnant women. This is because there is insufficient evidence to demonstrate that the benefits to be gained from screening all pregnant women and treating those carrying the organism with intravenous antibiotics during labour would outweigh the harms." NSC (2012) Policy Position Statement

Further details regarding the rationale behind the NSC's decision can be found in the Policy Position Statement above, and in an FAQ published by the organisation.

What tests are available for GBS, and when can these be used?

There are currently two versions of the GBS test, referred to as the direct plating method or Enriched Culture Medium (ECM) method. The ECM test is considered the 'gold standard' and is considerably more sensitive than direct plating – false negative results for direct plating may be as high as 40–50%, compared to 4% for ECM (CDC, 1996; GBSS 2012).

Testing guidelines issued in 2012 by the UK Standards for Microbiology Investigations (SMI B 58) sets out testing protocols for GBS. This document recognises the NSC's recommendation against routine screening, but states that "according to local protocols, patients judged clinically to be at high risk for the development of Group B streptococcal infection may be investigated for carriage" and that the "use of selective enrichment broth [i.e. the ECM test] is recommended to avoid overgrowth of other organisms" (pg. 8, SMI B 58).

The ECM test is currently not widely available at NHS hospitals but may be purchased privately by post for a fee (including laboratory processing) of approximately £35 (GBSS, 2012). Information about where and how the ECM

test can be accessed, including a list of NHS Trusts that do offer the test, can be found on the GBSS website here.

SCOTTISH GOVERNMENT ACTION

Parliamentary question S4W-15631 (Margaret McDougall MSP) asked the Scottish Government what steps it is taking to "make testing of pregnant women in Scotland for group B streptococcal infection as described in *UK Standards Microbiology Investigations: Processing Swabs for Group B Streptococcal Carriage* [referring to the ECM test described above] available on request, and what the timetable is". The response from Michael Matheson MSP (26th June 2013) stated that:

> "The Scottish Government is given independent advice by the UK National Screening Committee (NSC), the independent expert advisory group who advise ministers and the NHS in the four UK countries about all aspects of screening.
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> The NSC reviewed the policy for Group B Streptococcus (GBS) in November 2012. This review considered all the available medical evidence regarding the risks and benefits of screening all pregnant women. The Committee recommended that a national screening programme for Group B Streptococcus should not be introduced. The NSC will continue to keep screening for GBS under review and will consider the policy again in 2015-16, or earlier, if significant new evidence emerges.
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> The Royal College of Obstetricians and Gynaecologists (RCOG) issued revised guidelines, 'The Prevention of Early-onset Neonatal Group B Streptococcal Disease', in June 2012. This recommends an approach to antibiotics administration based on maternal risk factors. NHS boards in Scotland are expected to follow professional guidance issued by the RCOG to identify which women, based on maternal risk factors, should be screened for GBS during pregnancy.
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> The UK Standards for Microbiology Investigations: Processing Swabs for Group B Streptococcal Carriage (SMI B 58) endorses and supports the recommendations that only those pregnant women assessed as being at high risk should be tested. The document provides a recommended method for such testing."

SCOTTISH PARLIAMENT ACTION

There have been no debates to date in Parliament regarding the specific issues raised by the petitioner.

Motion S4M-03648 (Kenneth Gibson MSP), lodged on 16th June 2012, supported the introduction of GBS testing in Scotland but fell on the 27th November 2012.

Recently, Motion S4M-08936 (Margaret McDougall MSP), lodged on the 3rd February 2014, noted that:

> "… although the RCOG does not recommend routine testing, the Scottish Government is not bound by this approach, and welcomes [the current petition that] asks the Scottish Government to introduce guidelines advising that all expectant mothers should be given information about GBS and be offered either routine testing or given information on where they can be tested privately".

The motion has achieved cross party support.

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