By: Graham Gibbens, Cabinet Member Adult Social Care & Public Health

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To: Social Care and Public Health Cabinet Committee – 5 December 2013

Subject: 13/00075 - Provision of opportunistic BCG (Bacillus Calmette-Guerin or Tuberculosis) vaccination programme for 10 to 16 year olds by school nurses

Classification: Unrestricted

Summary

The commissioning of school nursing, as part of the health child programme 5-19, is now the responsibility of local authorities from April 1st 2013.

As part of this programme school nurses in Kent continue to provide an opportunistic tuberculosis (BCG) vaccination programme for 10 to 16yr olds.

The national routine universal identification and BCG vaccination of 14 year olds by school nurses (started in 1953) was stopped in most of the country in 2005 as it was not considered effective due to a massive decline in cases in the indigenous population of the UK.

In the 1960s, rates in migrant populations were shown to be much higher and a selective neonatal BCG immunisation programme was introduced to protect infants born in the UK to parents of high-prevalence countries by vaccinating them shortly after birth. This is the most effective opportunistic approach.

Kent has never had higher than average levels of TB, and thus the value of the teenage opportunistic vaccination programme has been questioned.

NHS England has the responsibility for all vaccination programmes, including BCG. The Kent and Medway Area Team commissions the infant BCG vaccination programme and has no plans to commission BCG vaccinations for 14 year olds through school nurses.

Public Health England provided the background evidence and supports this proposal.

Recommendation:

Members of the Social Care and Public Health Cabinet Committee are asked to comment on the proposed decision to end opportunistic BCG vaccination of at risk 14 year olds in Kent by school nursing service.

1. Introduction

The purpose of this paper is to give the background to BCG vaccinations and the current evidence for controlling the spread of TB.

2. Background

2.1 What is TB?

Human tuberculosis (TB) is caused by infection with bacteria of the *Mycobacterium tuberculosis* complex (*M. tuberculosis*, *M. bovis* or *M. africanum*) and may affect almost any part of the body. The most common form is pulmonary TB, which accounts for almost 60% of all cases in the UK. Non-respiratory forms of TB are more common in young children in communities with connections to areas of the world with high prevalence, and in those with impaired immunity.

TB is spread when a person with an active TB infection in their lungs cough or sneeze and someone else inhales the expelled droplets containing TB bacteria.

However, although it is spread in a similar way to colds or influenza, TB is not as contagious. Transmission usually occurs only after prolonged periods of close contact with an infected person. For example TB usually spread amongst members who live in the same household; it would be highly unlikely to become infected by sitting next to an infected person on a train or bus.

2.1.1 The BCG vaccination programme

The BCG immunisation programme was introduced in the UK in 1953 and has undergone several changes since, in response to changing trends in the epidemiology of TB. The programme was initially targeted at children of school-leaving age (then 14 years), as the peak incidence of TB was in young, working-age adults.

In the 1960s, when TB rates in the indigenous population were continuing to decline, rates were shown to be much higher in new immigrants from High-prevalence countries and their families. Recommendations were made, therefore, to protect the children of these new entrants, wherever they were born, at the earliest opportunity. As part of this, a selective neonatal BCG immunisation programme was introduced to protect infants born in the UK to parents from high-prevalence countries by vaccinating them shortly after birth. Vaccinating neonates also gives the best immunity.

By the 1990s, uptake of BCG in schoolchildren aged 10–14 years was around 70%; a further 8% were exempt from immunisation as they were already tuberculin-positive (Department of Health). In 2005, following a continued decline in TB rates in the indigenous UK population, the schools programme was stopped. The BCG immunisation programme is now a risk-based

programme, the key part being a neonatal programme targeted at protecting those children most at risk of exposure to TB, particularly from the more serious childhood forms of the disease.

The universal BCG vaccination programme was replaced with the targeted BCG programme. In areas with TB incident ≤40 per 100,000, a targeted approach was recommended to immunise infants at high risk, that is, if their parents or grandparents originated from a country with an incidence ≥40 per 100,000, if travelling to a high incidence country for 3 or more months or when in contact with a TB case. In addition it was recommended that children of any age at high risk of TB should be vaccinated at suitable opportunities.

2.1.2 How do rates in Kent Compare?

Area	Rate* per 100,000 population (2010-2012
England	13.9
Kent	7.3
Medway	8.3
East Sussex	5.0
Surrey	7.8

* Rates based upon 2011 ONS population estimates

In Kent, Surrey and Sussex Public Health England Centre, the TB rate during the year ending 31st March 2013 was 7.0 per 100,000, similar to recent years. Rates continue to be highest in Gravesham in Kent at 18 per 100,000. Even though the rates in Gravesham are higher as compared to the rest of Kent they are much lower than the threshold of 40 per 100,000 required to implement the universal BCG vaccination programme.

2.1.3 The current service

In East and West Kent the school nursing service is provided by Kent Community Health Trust. The service in Swale is provided by Medway Hospital Foundation Trust.

Around 400 year 9 pupils are vaccinated per year from a population of around 16,000 pupils.

It is not possible to accurately identify the cost implications from removing this service as it is part of the school nursing service as is not commissioned separately. We estimate that the service utilises between 2-11 School nursing staff per year plus all the on costs of letters, clinics and administrative staff and consumes over 1,000 staff time hours per annum.

2.1.4 Proposed change to service delivery

At the moment the school nursing service send letters and a questionnaire to all parents of 14 year olds. This identifies those 14 year olds from specific at risk countries who are then invited for a BCG vaccination by the school nursing service. We propose to end this service, as indeed have our neighbouring areas, East Sussex and Surrey.

If we remove this service there still needs to be an opportunity for at risk 10 to 16 year olds to access BCG vaccination. The definition of at risk means family members recently arrived from a specified list of high risk countries or those who travel to high risk countries.

The opportunistic programme could be delivered through a range of NHS professionals in contact with teenagers such as at port entry, by GPs when they register new families, at appropriate school nurse health screening or at travellers' clinics.

NHS England is responsible for all vaccination programmes. They do this jointly with KCC and providers using a Kent Vaccination and Immunisation Board. This group will hold the responsibility for ensuring an alternative opportunistic vaccination pathway is in place.

The opportunistic neo natal BCG programme is provided widely in Kent and will not be affected by this change.

3. Implications

Ceasing the school based opportunistic BCG vaccination programme will not produce financial savings per see, however we will free up a significant amount of school nursing time (estimated at over 10000 hrs) to deliver core services in line with the Healthy Child programme.

It is not easy to recruit school nurses so this will enable school nurses to provide a more comprehensive service to schools, in particular special schools.

This change in service will be part of the full review of school nursing that is currently taking place.

4. Financial consequences

There are no financial implications.

5. Planned timeframe

Providers need 6 months notice which has already been given. Implementation is planned for April 2014; subject to a decision by the cabinet member by February 2014.

6. Recommendation

Members of the Social Care and Public Health Cabinet Committee are asked to comment on the proposed decision to end opportunistic BCG vaccination of at risk 14 year olds by the school nursing service.

It is proposed that an alternative pathway for at risk adolescents in Kent is agreed through the Kent Immunisation and Vaccination Board.

7. Contact Details

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8. References

Immunisation against Infectious Disease: The Green Book PHE 2013
Chapter 32

Tuberculosis in the UK: Annual Report on tuberculosis surveillance in the UK, 2013. London: Public Health England August 2013.

Appendix 1

Recommendations for the use of BCG vaccine

The aim of the UK BCG immunisation programme is to immunise those at increased risk of developing severe disease and/or of exposure to TB infection.

BCG immunisation should be offered to:

- All infants (aged 0 to 12 months) living in areas of the UK where the annual incidence of TB is 40/100,000 or greater*
- All infants (aged 0 to 12 months) with a parent or grandparent who was born in a country where the annual incidence of TB is 40/100,000 or greater†
- Previously unvaccinated children aged one to five years with a parent or grandparent who was born in a country where the annual incidence of TB is 40/100,000 or greater.† These children should be identified at suitable opportunities, and can normally be vaccinated without tuberculin testing
- Previously unvaccinated, tuberculin-negative children aged from six to under 16 years of age with a parent or grandparent who was born in a country where the annual incidence of TB is 40/100,000 or greater.† These children should be identified at suitable opportunities, tuberculin tested and vaccinated if negative (see section on tuberculin testing prior to BCG vaccination)
- Previously unvaccinated tuberculin-negative individuals under 16 years of age who are contacts of cases of respiratory TB (following recommended contact management advice – see National Institute for Health and Clinical Excellence (NICE), 2006)
- Previously unvaccinated, tuberculin-negative individuals under 16 years of age who were born in or who have lived for a prolonged period (at least three months) in a country with an annual TB incidence of 40/100,000 or greater.

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