

# **THE INQUIRY'S APPROACH TO MAKING USE OF RELEVANT DATA SOURCES**

## **1. Introduction**

The Bristol Royal Infirmary Inquiry intends to make full and effective use of available sources of evidence to inform its task. This includes making best use of available sources of data on children's heart surgery in Bristol and elsewhere, drawing on specialist statistical and scientific expertise as required.

## **2. Relevant sources of data which may form the basis of statistical analysis**

A range of sources of data on children's heart surgery exists, at both national and local level.

### **2.1 At national level, there are two main sources of data . They are as follows:**

#### **(i) Hospital Episode Statistics, known as "HES"**

This dataset aims to measure all hospital in-patient activity in England. Returns from hospitals across the country have been collected by the Department of Health since 1988. For some of the earlier years, we may be able to call on the precursor to HES, the Hospital In-Patient Enquiry, known as 'HIPE'.

#### **(ii) The UK Cardio-Thoracic Register data**

These data have been collected since 1977 and include information supplied voluntarily about cardiac surgery from each of the hospitals undertaking such work. They are collected and analysed by the Society of Cardio-Thoracic Surgeons.

### **2.2 At local level, the sources of information which could inform statistical analysis include:**

#### **(i) The clinical records**

These were compiled by UBHT clinicians on each child who received heart surgery. The Inquiry has access to all relevant clinical records.

#### **(ii) The UBHT's Patient Administration System, known as "PAS".**

This originated back to 1988 and, as well as being a system for tracking patients within the UBHT, it is the source of the UBHT's returns for Hospital Episode Statistics, the national source mentioned earlier.

In addition the Inquiry intends to draw on information collected and collated by the UBHT clinicians themselves. These sources include:

#### **(iii) The log-books of the Bristol cardiac surgeons**

(iv) The information collected by Bristol cardiologists, including their South West Congenital Heart Register computer system.

(v) The Patient Analysis and Tracing System - a system used in the UBHT cardiac surgery department from 1992.

(vi) We shall also draw on relevant clinical audit information, on statistics and tables used by UBHT clinicians at the time.

We may also draw on any other of the hospital's available clinical specialty systems and sources of information as necessary.

### **3. Issues of data quality**

In seeking to make effective and appropriate use of statistical data sources, the Inquiry intends to take account of crucial issues such as coverage, quality, relevance, comparability, and interpretation. We also want to understand the strengths, weaknesses and limitations of each of these sources. To this end, and as a broad framework within which to work, the Inquiry intends to adopt as a phased approach to making best use of available data.

### **4. A phased approach to making use of available data sources**

**4.1** The first phase will be to commission a preliminary critical overview of the sources outlined above. The aim of this overview, which we intend to publish, is to address key questions about the coverage and quality of each source, how the data were collected and validated, and the potential comparability of data sources. This overview will provide a context for subsequent statistical analysis, and will help to ensure that any conclusions reached, if indeed they can be reached from the data, are sound and capable of standing up to scientific and public scrutiny.

**4.2** The second phase will be an exploratory phase. Here we will look at what each data source – national and local - reveals about performance at Bristol. This will be a considerable undertaking, and will include:

- an exercise to look at every single child's clinical record, to capture information about each child's diagnosis, the surgical procedure performed, and the outcome. This exercise will allow the Inquiry to take a sample for more detailed study;
- independent assessment of the sources of national data to see what they can tell us about comparative performance as between Bristol and other centres performing paediatric cardiac surgery.

Where appropriate, we will cross-validate sources of data.

**4.3** At the end of this phase, the Inquiry, with the assistance of expert advice, will be in a position to determine whether the evidence suggests that Bristol had consistently or sporadically divergent performance, and if so in which aspects of children's heart surgery. We will then know which areas warrant further detailed study. But it must be emphasised that all that would be known at this stage is whether variations in performance existed. The data themselves would tell us nothing about what caused any variation.

**4.4** The third phase will be a confirmatory phase. Here the main interest lies in establishing whether there are any inherent technical biases in the data, both with regard to Bristol and to other centres, concentrating on those areas which are shown in the exploratory phase to merit special attention, e.g. particularly strong or weak areas of practice where lessons may be learnt.

**4.5** If any divergence in performance between Bristol and other centres were confirmed in Phase Three, a fourth explanatory phase will be taken forward. We will seek expert advice on possible explanations and will undertake further investigations, including, potentially, more detailed assessment of clinical notes. This may also involve the collection of new data.

## **5. Summary**

The Inquiry is determined to make full and appropriate use of relevant sources of statistical data to inform its task, but this must be done with an awareness of the limitations on the quality of the available sources of data. We aim to make public during the course of the year, a critical review of the sources of data and, subsequently, both analyses of Bristol's performance and expert opinion on what conclusions may reasonably be drawn from the data.

**The Secretariat**  
**Bristol Royal Infirmary Inquiry**  
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