

**TO:** West Gloucestershire Primary Care Trust Board

**FROM:** Dr Hugh Annett, Director of Public Health

**DATE:** November 2004

**SUBJECT: FIRST ANNUAL REPORT ON THE SANDHURST LONG TERM FOLLOW-UP STUDY**

## **2.0 PURPOSE**

- 2.1 To inform members of progress in a 20 year follow-up study of the health of local residents following a major chemical incident in 2000

## **3.0 BACKGROUND**

- 3.1 The Cleansing Services Group (CSG) site at Sandhurst was a licensed chemical waste transfer station and treatment facility jointly regulated by the Environment Agency (EA) and the Health and Safety Executive (HSE). A fire occurred at the facility at 02.00 on Monday 30<sup>th</sup> October 2000 during severe weather conditions.
- 3.2 Over 177 tonnes of organic solvents were ignited. Other chemicals involved in the incident included chlorinated solvents, pesticides, waste laboratory chemicals, mercury, zinc and cyanide. A small amount of low-level radioactive material and BSE contaminated waste was later found to have been stored on the site.
- 3.3 A plume of smoke from the fire was driven by the high prevailing wind in a north north-easterly direction over the village of Sandhurst. Residents living close to the site were evacuated but allowed to return on the evening of Monday 30<sup>th</sup> October 2000. Residents were evacuated again when extensive flooding prevented access to the site by emergency services.
- 3.4 Complaints of illness were first received on Tuesday 31<sup>st</sup> October 2000. A Health Surveillance survey carried out in November/December 2000 and followed up in June 2001 concluded that a physical and/or psychological health effect following the fire could be demonstrated for some local residents. Some local people reported continuing symptoms seven months after the incident. Blood and urine samples from some emergency services staff were screened for a range of chemicals with no positive findings. Expert medical opinion has suggested that in the case of one individual a causal relationship between the onset of illness and exposure during the incident is possible.
- 3.5 The site changed ownership in 2003 and no longer operates as a Waste Transfer Station.
- 3.6 The PCT seeks to identify whether sections of the community are experiencing particularly poor health and subsequently to give the highest priority to effectively addressing their special circumstances and needs.

### 4.0 STUDY RATIONALE

- 4.1 Due to the strength of community concern following the incident, Gloucestershire Health Authority undertook to set up a long term follow up study of the health of local people. It was clear that the statistical power of such a study would be low due to the small numbers of residents involved and the lack of information about exposure. Lack of statistical power is a common occurrence in small studies of exposure incidents and reduces the ability of researchers to draw robust conclusions.
- 4.2 An initial proposal to use an established research method to analyse mortality and cancer registration rates from ONS tagged records over 20 years using Kaplan Meier Survival Analysis was developed and received local ethical (LREC) approval in 2002. There have been a number of delays in setting up the study relating to changes in legislation affecting data collection and the requirements of Section 60 of the Health and Social Care Act which were beyond the control of the local researchers. However the data flow has now been established.
- 4.3 This study seeks to address some of the local concerns over the long-term impact of exposure to the acute incident. Funding has been set aside but the study must still meet criteria of being an effective investment of health resources.

### 5.0 EXPOSURE ASSESSMENT STUDY

- 5.1 In June 2004 experts in exposure assessment were consulted by the PCT to assess the quality of the data available to the study and to advise on what impact this might have on the analysis of the study. The key recommendation of the assessment was to redefine the 'exposed' population based on further plume modelling studies carried out at the University of Birmingham by Professor Sir Roy Harrison and his team. The exposed area defined by this model will be mapped from the original study population and corresponds more closely with the observations of the community. The principal comparison group will now be a selected 'basket' of parishes in Gloucestershire with similar deprivation and other indices. The most appropriate method of collecting robust data on this new control group is under investigation.
- 5.2 It was also suggested that the hair sampling survey carried out by the University of Surrey on behalf of the community might on further analysis, be able to provide some supporting evidence of exposure. This line of investigation is being explored.

### 6.0 PROJECT MANAGEMENT

- 6.1 A Project Steering Group has been set up to oversee the work of the Project Team. The group is chaired by the Director of Public Health and has representatives from involved organisations and the community. At the first meeting on 13<sup>th</sup> July 2004 the group agreed membership, Terms of Reference and agreed to implement the recommendations of the Exposure Assessment Study. The Study Protocol will be revised in the light of the specialist advice received and the agreement of the Local Research Ethics Committee will be sought.

**RECOMMENDATION: Members are asked to agree the Terms of Reference of the Project Steering Group (attached)**

### **7.0 STUDY RESULTS AND ANALYSIS**

- 7.1 The Project team has received data relating to Oct 2000 to July 2004 but as yet the numbers of reports are insufficient to allow meaningful comparisons. For the study population of 3872 people currently there have been 66 cancer and 110 death notifications received. This is within normal expectations in Gloucestershire. Further notifications for this period may still be received. At the current rate of data accrual it is likely to take 10-15 years to accumulate sufficient data to demonstrate any excess risk. The data will however be examined annually by the Project Steering Group to look for unexpected trends.
- 7.2 The comparison group of parishes with similar socio-demographic parameters will be identified in the next 12 months and appropriate systems set up to capture this data set.

### **8.0 DISSEMINATION OF INFORMATION**

- 8.1 The Major Incident Co-ordinating Group will be formally asked to remove an embargo on the dissemination of information from the Sandhurst Incident which was imposed in 2001 pending a potential Public Enquiry. This will enable the lessons learned from the incident to be disseminated more widely and facilitate training. A key concern will be to present health risks in ways that are meaningful, comprehensible and do not raise unnecessary fears in the community.
- 8.2 From 2005 results and their interpretation will be presented in an open meeting of the board of West Gloucestershire Primary Care Trust which is widely available. The report will be sent to the CSG Incident Group, the Major Incident Co-ordinating Group and to local Parish Councils. The report will also be freely available for reproduction in local publications.

### **9.0 RECOMMENDATION**

- 9.1 Members are asked to approve the contents of the annual report and the terms of reference for the project Steering Group.

