



#### Surveillance report 1<sup>st</sup> January – 31<sup>st</sup> March 2005

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#### Summary

- Between 1<sup>st</sup> January and the 31<sup>st</sup> March 2005, 167 acute chemical incidents were reported by CHaPD.
- Of the 167 reported incidents 30 were removed as non-incidents. Criteria for removal was mainly information requests (n=17) and chronic exposure (n=6).
- The chemical most frequently identified was products of combustion (15 %, n=21), followed by inorganic chemicals (11 %) and asbestos (10 %). The chemical involved was not identified in 14 (10 %) incident reports. For the reporting period chemical incidents most frequently reported in London (24 %, n=31), followed by the West Midlands (15 %) and the South East (12 %). The location of 13 (9 %) incidents was not specified.
- Of 137 chemical incidents, 42 % (n=57) reported 1-10 people exposed to the chemical hazard of which 72 % (n=41) showed clinical symptoms. Four incidents resulted in seven fatalities.

#### Introduction

1. This report provides a summary of the combined data sets from CHaPD London, Newcastle, West Midlands and Cardiff. Duplicate reporting has been minimised but cannot be guaranteed to have been eliminated due to incomplete data fields within incident log forms.
2. Scotland Health Protection Service (HPS), Local and Regional Services (LARS) and National Chemical Emergency Centre chemical incident surveillance data was not available at the time of writing, however these data providers have been approached for a quarterly update.
3. The National Focus programme<sup>1</sup> for chemical incident surveillance co-ordinated by Cardiff CHaPD used the following definition of a chemical incident; *'An acute event in which there is, or could be, exposure of the public to chemical substances which cause, or have the potential to cause ill health'*.
4. The initial 167 incidents were screened and 30 reported cases were removed as not meeting the definition. The most common (n=17) cause for incident removal was that the reports referred to requests for information only. Several reports (n=6) were

<sup>1</sup> <http://www.natfocus.uwic.ac.uk/>

related to chronic exposure or disease clusters. Three reports were about incidents abroad and in three cases there was no chemical involvement. A summary of removed incidents is provided in annex I page 10.

### **Chemicals involved in incidents during reporting period**

5. Between 1<sup>st</sup> January and the 31<sup>st</sup> March 2005, 69 % (n=94) acute chemical incidents were reported by the London unit, 15 % incidents were recorded directly into the West Midlands database (an additional 5 % were also recorded on the incident report forms by the West Midlands unit), 9 % incidents were reported by Cardiff, 1 % by Newcastle and 1 % of reports could not be attributed to an individual unit. Incident location was not necessarily geographically related to the CHaPD unit generating the incident log.
6. A breakdown of the type of chemical involved in each incident shows that in 10 % (n=14) of cases the chemical involved is unknown (figure 1). For each incident where a chemical has been described, it has been placed in a group of chemicals with similar characteristics.
7. During the reporting period 'products of combustion' (15%, n=21) were the most commonly reported chemical release (27 %, n=38 of the chemical incidents were fires). Inorganic chemicals were most often identified at a chemical incident (11 %) followed by asbestos (10 %), petroleum/oil (9 %) organic compounds (9 %) and volatile organic compounds (8 %).

### **Regional distribution of chemical incidents**

8. Over one-third (36%) of the total number of chemical incidents reported were not initially associated with a geographical area. In some cases the only indication of area was the reporting HPU and this was used to fill in the region field. This stage could be automatically generated from postcode/OS fields, though in many cases there was neither a postcode/grid reference (n=79) nor a specific location (n=23).
9. During the reporting period 24 % of incidents were in London (figure 2), 15 % in the West Midlands, 12 % in the South East and 9 % of incidents occurred at unknown locations (even after all attempts to assign a general region from the incident reports).

### **Chemical incident location type**

10. The most frequently reported location type (figure 3) were industrial (24 %), residential (18 %) and commercial (14 %). This field was completed to a greater extent than other fields and is probably an indication of how clearly incidents can be divided by location type.

### **Number of casualties and fatalities from chemical incidents**

11. Figure 4 shows that, of 137 chemical incidents, 42 % (n=57) reported 1-10 people exposed to the chemical hazard and 30 % (n=41) showed clinical symptoms (figure 5). In 46% (n=63) of chemical incidents it was not reported how many people were exposed. No one was reported to having been exposed to a chemical agent in 9 % (n=12) of incidents.

12. The number of people with symptoms was from 1-10 in 41 incidents and no symptoms in 32 incidents. (figure 4). In 64 (46 %) of chemical incidents it was not known how many people showed symptoms of exposure to a chemical hazard.
13. During the reporting period (figure 6), seven fatalities were reported. Three fire-fighters were killed when a building collapsed, two people committed suicide (CO) in a car, one six year old was exposed to CO at home and one fatality at a fire was reported in the media.

### **Recommendations**

14. Future quarterly reports will incorporate data collected from the Fire Service, Environment Agency and National Chemical Emergency Centre and the report will be available during July 2005.
15. From the 1<sup>st</sup> July chemical incident data collected will be submitted and stored on a central on-line management database maintained by the West Midlands ChaPD unit.

### Incident by chemical group (n=137)

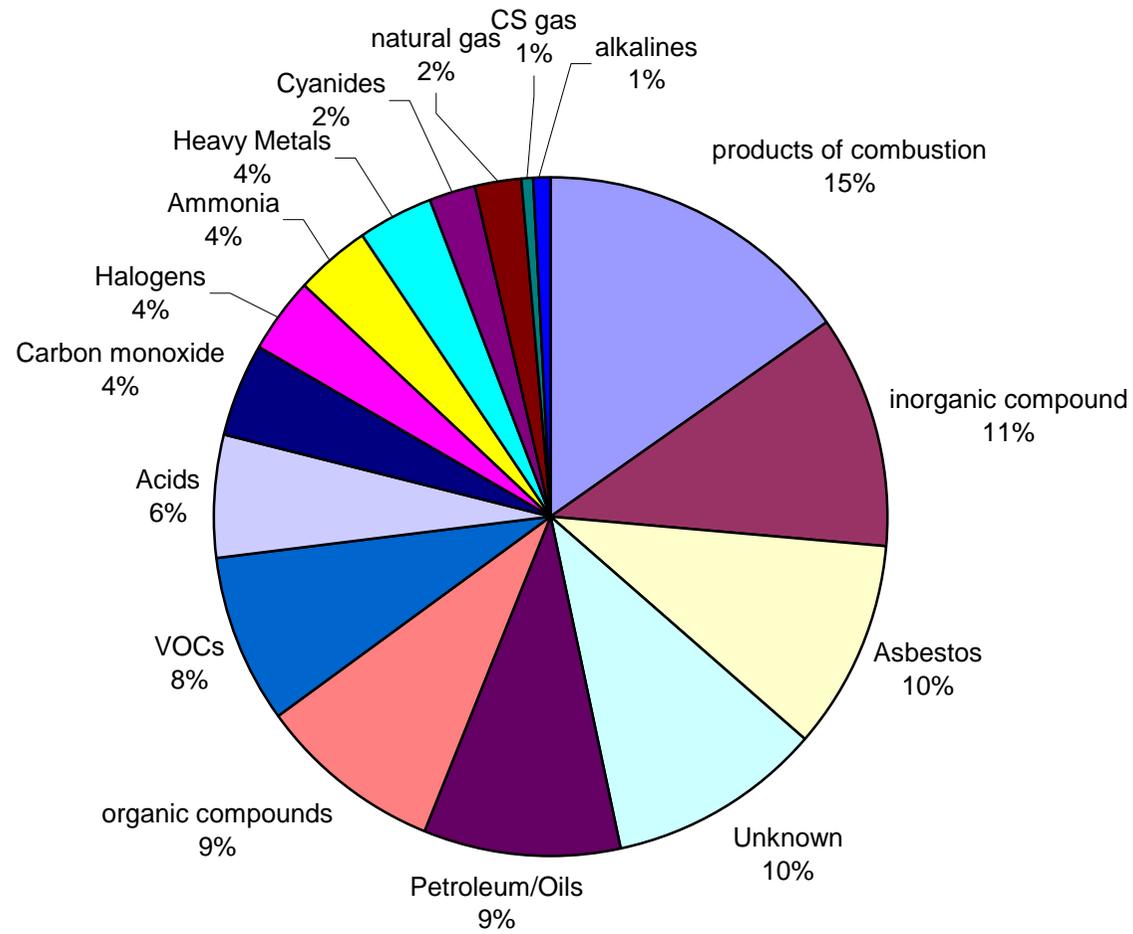


Figure 1 Chemicals involved in incidents reported between 1<sup>st</sup> January and 31<sup>st</sup> March 2005.

### Regional distribution of chemical incidents (n=137)

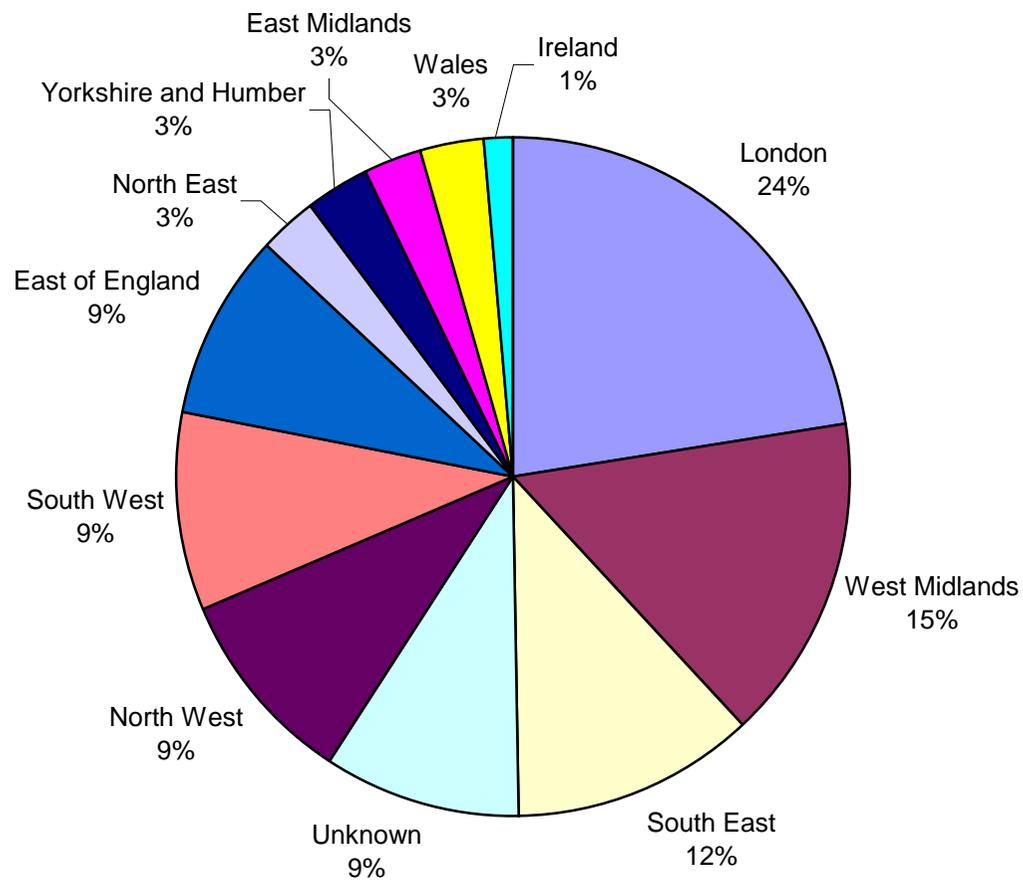


Figure 2 Regional distribution of chemical incidents reported in England, Wales and Ireland between 1<sup>st</sup> January and 31<sup>st</sup> March 2005.

### Chemical incident by location type (n=137)

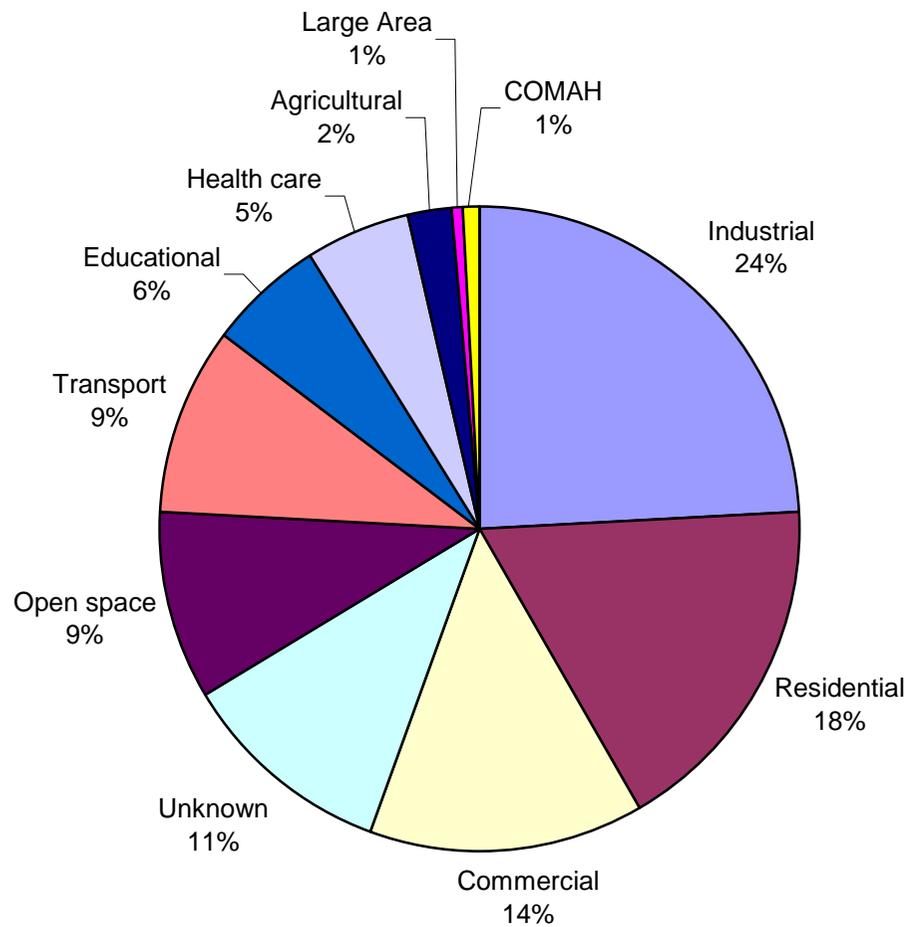


Figure 3 Chemical incident location type for chemical incidents reported in England, Wales and Ireland between 1<sup>st</sup> January and 31<sup>st</sup> March 2005

**Number of people exposed (n=137)**

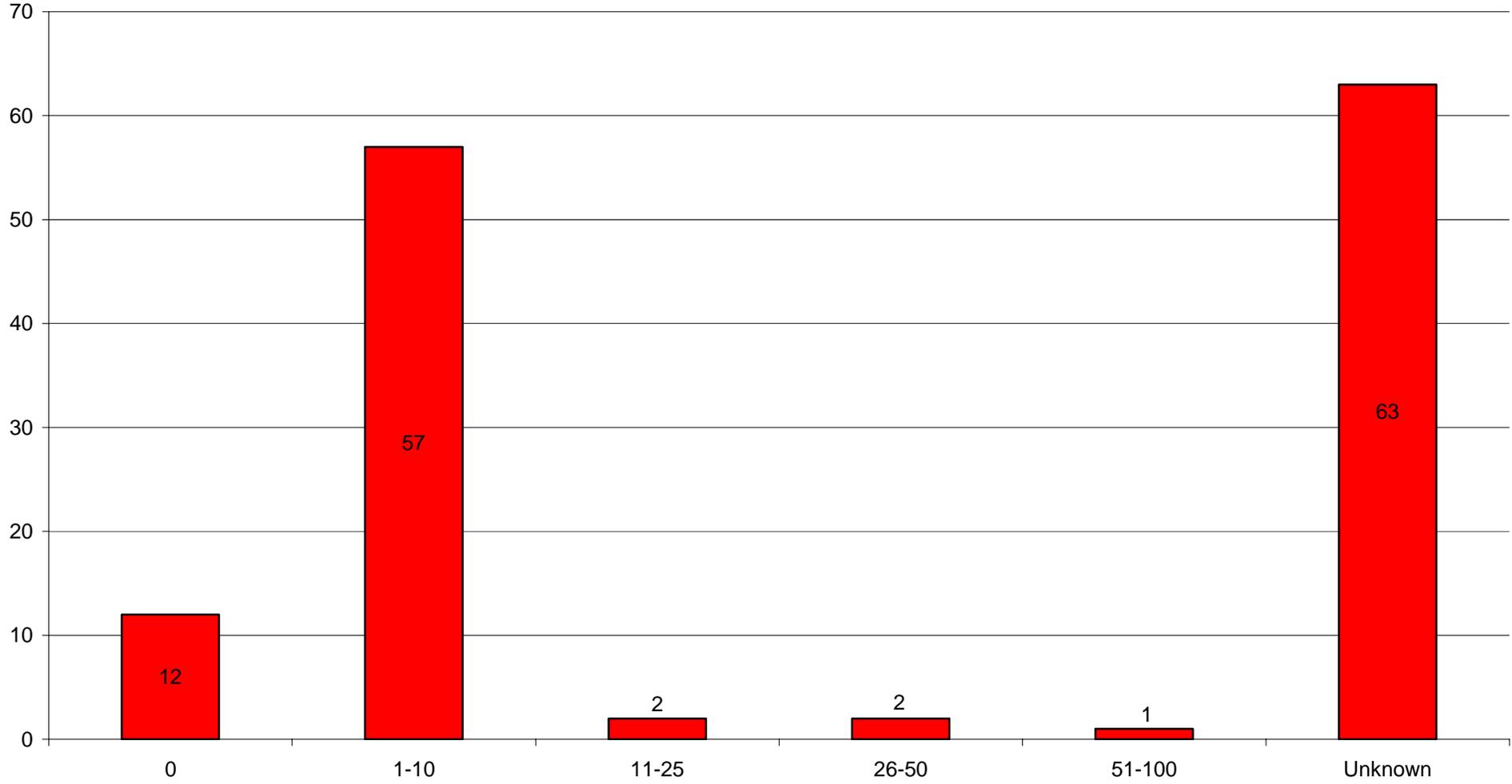


Figure 4 Number of people exposed to a chemical reported as an acute incident between 1<sup>st</sup> January and 31<sup>st</sup> March 2005

### Estimated number of people experiencing symptoms (n=137)

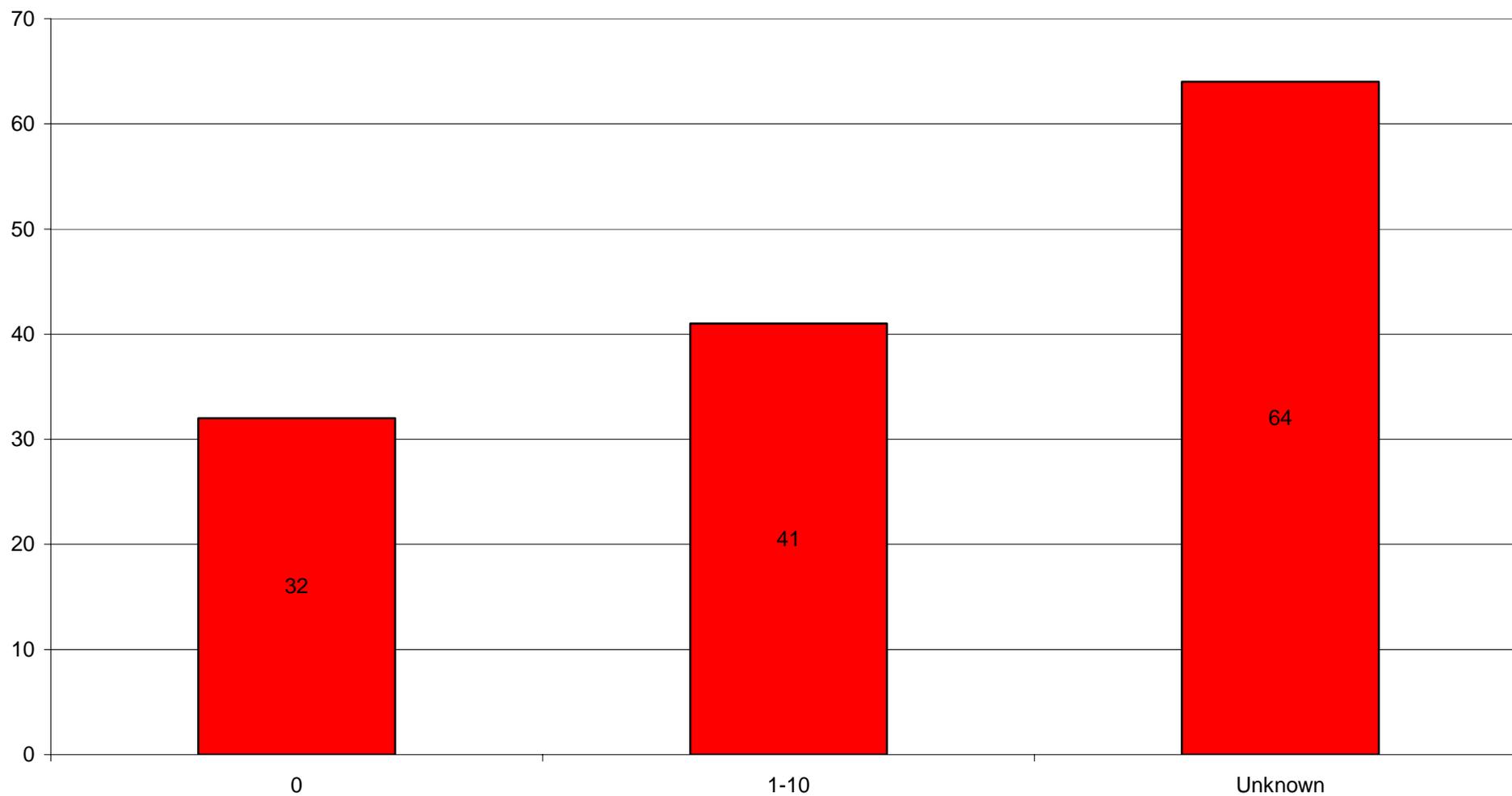


Figure 5 Number of people with symptoms due to involvement in an acute chemical incident between 1<sup>st</sup> January and 31<sup>st</sup> March 2005

### Number of fatalities per incident (n=137)

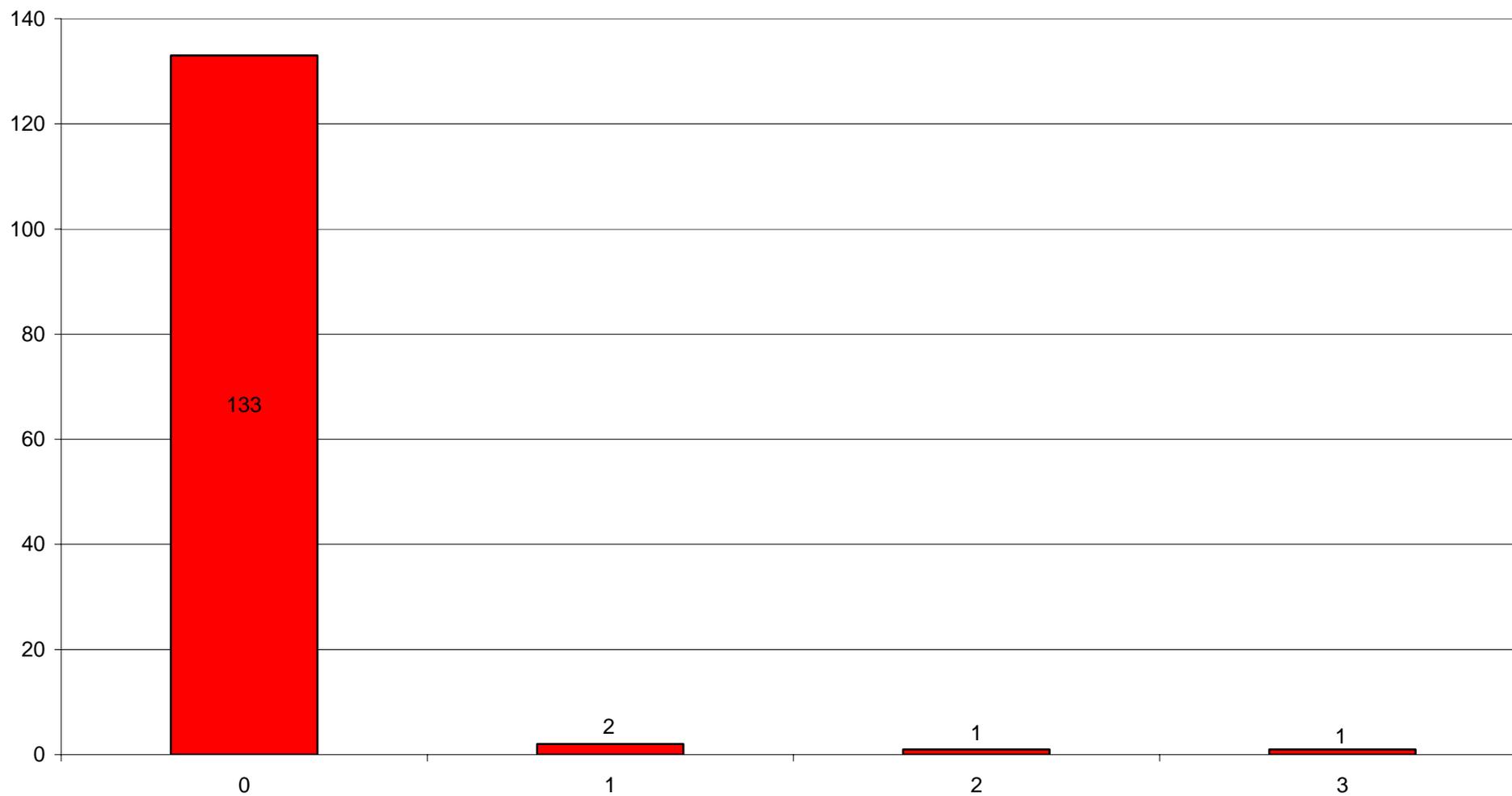


Figure 6 Number of fatalities due to involvement in an acute chemical incident between 1<sup>st</sup> January and 31<sup>st</sup> March 2005

## Annex I

Number Incidents removed	Example brief descriptions of incidents	Reason for removal
17	Floods, risk from new developments, potentially contaminated water, COSHH assessment.	Information only
6	Historical land use problems, leukaemia clusters	Chronic incidents
3	Philippines, Asia, Holiday	Natural disaster outside UK
3	Riot, food poisoning, syringe	No chemicals
1	Explosive accident	Occupational

Table 1 Chemical incident reports removed.