

# Fireworks Injuries Enquiry 1998

## Scotland Summary

### Introduction

This is the 20th annual publication of Scottish results from the Department of Trade and Industry (DTI) Fireworks Injuries Enquiry. The information is derived from data supplied to ISD by NHS hospitals in Scotland and forms part of the DTI's continuing review of policy on fireworks.

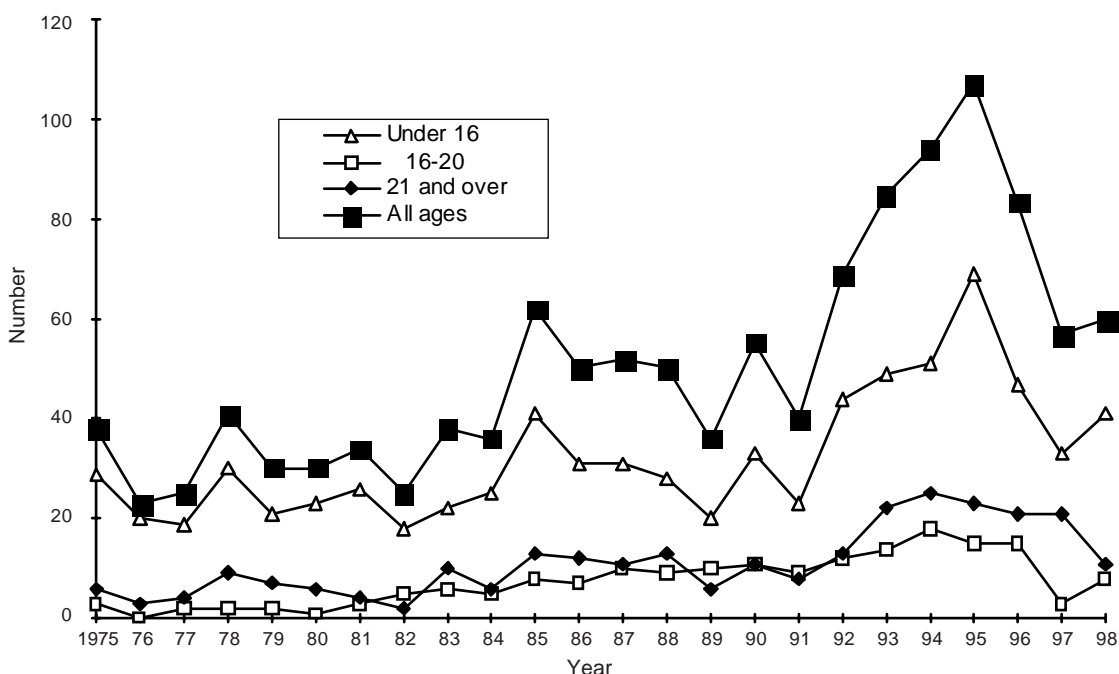
The data consist of all injuries caused by fireworks that require treatment in Accident & Emergency Departments and Burns / Plastic Surgery Units in Scotland during the period 12 October to 8 November 1998 inclusive; bonfire-only injuries are excluded.

Comments on this briefing and requests for further information, are welcomed and should be directed to: Frank Clarke, Room B021, Information & Statistics Division, Trinity Park House, South Trinity Road, Edinburgh, EH5 3SQ (tel. 0131-551 8247).

### The main points are :

- the number of injuries reported was 60, up from 57 in 1997 (figure 2)
- five patients were detained for at least one night in hospital; a further 14 were referred to outpatient departments for further treatment (figures 2 and 4)
- compared with 1997 there were relatively more injuries in the under 13 age group (up 35% from 23 to 31) and fewer in the 21 and over age group (down 48% from 21 to 11) (figure 2)
- number of injuries to adults aged 21 and over continues to fall from its peak in 1994 (figure 1)
- the number of injuries caused by rockets increased from 1997; sparklers, which were the largest single source of injuries in 1997, showed a considerable drop in 1998 with only 5 injuries recorded, down from 19 in 1997 (figures 2 and 4)
- although fewer in number, injuries to the hand remain the largest group (down from 37 to 21; 35% of all injuries); injuries to the eye and head remain the next most common and both increased as a proportion of all injuries (figure 5)
- injuries occurring at family or private parties fell from 1997; casual incidents in the street rose to account for half of all fireworks accidents (figures 2 and 4).

**Figure 1 Trend by age group of patient treated**

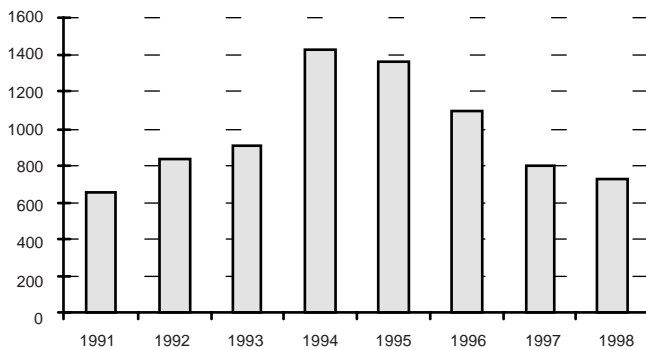


**Figure 2 Trends in fireworks accidents**

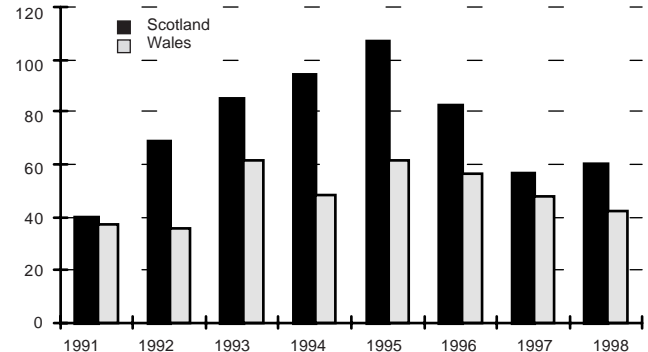
|  | 1975      | 1980      | 1985      | 1990      | 1995       | 1996      | 1997      | 1998      |
|--|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|
| <b>Total Cases</b>   | <b>38</b> | <b>30</b> | <b>62</b> | <b>55</b> | <b>107</b> | <b>83</b> | <b>57</b> | <b>60</b> |
| <b>Place of Accident</b>                                     |           |           |           |           |            |           |           |           |
| Family or private party                                      | 3         | 5         | 10        | 6         | 24         | 18        | 20        | 14        |
| Semi public party <sup>1</sup>                               | { 4 }     | -         | 4         | 2         | 3          | 2         | 2         | 3         |
| Large public display   | { 4 }     | 5         | 8         | 11        | 4          | 7         | 8         | 9         |
| Casual incident in street or other public place <sup>2</sup> | 17        | 17        | 33        | 29        | 60         | 48        | 25        | 31        |
| Indoors  | { 3 }     | 3         | 3         | 4         | 3          | 2         | 1         | -         |
| Other  | { 14 }    | -         | 4         | 3         | 13         | 6         | 1         | 3         |
| <b>Type of Firework</b>                                      |           |           |           |           |            |           |           |           |
| Banger   | 12        | 10        | 21        | 15        | 33         | 26        | 11        | 10        |
| Rocket   | 6         | 2         | 14        | 6         | 18         | 19        | 10        | 14        |
| Air bomb   | ..        | ..        | ..        | ..        | 3          | 4         | 1         | 7         |
| Roman candle <sup>3</sup>                                    | 2         | 2         | 4         | 4         | 2          | 4         | 3         | 5         |
| Sparklers  | { 3 }     | 3         | 4         | 3         | 12         | 8         | 19        | 5         |
| Other proprietary fireworks                                  | { 3 }     | 1         | 2         | 4         | 2          | 12        | 9         | 9         |
| Home made or extracted powder                                | 3         | 1         | 2         | 2         | -          | 7         | 1         | 3         |
| Not known  | 12        | 11        | 15        | 21        | 37         | 3         | 3         | 7         |
| <b>Severity of Injury</b>                                    |           |           |           |           |            |           |           |           |
| Died   | -         | -         | -         | -         | -          | -         | -         | -         |
| Transferred to another hospital                              | ..        | ..        | ..        | ..        | 5          | 4         | 1         | 7         |
| Detained in hospital for one night or more                   | 3         | 2         | 7         | 6         | 3          | 5         | 5         | 5         |
| One days absence from school, work etc                       | 3         | 2         | 16        | 8         | ..         | ..        | ..        | ..        |
| Minor injury   | 30        | 23        | 36        | 40        | ..         | ..        | ..        | ..        |
| Referred to outpatient department                            | ..        | ..        | ..        | ..        | 39         | 37        | 22        | 14        |
| Referred to GP   | ..        | ..        | ..        | ..        | 25         | 7         | 8         | 7         |
| No further treatment required                                | ..        | ..        | ..        | ..        | 27         | 24        | 18        | 27        |
| Not known  | 2         | 3         | 3         | 1         | 8          | 6         | 3         | -         |
| <b>Age Group of Injured Person</b>                           |           |           |           |           |            |           |           |           |
| 21 and over  | 6         | 6         | 13        | 11        | 23         | 21        | 21        | 11        |
| 16-20  | 3         | 1         | 8         | 11        | 15         | 15        | 3         | 8         |
| 13-15  | 9         | 11        | 20        | 12        | 26         | 23        | 10        | 10        |
| Under 13   | 20        | 12        | 21        | 21        | 43         | 24        | 23        | 31        |
| <b>Eye Injuries</b>  | ..        | <b>14</b> | <b>20</b> | <b>11</b> | <b>18</b>  | <b>20</b> | <b>11</b> | <b>16</b> |

1 Prior to 1993 figures are for "Public/semi public display".  
 2 Prior to 1993 figures are for "Casual incident in street".  
 3 Prior to 1993 figures are for "Roman candle or similar".  
 .. Not available.

**Figure 3a Patients treated for fireworks accidents  
England: 1991-98**



**Figure 3b Patients treated for fireworks accidents  
Scotland, Wales: 1991-98**



Source: Department of Trade and Industry (for England and Wales figures).

**Figure 4 Fireworks accidents;  
by health board area of treatment <sup>1,2</sup>**

|  | Scotland  | Argyll & Clyde | Ayrshire & Arran | Fife     | Grampian | Greater Glasgow | Lanarkshire | Lothian  | Tayside  | Shetland |
|--|-----------|----------------|------------------|----------|----------|-----------------|-------------|----------|----------|----------|
| <b>Total patients treated</b>              | <b>60</b> | <b>4</b>       | <b>4</b>         | <b>2</b> | <b>7</b> | <b>17</b>       | <b>11</b>   | <b>5</b> | <b>9</b> | <b>1</b> |
| <b>Place of Accident</b>                   |           |                |                  |          |          |                 |             |          |          |          |
| Family or private party                    | 14        | 2              | 1                | 1        | 3        | 1               | 2           | 1        | 3        | -        |
| Public semi/public display                 | 3         | -              | -                | -        | -        | -               | 1           | -        | 1        | 1        |
| Large public display                       | 9         | -              | 2                | 1        | -        | 2               | 1           | 1        | 2        | -        |
| Casual incident in street                  | 31        | 2              | 1                | -        | 4        | 13              | 6           | 2        | 3        | -        |
| Indoors                                    | -         | -              | -                | -        | -        | -               | -           | -        | -        | -        |
| Other                                      | 3         | -              | -                | -        | -        | 1               | 1           | 1        | -        | -        |
| <b>Type of Firework</b>                    |           |                |                  |          |          |                 |             |          |          |          |
| Banger                                     | 10        | -              | 1                | -        | 2        | 5               | 2           | -        | -        | -        |
| Rocket                                     | 14        | 2              | 3                | 1        | 1        | 2               | -           | 4        | 1        | -        |
| Air bomb                                   | 7         | -              | -                | -        | 1        | 1               | 3           | -        | 2        | -        |
| Roman candle or similar                    | 5         | -              | -                | 1        | 1        | 1               | -           | -        | 2        | -        |
| Sparklers                                  | 5         | 1              | -                | -        | 1        | 2               | -           | -        | 1        | -        |
| Other proprietary fireworks                | 9         | 1              | -                | -        | -        | -               | 5           | 1        | 1        | 1        |
| Homemade or extracted powder               | 3         | -              | -                | -        | -        | 1               | -           | -        | 2        | -        |
| Not known                                  | 7         | -              | -                | -        | 1        | 5               | 1           | -        | -        | -        |
| <b>Severity of Injury</b>                  |           |                |                  |          |          |                 |             |          |          |          |
| Died                                       | -         | -              | -                | -        | -        | -               | -           | -        | -        | -        |
| Transferred to another hospital            | 7         | -              | -                | -        | 1        | 1               | 3           | 1        | 1        | -        |
| Detained in hospital for one night or more | 5         | -              | -                | -        | -        | 2               | 1           | 2        | -        | -        |
| Referred to outpatient dept.               | 14        | 1              | 3                | -        | 2        | 7               | -           | -        | 1        | -        |
| Referred to GP                             | 7         | 3              | 1                | -        | 1        | 1               | 1           | -        | -        | -        |
| No further treatment required              | 27        | -              | -                | 2        | 3        | 6               | 6           | 2        | 7        | 1        |
| Not known                                  | -         | -              | -                | -        | -        | -               | -           | -        | -        | -        |
| <b>Age Group of Injured Person</b>         |           |                |                  |          |          |                 |             |          |          |          |
| 21 and over                                | 11        | 1              | 1                | -        | 2        | 3               | 3           | -        | 1        | -        |
| 16-20                                      | 8         | -              | -                | -        | 3        | 2               | 1           | -        | 2        | -        |
| 13-15                                      | 10        | -              | 1                | 1        | -        | 3               | 2           | 1        | 2        | -        |
| Under 13                                   | 31        | 3              | 2                | 1        | 2        | 9               | 5           | 4        | 4        | 1        |
| <b>Sex</b>                                 |           |                |                  |          |          |                 |             |          |          |          |
| Males                                      | 42        | 3              | 2                | -        | 7        | 13              | 8           | 4        | 5        | -        |
| Females                                    | 18        | 1              | 2                | 2        | -        | 4               | 3           | 1        | 4        | 1        |
| <b>Type of Injury<sup>3</sup></b>          |           |                |                  |          |          |                 |             |          |          |          |
| Eye  | 16        | -              | 2                | 1        | 1        | 3               | 5           | 1        | 2        | 1        |
| Head                                       | 14        | -              | 1                | -        | 4        | 3               | 2           | 3        | 1        | -        |
| Hand                                       | 21        | 4              | -                | -        | 3        | 8               | 2           | 1        | 3        | -        |
| Arm  | 2         | -              | -                | -        | -        | -               | -           | -        | 2        | -        |
| Leg / foot                                 | 8         | 1              | 1                | 1        | -        | 2               | 1           | 2        | -        | -        |
| Torso                                      | 5         | -              | -                | -        | -        | 2               | 1           | 1        | 1        | -        |

1 Where patients were transferred between hospitals data is recorded against the first hospital of treatment.

2 No injuries were reported in the following health board areas: Borders, Dumfries & Galloway, Forth Valley, Highland, Orkney, and Western Isles.

3 The number of patients treated may not equal the total number of injuries sustained as patients may have more than one type of injury.

**Figure 5 Type of injury by type of firework**

| Type of injury                             | Type of firework |           |           |           |          |              |          |                             |                               |           |
|--|------------------|-----------|-----------|-----------|----------|--------------|----------|-----------------------------|-------------------------------|-----------|
|  | All Fireworks    |           | Banger    | Rocket    | Air Bomb | Roman Candle | Sparkler | Other proprietary fireworks | Home made or extracted powder | Not known |
|  | 1997             | 1998      |           |           |          |              |          |                             |                               |           |
| <b>Total patients treated <sup>1</sup></b> | <b>57</b>        | <b>60</b> | <b>10</b> | <b>14</b> | <b>7</b> | <b>5</b>     | <b>5</b> | <b>9</b>                    | <b>3</b>                      | <b>7</b>  |
| Eye  | 11               | 16        | 2         | 4         | 4        | 1            | -        | 2                           | -                             | 3         |
| Head                                       | 6                | 14        | 2         | 5         | 1        | 1            | -        | 2                           | -                             | 3         |
| Hand                                       | 37               | 21        | 3         | 4         | 1        | 1            | 5        | 2                           | 3                             | 2         |
| Arm  | 2                | 2         | -         | -         | 1        | -            | -        | 1                           | -                             | -         |
| Leg / foot                                 | 3                | 8         | 2         | 3         | -        | 1            | -        | 2                           | -                             | -         |
| Torso                                      | 2                | 5         | 1         | 1         | -        | 1            | -        | 1                           | -                             | 1         |

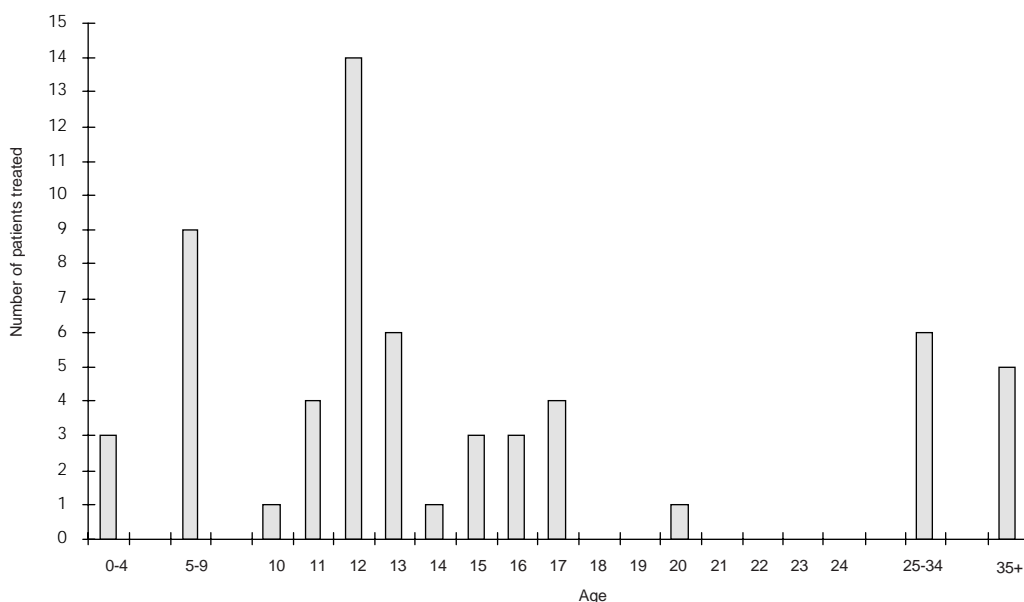
1 The number of patients treated may not equal the total number of injuries sustained as patients may have more than one type of injury.

**Figure 6 Type of injury; by outcome**

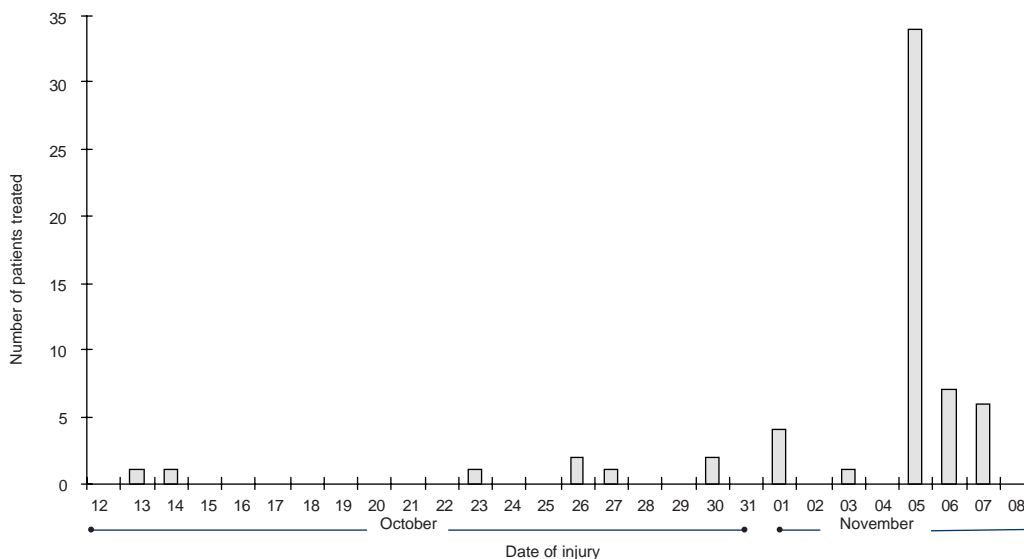
| Type of injury                            | Outcome of injury |                               |             |                       |                           |                                 |      |           |
|---|-------------------|-------------------------------|-------------|-----------------------|---------------------------|---------------------------------|------|-----------|
|   | All outcomes      | No further treatment required | Referred to |                       | Detained in this hospital | Transferred to another hospital | Died | Not known |
|   |                   |                               | GP          | Outpatient department |                           |                                 |      |           |
| <b>Total patients treated<sup>1</sup></b> | <b>60</b>         | <b>27</b>                     | <b>7</b>    | <b>14</b>             | <b>5</b>                  | <b>7</b>                        | -    | -         |
| Eye                                       | 16                | 11                            | 1           | 3                     | -                         | 1                               | -    | -         |
| Head                                      | 14                | 7                             | -           | 3                     | 2                         | 2                               | -    | -         |
| Hand                                      | 21                | 5                             | 5           | 7                     | 1                         | 3                               | -    | -         |
| Arm                                       | 2                 | 2                             | -           | -                     | -                         | -                               | -    | -         |
| Leg / foot                                | 8                 | 3                             | 2           | 1                     | -                         | 1                               | -    | -         |
| Torso                                     | 5                 | 1                             | -           | -                     | 1                         | 3                               | -    | -         |

1 The number of patients treated may not equal the total number of injuries sustained as patients may have more than one type of injury.

**Figure 7 Fireworks injuries; by age**



**Figure 8 Calendar of injuries sustained**



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GENERAL ENQUIRIES

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