Out-of-Hospital Cardiac Arrest Overview: English Ambulance Services 2022*

Demographics

98,152 OHCA calls attended

34,407 Patients treated by ambulance service personnel

OHCA incidence (per 100,000)

All cases (Age/gender adjusted)

Males (Age adjusted)

Females (Age adjusted)

62.5

87.2

40.4

Age of patients

Median Age 69.0yrs
Mean Age 65.4yrs

Age Distribution

Sex Distribution

1.8%<15yrs

38.9%15-64yrs

59.3%65+yrs

65.5%

34.5%

Median Age 68.0yrs
Mean Age 64.6yrs

Median Age 71.0yrs
Mean Age 67.0yrs

*December 2022 EMAS data not submitted
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#### Where did people have a cardiac arrest?^*

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of residence</td>
<td>80.0%</td>
</tr>
<tr>
<td>Public place</td>
<td>12.7%</td>
</tr>
<tr>
<td>Workplace</td>
<td>1.7%</td>
</tr>
<tr>
<td>Place of education</td>
<td>0.1%</td>
</tr>
<tr>
<td>Sports and recreation</td>
<td>0.9%</td>
</tr>
<tr>
<td>Another location</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

*Based on 5 of 11 services

#### When did people have a cardiac arrest?

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:00 – 05:59</td>
<td>14.4%</td>
</tr>
<tr>
<td>06:00 – 11:59</td>
<td>30.2%</td>
</tr>
<tr>
<td>12:00 – 17:59</td>
<td>29.6%</td>
</tr>
<tr>
<td>18:00 – 23:59</td>
<td>25.8%</td>
</tr>
</tbody>
</table>

Median EMS Response time: 8.0 mins

90th percentile time: 18.8 mins

Proportion of cases reached in 7 mins: 42.2%
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### Aetiology

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical/Presumed cardiac</td>
<td>84.4%</td>
</tr>
<tr>
<td>Trauma</td>
<td>3.5%</td>
</tr>
<tr>
<td>Overdose</td>
<td>2.0%</td>
</tr>
<tr>
<td>Asphyxia</td>
<td>3.8%</td>
</tr>
<tr>
<td>Other/missing</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

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### Initial Rhythm

<table>
<thead>
<tr>
<th>Rhythm</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF/VT</td>
<td>21.0%</td>
</tr>
<tr>
<td>PEA</td>
<td>21.9%</td>
</tr>
<tr>
<td>Asystole</td>
<td>52.3%</td>
</tr>
<tr>
<td>Other/missing</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

*Other/missing 4.8%
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Bystander Interventions

Who witnessed cardiac arrest?
- EMS: 10.7%
- Unwitnessed: 35.1%
- Bystander: 54.2%

Bystander CPR rates:

<table>
<thead>
<tr>
<th></th>
<th>Unwitnessed cases</th>
<th>Un-EMS witnessed cases</th>
<th>Bystander-witnessed cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70.1%</td>
<td>75.8%</td>
<td>79.6%</td>
</tr>
</tbody>
</table>

^Non-EMS-witnessed cases is the combination of unwitnessed and bystander-witnessed cases

Public Access Defibrillator use

- All cases: 8.5%
- Bystander witnessed cases: 10.6%
- Unwitnessed cases: 7.7%

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Clinical Outcomes

Declared dead on scene: 58.3%
Admitted with ongoing CPR: 15.9%
Admitted with ROSC: 25.8%

Admitted to hospital with ROSC: 25.8%
Utstein*: 46.0%

30-day Survival: 7.8%
Utstein*: 24.3%

Ambulance service personnel successful in restarting: 8,877 hearts, 2,642 lives saved

*Bystander witnessed, shockable rhythm

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Utstein Comparator Group Flow Chart

RESUSCITATION ATTEMPTED
N = 34,407

- NOT WITNESSED*
  N = 12,046 (35.1%)
  *Missing/Unknown
  N = 72 (0.2%)

- BYSTANDER WITNESSED
  N = 18,606 (54.2%)

- EMS WITNESSED
  N = 3,763 (10.7%)

INITIAL RHYTHM VF/VT^*
N = 5,161 (28.6%)

- ^Missing/Unknown
  N = 589 (3.2%)

- BYSTANDER CPR
  N = 4,421 (85.7%)

- ROSC NOT ACHIEVED
  N = 2,235 (43.3%)

- ROSC AT HOSPITAL HANDOVER
  N = 2,075 (46.0%)

- ROSC AT ANY TIME
  N = 2,926 (56.7%)

OUTCOME DATA**
N = 4,987 (96.6%)

- **Unknown N = 2 (<0.1%)

- DIED IN 30 DAYS
  N = 1,985 (39.8%)

- SURVIVED TO 30 DAYS
  N = 1,214 (24.3%)

- EFFORTS STOPPED ON SCENE
  N = 1,786 (35.8%)

- NO OUTCOME DATA
  N = 174 (3.4%)

*Missing/Unknown N = 72 (0.2%)

^Missing/Unknown N = 589 (3.2%)

**Unknown N = 2 (<0.1%)

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