**Appendices**

**Appendix 1.** The ascertainment of 127 children in the Community and 245 children in the ED cohort



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| **Appendix 2.** Further detail on mechanisms of injury from 559 incidents in children <13yrs |
|  | **Number of incidents** | **Number of bruises** | **Total number of bruises** | **Common sites of bruising** |
| **1** | **2** | **3** | **4** | **Below knee - front** | **Knee** | **Forehead** | **Head** | **Other** |
| Number of Stairs fallen downa | 0 – 9 | 10 | 7 | 3 | 0 | 0 | 13 | 1 | 1 | 5 | 1 | 5 |
| 10 – 14 | 6 | 0 | 3 | 2 | 1 | 16 | 1 | 0 | 5 | 2 | 8 |
| Unknown | 9 | 7 | 1 | 1 | 0 | 12 | 4 | 0 | 1 | 0 | 7 |
| Total | 25 | 14 | 7 | 3 | 1 | 41 | 6 | 1 | 11 | 3 | 20 |
| Impact Injury | Hit by moving object | 46 | 45 | 1 | 0 | 0 | 47 | 6 | 3 | 14 | 2 | 22 |
| Hit a stationary object | 96 | 91 | 5 | 0 | 0 | 101 | 25 | 2 | 30 | 9 | 35 |
| Type of Sporting Eventb | Football | 22 | 11 | 8 | 2 | 1 | 37 | 27 | 6 | 0 | 0 | 4 |
| Rugby | 5 | 4 | 1 | 0 | 0 | 6 | 1 | 2 | 0 | 1 | 2 |
| Scooter or skateboarding | 14 | 6 | 5 | 3 | 1 | 29 | 9 | 9 | 2 | 0 | 9 |
| Cycling | 14 | 9 | 5 | 0 | 0 | 18 | 10 | 1 | 3 | 0 | 4 |
| Other | 3 | 2 | 1 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 3 |
| Total | 58 | 31 | 20 | 5 | 2 | 94 | 48 | 18 | 5 | 1 | 22 |
| *a1 x carried by care giver (unknown number of steps and 1 bruise), 1 x in buggy (12 steps, 3 bruises), 1 x on tricycle (2 steps, 2 bruises)**bOther sporting events – 1 x karate, 1 x skiing and 1 x trampolining* |

**Statistical Appendices**

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| **Statistical Appendix 1.** Difference in gender across mechanisms of injury for 559 injury incidents |
|   | **Mechanism**  |
| **Fall from < 1 metre** | **Fall from standing height or less and hitting an object during fall** | **Fall from 1 - 2 metres** | **Stair fall** | **Impact into an object** | **Sports injury** | **Motor vehicle collision** | **Crush injury** | **Total** |
|  |  |  |  |  |  |  |  |
| **Boy** | **Number** | 88 | 51 | 10 | 10 | 71 | 47 | 6 | 4 | 287 |
| **%** | 30.7% | 17.8% | 3.5% | 3.4% | 24.7% | 16.4% | 2.1% | 1.4% | 100.0% |
| **Girl** | **Number** | 110 | 45 | 14 | 15 | 71 | 11 | 1 | 5 | 272 |
| **%** | 40.4% | 16.5% | 5.1% | 5.5% | 26.1% | 4.0% | 0.4% | 1.8% | 100.0% |
| **Total** | **Number** | 198 | 96 | 24 | 25 | 142 | 58 | 7 | 9 | 559 |
| The mechanism of bruising was significantly (p < 0.001) different boys and girls. Note this primarily due to sports injury. There is no overall significant difference if sports injury is excluded (p = 0.29) |

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| **Statistical Appendix 2.** Method of presentation from 559 incidents of injury in children aged <13 years |
| **Method of Presentation** | **Total number of incidents** **(% of total incidents of injury)** | **Fall from < 1 metre** **(% for this mechanism)** | **Fall from standing height** **or less & hitting an object during fall (% for this mechanism)** | **Fall from 1 - 2 metres** **(% for this mechanism)** | **Stair fall** **(% for this mechanism)** | **Impact injury** **(% for this mechanism)** | **Sports injury** **(% for this mechanism)** | **Motor vehicle collision** **(% for this mechanism)** | **Crush injury** **(% for this mechanism)** |
|  |  |  |  |  |  |  |  |
| **Medically attended** | 146(26.1) | 49(24.8) | 17(17.7) | 17(70.8) | 15(60.0) | 23(16.1) | 13(22.4) | 7(100.0) | 5(55.6) |
| **Non-medically attended** | **ED Cohort** | 147(26.3) | 51(25.7) | 17(17.7) | 4(16.7) | 2(8.0) | 33(23.1) | 38(65.5) | 0(0.0) | 2(22.2) |
| **Community Cohort** | 266(47.6) | 98(49.5) | 62(64.6) | 3(12.5) | 8(32.0) | 86(60.8) | 7(12.1) | 0(0.0) | 2(22.2) |
| **Total** | 559(100) | 198(100) | 96(100) | 24(100) | 25(100) | 142(100) | 58(100) | 7(100) | 9(100) |
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| **Statistical Appendix 3.** The predicted position of the mechanism by the model against the actual mechanism of injury. Model and test data combined. |
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| **Actual Cause** | **Predicted Position** |
| **1st** | **2nd** | **3rd** | **Later** |
| **Fall from < 1 metre** | 125 | 63.1% | 51 | 25.8% | 21 | 10.6% | 1 | 0.5% |
| **Fall from standing height or less and hitting** **an object during fall** | 34 | 35.4% | 14 | 14.6% | 30 | 31.3% | 18 | 18.8% |
| **Fall from 1 - 2 metres** | 2 | 8.3% | 0 | 0.0% | 6 | 25.0% | 16 | 66.7% |
| **Stair fall** | 7 | 28.0% | 2 | 8.0% | 2 | 8.0% | 14 | 56.0% |
| **Impact injury** | 45 | 31.7% | 80 | 56.3% | 15 | 10.6% | 2 | 1.4% |
| **Sports injuries** | 34 | 58.6% | 3 | 5.2% | 13 | 22.4% | 8 | 13.8% |
| **Motor vehicle collision** | 5 | 71.4% | 1 | 14.3% | 0 | 0.0% | 1 | 14.3% |
| **Crush injury** | 5 | 55.6% | 0 | 0.0% | 2 | 22.2% | 2 | 22.2% |
| **Total** | 257 | 46.0% | 151 | 27.0% | 89 | 15.9% | 62 | 11.1% |

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| **Statistical Appendix 4.** Difference in developmental stage across mechanisms of injury from 559 injury incidents |
|   |   | **Mechanism** |   |
|  |  | **Fall from < 1 metre** | **Fall from standing height or less and hitting an object during fall** | **Fall from 1 - 2 metres** | **Stair fall** | **Impact into an object** | **Sports injury** | **Motor vehicle collision** | **Crush injury** | **Total** |
|  |  |  |  |  |  |  |  |
| **Baby** **Non Mobile** | **Number** | 0 | 0 | 2 | 1 | 4 | 0 | 0 | 0 | 7 |
| **%** | 0.0% | 0.0% | 28.6% | 14.3% | 57.1% | 0.0% | 0.0% | 0.0% | 100.0% |
| **Sitting** | **Number** | 1 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 6 |
| **%** | 16.7% | 16.7% | 0.0% | 16.7% | 50.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| **Crawling** | **Number** | 5 | 6 | 0 | 0 | 11 | 0 | 0 | 0 | 22 |
| **%** | 22.7% | 27.3% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| **Cruising** | **Number** | 12 | 15 | 1 | 1 | 19 | 0 | 0 | 0 | 48 |
| **%** | 25.0% | 31.3% | 2.1% | 2.1% | 39.6% | 0.0% | 0.0% | 0.0% | 100.0% |
| **Walking** | **Number** | 180 | 74 | 21 | 22 | 105 | 58 | 7 | 9 | 476 |
| **%** | 37.8% | 15.5% | 4.4% | 4.6% | 22.1% | 12.2% | 1.5% | 1.9% | 100.0% |
| **Total** | **Number** | 198 | 96 | 24 | 25 | 142 | 58 | 7 | 9 | 559 |
| The mechanism of bruising was significantly different (p < 0.001) across the development stages |