**SUPPLEMENTARY TABLES**

**Supplementary Table 1.** MEDLINE search method

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| --- | --- |
| **Search date:** 26/05/21 | |
| **Set** | **MESH terms** |
| 1 | alcoholic intoxication/ or alcoholism/ or binge drinking/ |
| 2 | exp alcohol drinking/ |
| 3 | Alcoholism/ |
| 4 | ((ETOH or alcohol\*) adj3 (intox\* or drink\* or drunk\* or excess\* or consum\* or binge\*)).ti,ab. |
| 5 | (binge\* adj2 drink\*).ti,ab. |
| 6 | or/1-5 |
| 7 | Emergency Service, Hospital/ |
| 8 | Emergency Medical Services/ |
| 9 | emergency medicine/ |
| 10 | Emergency Nursing/ |
| 11 | (emergency adj2 (room? or unit? or department? or accident or service? or ward?)).ti,ab. |
| 12 | casualt\*.ti,ab. |
| 13 | or/7-12 |
| 14 | 6 and 13 |
| 15 | (disrupt\* or abnormal\* or interupt\* or increas\* or decreas\* or surge\* or rush\* or rise\* or fall\* or busy\* or quiet or extend\* or extra or more or less).ti,ab. |
| 16 | 6 and 13 |
| 17 | (disrupt\* or abnormal\* or interupt\* or increas\* or decreas\* or surge\* or rush\* or rise\* or fall\* or busy\* or quiet or extend\* or extra or more or less).ti,ab. |
| 18 | 14 and 15 |
| 19 | limit 18 to (english language and yr="2012 -Current") |

**Supplementary Table 2.** CINAHL search method

|  |  |
| --- | --- |
| **Search date:** 26/05/21 | |
| **Set** | **Subject headings** |
| S1 | MH alcoholic intoxication OR alcoholism OR binge drinking |
| S2 | (MH "Alcoholic Intoxication") OR (MH "Alcoholism") OR (MH "Alcohol Abuse") |
| S3 | (MH "Binge Drinking") |
| S4 | (MH "Alcohol Drinking") |
| S5 | (MH "Alcoholism") |
| S6 | TI ( (ETOH or alcohol\*) N2 (intox\* or drink\* or drunk\* or excess\* or consum\* or binge\*) ) OR AB ( (ETOH or alcohol\*) N2 (intox\* or drink\* or drunk\* or excess\* or consum\* or binge\*) ) |
| S7 | TI binge\* N2 drink\* OR AB binge\* N2 drink\* |
| S8 | S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 |
| S9 | (MH "Emergency Service") |
| S10 | (MH "Emergency Medical Services") |
| S11 | (MH "Emergency Medicine") |
| S12 | (MH "Emergency Nursing") |
| S13 | TI ( emergency N2 (room or unit or department or accident or service or ward) ) OR AB (emergency N2 (room or unit or department or accident or service or ward) ) |
| S14 | TI casualt\* OR AB casualt\* |
| S15 | S9 OR S10 OR S11 OR S12 OR S13 OR S14 |
| S16 | TI ( disrupt\* or abnormal\* or interupt\* or increas\* or deceas\* or surge\* or rush\* or rise\* or fall\* or busy\* or quiet or extend\* or extra or more or less ) OR AB ( disrupt\* or abnormal\* or interupt\* or increas\* or deceas\* or surge\* or rush\* or rise\* or fall\* or busy\* or quiet or extend\* or extra or more or less ) |
| S17 | S8 AND S15 AND S16 |

MH: indicates that a subject heading has been searched.

**Supplementary Table 3.** EMBASE search method

|  |  |
| --- | --- |
| **Search date:** 26/05/21 | |
| **Set** | **Subject headings** |
| 1 | 'alcohol intoxication'/de OR 'binge drinking'/de OR 'drinking behavior'/de OR 'alcoholism' |
| 2 | ((etoh OR alcohol\*) NEAR/2 (intox\* OR drink\* OR drunk\* OR excess\* OR consum\* OR binge\*)):ti,ab |
| 3 | (binge\* NEAR/2 drink\*):ti,ab |
| 4 | #1 OR #2 OR #3 |
| 5 | 'hospital emergency service'/de OR 'emergency health service'/de OR 'emergency medicine'/de OR 'emergency nursing'/de |
| 6 | (emergency NEAR/2 (room OR unit OR department OR accident OR service OR ward)):ti,ab |
| 7 | casualt\*:ti,ab |
| 8 | #5 OR #6 OR #7 |
| 9 | disrupt\*:ti,ab OR abnormal\*:ti,ab OR interupt\*:ti,ab OR increas\*:ti,ab OR decreas\*:ti,ab OR surge\*:ti,ab OR rush\*:ti,ab OR rise\*:ti,ab OR fall\*:ti,ab OR busy\*:ti,ab OR quiet:ti,ab OR extend\*:ti,ab OR extra:ti,ab OR more:ti,ab OR less:ti,ab |
| 10 | #4 AND #8 AND #9 |
| 11 | #10 AND 'Conference Abstract'/it |
| 12 | #10 NOT #11 |
| 13 | #12 AND [english]/lim AND [2012-2021]/py |
| 14 | #12 AND [english]/lim AND [2012-2021]/py AND [embase]/lim |

**Supplementary Table 4.** Characteristics, demographics and outcomes of alcohol-related presentations to EDs regarding events

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Publication characteristics** | **Characteristics** | | | **Demographics** | | **Outcomes** | | | **Other outcomes** |
| **Event** | **Busy periods** | **Quiet periods** | **Age (years)** | **Gender dominance** | **LOS** | **Disposition** | **BAL** |
| **Event category: *Disaster*** | | | | | | | | | |
| Kobayashi et al., (37) | Earthquakes | 51.1% weekend presentations: (n=3268/6395)  β (95% CI):  0.08\* (−0.01\* to 0.14)  ↑ male presentations in Winter compared to Spring (p=0.01\*)  ↑ female presentations on non-working days (p=0.02\*)  ↑ presentations amongst older people in Winter  (p=<0.01\*) | ↓ male presentations during daytime earthquakes only (p=0.03\*)  β (95% CI):  0.19 (-0.36 to -0.02\*) | Mean (SD):  42.6 (16.9) | 71.8% Male  (n=4592/6395) |  | ↓ ED volume during daytime earthquakes  (95% CI):  0.08\* (−0.01\* to 0.14) |  |  |
| **Event category: *Music Festival*** | | | | | | | | | |
| Chhabra et al, (22) | Electronic Dance Music Festival | 17:00 – 02:15am  (all presentations) | 13:00 – 17:00  (no presentations) | Median (IQR): 21 (19.5-24)  Range: 18-29 | 53.57% Male (n=15/28) | Median (IQR):  265 minutes (210-347)  Range:  66-660 minutes | ↑ 2 ward admissions  ↑ 1 ICU admission |  | 64.3% Ethanol (n=18)  46.4% Amphetamine (n=13)  28.6% Marijuana (n=8). |
| Ridpath et al., (23) | Electronic Dance Music Festival |  |  | Median: 21  Range: 16-29  ≥20 = 55% | 59% Female  (n=13/22) |  | ↑ 5 ICU admissions (23%)  ↑ 2 deaths (9%) |  |  |
| Ruest et al., (21) | 115 Music Concerts |  |  | Mean (SD): 19.5 (3.3)  <18 = 33% (n=47)  <21 = 72% (n=102) | 71% Female  (n=101) | Mean (SD): 4.3 hours (3.4) | ↑ 142 ED presentations: 90% treated and discharged home (n=128)  61% (n = 86) required clinical interventions  46% received IVF (n = 65) | Mean (SD):  242mg/dL (70)  (n=60) | 48 of 115 concerts caused an increase in presentations, and these were: 31% pop concerts (n=16)  29% rock concerts (n=19)  19% rap/hip hop concerts (n=7) |
| Stagelund et al., (24) | 2012 Roskilde Music Festival |  |  |  |  |  | ↑ 238 ED presentations (2.2%) |  |  |
| **Event category: *Policy change*** | | | | | | | | | |
| Atkinson et al., (43) | **Change in trading hours of:** |  |  |  |  |  |  |  |  |
| Extending trading to 12am |  |  |  |  |  | ↑ 5.9% ED presentations; margin of error ± 2.6 |  |  |
| Extending trading hours to 2am |  |  |  |  |  | ↑ 8.5% ED presentations; margin of error ± 2.3 |  |  |
| Extending trading hours to 11pm |  |  |  |  |  | ↑ 5.6% ED presentations; margin of error ±2.7 |  |  |
| 1am closing time |  |  |  |  |  | ↓ 19.4% ED presentations; margin of error ±2.3 |  |  |
| 3am closing time |  |  |  |  |  | ↓ 11.9% ED presentations; margin of error ±2.1 |  |  |
| Castro-Marin et al., (25) | Alternate Care Site at event |  |  |  |  |  | ↓ 55.3% ED transports (OR=0.37; 95% CI = 0.16-0.86) (p=0.01\*) |  |  |
| Fierro-Fine et al., (42) | University alcohol policy | Nongame day (n=3959/5437) | Game day  (n=1478/5437) | ≥ 30  (n=3015/5437) | 63.2% Male (n=3437/5437) |  | ↑ ED presentations post policy change (n=3959/5473)  (p=<0.01\*) | ↓ severe ethanol range ≥ 240mg/dL on game days after the implementation of policy |  |
| Fulde et al., (28) | Changes to liquor licencing | ↑ 9.1% ED presentations during high alcohol times (18:00 Friday – 06:00 Sunday) than the rest of the week (3.1%; p < 0.05\*) |  |  |  |  | ↓ ED presentations from 318 (pre-implementation) to 246 (post-implementation) (p = <0.05\*) |  | Takeaway alcohol sales stop at 22:00; no service of “shots” after midnight; 01:30 – 03:30 “lockout” rule; and 03:00 “last drinks” |
| Gale et al., (38) | Increase in alcopops tax |  |  |  | 66% Male (n=70740/107810) |  | ↓ 18 – 24-year-old female ED presentations (=0.37 presentations/100 000/month, 95%CI -0.45 to -0.29). |  |  |
| Introduction of GST |  |  |  |  |  | ↑ ED presentation rates for 18 – 24-year old’s (0.14/100 000/month, 95%CI 0.05 – 0.22) |  |  |
| Grigoletto et al., (27) | COVID-19 Lockdown | ↑ ED presentations post the lock down period (04/05/20 –27/05/20) from 2.96% (n=15) to 11.31% (n=25) | ↓ ED presentations during the lockdown period (10/04/20 – 04/05/20) from 2.95% (n=9) to 0.88% (n=1) | Mean: 16 – 18 (n=9/25) | 68% Male (n=17/25) |  |  | Mean: 240 mg/dL (range: 170 – 320) |  |
| Kharasch et al., (29) | University alcohol policy |  |  | Mean: 19 |  | Mean: 252.5 minutes | ↑ 56% yearly transports to ED following the implementation of the policy (p=<0.01\*) | Mean: 236mg/dL (admitted patients)  193mg/dL (non-admitted patients) (p=<0.01\*) |  |
| **Disruptive event category: *Public Holiday*** | | | | | | | | | |
| Griffin et al., (35) | All public holidays | More likely to present out of normal working hours (00:00 – 09:00) (p < 0.001\*) RR (95% CI):  1.35 (1.20 – 1.51) |  |  |  |  | ↑ 43% of alcohol-related ED presentations on public holidays compared to 38% on all other days (p=<0.001\*). RR (95% CI): 1.24 (1.17 – 1.32) |  |  |
| Christmas Day |  |  |  |  |  | ↑ 81% risk of alcohol involvement for males. RR (95% CI): 1.81 (1.18-2.76) p=<0.01\*  ↑ 79% risk of alcohol involvement for females. RR (95% CI): 1.79 (1.25-2.55) p=<0.01\* |  |  |
| Christmas Eve |  |  |  |  |  | ↑ 150% risk of alcohol involvement for males. RR (95% CI): 2.51 (1.70-3.73) p=<0.001\* |  |  |
| Easter Sunday |  |  |  |  |  | ↑ 58% risk of alcohol involvement for females. RR (95% CI): 1.58 (1.17-2.13) p=<0.01\* |  |  |
| Good Friday |  |  |  |  |  | ↓25 % risk of alcohol involvement for males and females. RR (95% CI): 0.75 (0.60-0.98) p=<0.05\* |  |  |
| June Bank Holiday |  |  |  |  |  | ↑ 88% risk of alcohol involvement for males. RR (95% CI): 1.88 (1.33-2.65) p=<0.001\* |  |  |
| New Year’s Day |  |  |  |  |  | ↑ 53% risk of alcohol involvement for males. RR (95% CI): 1.53 (1.15-2.03) p=<0.01\*  ↑ 37% risk of alcohol involvement for females. RR (95% CI): 1.37 (1.04-1.81) p=<0.05\* |  |  |
| New Year’s Eve |  |  |  |  |  | ↑ 102% risk of alcohol involvement for females. RR (95% CI): 2.02 (1.50-2.72) p=<0.001\* |  |  |
| St. Patricks Day |  |  |  |  |  | ↑ 62% risk of alcohol involvement for females. RR (95% CI): 1.62 (1.23-2.12) p=<0.01\* |  |  |
| St. Stephens Day |  |  |  |  |  | ↑ 62% risk of alcohol involvement for females. RR (95% CI): 1.62 (1.18-2.22) p=<0.01\* |  |  |
| Lloyd et al., (41) | ANZAC Day |  |  |  |  |  | ↑ ED presentations on the day prior to ANZAC day: Β Coeff. 2.73; p=<0.05\* |  |  |
| New Year’s Day |  |  |  |  |  | ↑ED presentations on the day prior to New Year’s Day: β Coeff. 25.51; p=<0.05\* |  |  |
| **Event category: *Social Event*** | | | | | | | | | |
| Callaghan et al., (36) | Hazardous Birthday drinking | Friday and Saturday | Monday, Tuesday and Wednesday | Impact of birthday week on alcohol-related ED presentations/admissions for ages 13 to 30. | For females, significant impact noted in alcohol presentations to ED in the birthday week for 14th, 15th, 16th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 29th, 30th birthdays.  For males, significant impact noted in alcohol presentations to ED in the birthday week for 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 30th birthdays. |  | Significant impact noted in alcohol presentations to ED in the birthday week for 14th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 28th, 29th, 30th birthdays. Most noticeable for 19th birthday week. Note: in Ontario, Canada minimum legal drinking age is 19 years. |  |  |
|  | | | | | | | |
| Lloyd et al., (41) | Last working day before Christmas |  |  |  |  |  | ↑ ED presentations on the last working day before Christmas: Β Coeff 2.76 (p=<0.05) |  |  |
| **Event category: *Sporting Event*** | | | | | | | | | |
| Gardener et al., (20) | 2011 Rugby World Cup | Opening ceremony (09/09/11): ↑ ATS 2 and 3 with up to 25 presentations for the hour 20:00 – 20:59  Grand Final (23/10/11 – 24/10/11): sustained peak period between 21:00 – 03:00 |  |  |  |  | ↑8% ED presentations from 6854 to 7419 during event.  44 patients required short-stay observation during the evening of the opening ceremony – nearly threefold increase on the departmental average of 15 per 24 hours. |  | The department saw its highest ever 24hr daily attendances during the two peak periods, resulting in a large number of Ambulances queuing to offload. |
| Noel et al., (19) | EURO-16 Football Cup | Month of June  7.7 (CI 6.5-9)  (p=<0.02\*) | Month of August 5.5 (CI 4.7 – 6.5)  (p=<00.2\*) | Mean (SD): 44.6 (20.8) | 53.2% Male |  | ↑43% ED presentations on event days (p = 0.003\*) |  |  |
| Lloyd et al., (41) | AFL Grand Final |  |  |  |  |  | ↑ ED presentations 2.37, 95% CI: 0.55–4.19 |  |  |
|  | Commonwealth Games |  |  |  |  |  | ↑ ED presentations 2.45, 95% CI: 0.6–4.3 |  |  |
|  | Melbourne Cup Day |  |  |  |  |  | ↑ ambulance attendees 6.14, 95% CI: 2.42–9.85 |  |  |

Australian Football League (AFL); Australian New Zealand Army Corps (ANZAC); Australasian Triage Score (ATS); Emergency Department (ED); Intensive Care Unit (ICU); Intravenous Fluid (IVF); Confidence Interval (CI)