

Title Registration for a Systematic Review: Emergency Department Data Sharing to Reduce Alcohol-Related Violence: A Systematic Review of the Feasibility and Effectiveness of Community Level Interventions

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TITLE OF THE REVIEW

Emergency Department Data Sharing to Reduce Alcohol-Related Violence: A Systematic Review of the Feasibility and Effectiveness of Community Level Interventions.

BACKGROUND

Alcohol related harm places substantial burden upon hospital emergency departments, particularly on weekends during times of high alcohol use. (Laing, Sendall, & Barker, 2013; Scott Macdonald et al., 2006) This is of increased concern in Australia, with international research attributing a greater proportion of accident, injury and violence related attendances to alcohol use compared to US, European, and South-American hospitals. (S. Macdonald et al., 2005) Further, research conducted in New South Wales and Victoria indicates that alcohol related presentations may be even more prevalent in rural Australian hospitals. (Coomber, Miller, Livingston, & Xantidis, 2013; Havard, Shakeshaft, & Conigrave, 2012) In an effort to pro-actively reduce drain on resources, many emergency departments utilise the presentation of alcohol related injury and harm as an opportunity to motivate reduction in the patients' alcohol consumption and subsequent risk behaviors. (Blow et al., 2006; Dent, Weiland, Phillips, & Lee, 2008; Longabaugh et al., 2001) Reviews of patient targeted intervention outcomes have provided mixed support for hospital emergency departments as an effective public health platform from which to launch such individual level patient screening and interventions to reduce alcohol related injuries. (Havard, Shakeshaft, & Sanson-Fisher, 2008; Mdege et al., 2013) Individual level programs fail to address sources and hotspots of alcohol related harm in the community, and ED staff are often ambivalent about discussing interventions with patients in an ED environment. (Nordqvist, Johansson, Lindqvist, & Bendtsen, 2006)

Alternately, an emerging trend largely concentrated in the UK is the use of ED recorded data on assaults and alcohol related injuries as a tool for targeting police and other regulatory community level interventions ((for e.g. "TASC" - Tackling Alcohol-related Street Crime) A. L. Warburton & Shepherd, 2004) The World Health Organization promotes the distribution and usage of emergency department data as a major component in public health approaches to prevent injuries. (Holder et al., 2001; World Health Organization, 2013) Such ED programs are typically affiliated with injury surveillance systems (ISS). In the UK a number of ISS have been established, with operations ranging across a multitude of frontline emergency healthcare providers spanning districts. Emergency department datasets have been demonstrated to substantially improve detection of assault and violence over police recorded data, and it is generally accepted in Australasia and internationally that police recorded data is a poor overall indicator of the patterns of public violence. (Miller, Coomber, Sonderlund, & McKenzie, 2012; Miller et al., 2011; Shepherd, 2007; Sutherland, Sivarajasingam, & Shepherd, 2002) Advocates of ED data sharing emphasise the potential for improved harm-reduction interventions through the identification of problematic venues,

liquor outlets, and high-risk neighbourhoods, and by targeting the most effective application of limited first response resources such as police and ambulance. (Sivarajasingam, Shepherd, & Newcombe, 2011) This method of anonymised data sharing to reduce violence and assaults has been frequently referred to as the ‘Cardiff’ model.

While the current implementations of the Cardiff model in the UK are often generalised to the monitoring and reduction of all violent incidents, the scope of the current review is focussed upon alcohol related injuries and assaults resulting in ED attendance.

OBJECTIVES

- What is the current evidence for the effectiveness of using inter-agency ED assault data sharing to direct interventions reducing alcohol related or nightlife assaults, injury or violence?
- What are the conclusions of pilot/feasibility studies investigating this practice?

EXISTING REVIEWS

Aside from our own review we have no knowledge of existing reviews in this area.

INTERVENTION

This review specifically searches for peer-reviewed original-research articles, commentaries and discussion pieces, and unpublished professional reports and dissertations (grey literature) reporting on the collection and sharing of alcohol related violence, assault and injury data in the ED. Data in this context is intended to identify problematic venues, public areas and sources of alcohol related harm in the community; those locations which are contributing most to the presentation of alcohol related harm and injury in the ED.

Not all articles included in the review present the results of an intervention. Some are feasibility studies and pilots that report on the cost and ease with which this method can be introduced in an ED.

The trial studies included used a number of public health interventions with differing outcome measures. These interventions and outcomes were not always easily comparable between studies. Outcome measures included violent crimes recorded by police, ED attendances attributed to alcohol, ED assault related attendances, violence and injury attendances, and assaults occurring at specific licensed venues.

Public health interventions were also variable, ranging from sharing anonymised data with law enforcement partners, to contact with venues from ED clinicians.

POPULATION

All data in the included studies is presented as aggregated incidence data. Emergency departments serve the entire community and as a result the attendants and participants can be assumed to be representative of those communities, the majority of which are in the UK. As a result of the data collection methodology being assessed, no studies are included or excluded base upon the population subtype involved in the data collection.

OUTCOMES

Outcomes of concern for this review are

- the effectiveness of using inter-agency ED assault data sharing to direct public health interventions, as measured by reductions us alcohol related assaults or nightlife assaults, injuries, violence or alcohol attributed ED presentations, and
- indicative quantitatively and/or qualitatively reported feasibility and methodological/practical implications of this data collection and sharing practice.

STUDY DESIGNS

Study designs included in the final review are:

- Cross-sectional retrospective
- Experimental time-series
- Longitudinal crossover

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REVIEW AUTHORS

Lead review author: The lead author is the person who develops and co-ordinates the review team, discusses and assigns roles for individual members of the review team, liaises with the editorial base and takes responsibility for the on-going updates of the review.

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ROLES AND RESPONSIBILITIES

- **Content:** PM and TB have significant publication history in the fields of alcohol and other drugs and emergency medicine, respectively. TB is also director of the ED at Warrnambool Base Hospital. Both authors contributed substantially to the development and drafting of the review.
- **Systematic review methods:** ND and PM both have experience conducting, publishing, and supervising systematic reviews. ND and PM co-designed the review methodology and criteria.
- **Statistical analysis:** ND and PM have statistical expertise, however meta-analysis was not conducted for this review.
- **Information retrieval:** Information retrieval was conducted by ND, with inclusion, exclusion, and eligibility criteria co-reviewed by PM and TB.

FUNDING

No funding to declare. No deliverable deadlines. Review has been published prior in peer-reviewed journal:

Droste, N., Miller, P., & Baker, T. (2014). Review article: Emergency department data sharing to reduce alcohol-related violence: a systematic review of the feasibility and effectiveness of community-level interventions. *Emergency Medicine Australasia*, 26(4), 326-335. doi: 10.1111/1742-6723.12247

POTENTIAL CONFLICTS OF INTEREST

Authors PM, TB, and ND have conducted a 6 month data collection trial in an Australian rural hospital. This pilot study has been peer reviewed:

Miller, P., Droste, N., Baker, T., & Gervis, C. (2015). Last drinks: A study of rural emergency department data collection to identify and target community alcohol-related violence. *Emergency Medicine Australasia*, n/a-n/a. doi: 10.1111/1742-6723.12369

Authors PM, ND and TB are now engaging with Australian metropolitan hospitals with the intention of commencing a larger scale data collection and public health intervention trial. Funding will be sought from participating institutions in partnership with the Australian National Health and Medical Research Council (NHMRC).

PRELIMINARY TIMEFRAME

Review of peer-reviewed literature is completed and published. Review will be updated with findings of a systematic grey literature search and can be submitted/modified at the editor's convenience.

AUTHOR DECLARATION

Authors' responsibilities

By completing this form, you accept responsibility for preparing, maintaining, and updating the review in accordance with Campbell Collaboration policy. The Coordinating Group will provide as much support as possible to assist with the preparation of the review.

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Form completed by: Nicolas Droste

Date: 31/8/15

A handwritten signature in black ink, appearing to read 'ND', with a small dot at the end of the second letter.