Maximising Return on CCTV Investment: Security Personnel and Alcohol-Related Assault in the Cairns Night-Time Economy

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Seminar Overview

Background:
Violence in late night entertainment precincts
Measurement and Interventions

Aims:
Specific aims and objectives

Research:
Overview of the three studies
Theoretical basis is Situational Crime Prevention

Acknowledgements
Thankyou

Feasibility study funded by the National Drug Law Enforcement Research Fund

Intervention study funded by the Queensland Injury Prevention Council and the Alcohol Education & Rehabilitation Foundation
A more accurate count

Establish and strengthen co-ordinated data collection mechanisms to count incidents

Establish Boundaries of LNEP

Define incidents

Identify data collection agencies

Establish data each agency can share

Negotiation

Design ➤ Link ➤ Awareness

Co-ordinated data collection tool
Designed and implemented
Qualitative Results

Cairns LNEP

Stakeholder consensus
~0.6 km²

26 venues licensed
trade >midnight

For 3074 hrs/week
(827 hrs/week
>midnight)

Capacity – 18055
people at midnight
Fridays
A more accurate count

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Co-ordinated data collection tool

- Reported
- Injury Severity
  - Place
  - Time

- Place
- Time
- Demographic
  Unreported

- Place
- Time
- On street only

ED
Police
Venues
CCTV
Co-ordinated Data Collection Tool

Same data tool Baseline and Follow-up

April-May-June 2010 (baseline)

April-May-June 2011 (follow-up)

Community driven interventions occurred between 2010 and 2011
Co-ordinated Data Collection Tool

- Software project
- Linked to ED Information System
- ICD codes
- Compulsory
- Yes/No/Unsure
- Triage text

ED

Police

Venues

CCTV

- Summary QPRIME report provided monthly

- Footage plus incident database
- Alcohol-related assault category
- Free-text description

- Summary reports monthly by security
Incidents of person-to-person violence (‘alleged assault’) in the Cairns Late Night Entertainment Precinct: June 2011

- CCTV incidents observed
- Police charges of alcohol-related assault
- Security Data

123 incidents counted
ED accuracy?
Total Difference from 2010 to 2011:

April 2011 down 34.8% (No venue data April 2011)

May down 24% (full data set)

June down 23% (No venue data June 2010)
Number of factors may have had an impact:

Data is imperfect, but collected in the same way

Less people in town from interviews and anecdotal reports (tourism)

Those in town may have had less money to drink

Banning

Other interventions: e.g. training of venue and street security & audit of CCTV
Mixed Methods results

[Map image showing various areas and data points]

[Bar chart showing data for April, May, and June]
ED Data Accuracy 2010 & 2011* (*indicative)

2010: Baseline

Raw Numbers

2011 Follow-up
Remember we collected: 123 incidents counted June 2011

Emergency Department data
- Triggered by ICD Codes
- Treating physicians judgement
- Yes/No/Unsure
- Triage text

CCTV data
- Incidents tagged by camera operator

Efficient and effective collection
ED Accuracy: prospective vs retrospective
9 presentations/month (retrospective)
97 presentations/month (prospective)
Translation: prospective vs retrospective
Proxy Denominator

Studies 1.1 - 1.2
- More accurate count
- Total number of assaults

Proxy Measure
- Headcount through CCTV
- Taxi meter activations

Denominator
- Repeated measurement
- Correlation established

Total number of assault incidents (time)
Per taxi meter activation (time)
Peer Reviewed Publications

Pointing ES, Hayes-Jonkers C, Bohanna I, Clough AR. The role of an open-space CCTV system in limiting alcohol-related assault injuries in an LNEP. *Injury Prevention* 2011 Sep 5 [Epub ahead of print]


ECONOMIC ANALYSIS: Cost benefit

Rollins 2008: $1,800 average

June 2011 = $214,200 cost
May 2011 = $234,000
April 2011 = $171,000
TOTAL INDICATIVE 2011 COST
$619,200

June 2010 = $286,200
May 2010 = $322,200
April 2010 = $270,000
TOTAL INDICATIVE 2010 COST
$878,400

$259,200 indicative benefit for April, May, June ($1,036,800 full year)
$203,500 Cost of research 2009/2010/1011
Enhancing Urban CCTV systems to limit assaults
Technological Capability

Note the sign behind the truck
CCTV Real-time Communications System

- Camera Room
  - Police (Comms)
  - Security (venues)
  - Security (Street)
  - Police (radio)
AIMS: Assess Cairns practice against good practice

METHODS:
Recommended practices extracted from literature
Grouped by key topics and tabulated
Observational sessions, open-ended discussions and focus groups
Practices compared against recommendations

RESULTS:
The Cairns CCTV model generally met recommended guidelines
Improvements are possible
CCTV Context identified
Context of Cairns CCTV system defined

A. Precise system outcomes
B. Police involvement
C. Camera room staff and operations
D. Camera operator training
E. Community information strategy & strategic communication networks
F. **Real-time communication networks**
G. Referral and outcome recorded
H. Regular internal audit and external evaluations
I. Legislative and regulatory requirements met
Examine CCTV camera operator reports and observed footage.

Nine days in late-August (2010) and thirteen days over Christmas/New Year (2010-11)

Assaults: 30 in 22 Days

a) Happened too quickly for camera operators to direct street security to intervene: 13 (43%)
b) Operators alerted street security who then intervened to curtail the violence or prevent its escalation: 12 (40%)
c) Potential to intervene to prevent the initiation of violence: 5 (17%)
CCTV: Accuracy of Incident Type categorisation

- **Period 1 (Sept 2010)**
  - Inaccurate: 40%
  - Almost: 60%
  - Accurate: 0%

- **Period 2 (Xmas & NY 2010/11)**
  - Inaccurate: 0%
  - Almost: 10%
  - Accurate: 90%

**Baseline**

**Follow-up**
Realist Evaluation of camera room operations

Context

Mechanisms

Outcomes

Strength of RE is facilitation of scientific hypotheses
Applied Realist Evaluation

Camera room operations
Camera operator training

Mechanisms

Outcomes
Using Realist Evaluation for accuracy of data entry

- Defined
- Data Entry Context
- Stable

- Mechanisms
- Camera Operators

Data accuracy Outcomes (Study 1.2)
Enhancing CCTV operations to limit LNEP assaults

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Some Assaults in LNEPs are a four stage process (Barker, 2010)
1. Victim selection
2. Interview, or baiting
3. Violence
4. Aftermath

Viewers of CCTV footage can predict the outcome of a behavioural sequence more than 80% of time (Troskianko et al, 2009)
Applied Realist Evaluation

Context

- Camera room operations
- Camera operator training
- Real time communications network

Mechanisms

- Body language
- Behavioural predictors
- Victim Selection
- Interview/Baiting

Outcomes

40%
17%
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Dom Davies, Cairns City Licensees Safety Association

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Assistant Commissioner Katarina Carroll, QPS
Senior Sergeant Russell McDonald, QPS
Inspector Russell Rhodes, QPS
Inspector Brian Connors, QPS
Incidents of person-to-person violence (‘alleged assault’) alcohol in the Cairns Late Night Entertainment Precinct: June 2011

- Incidents observed by CCTV
- ‘Yes’ believed to be alcohol-related and occurred in the CBD
- Police charges of alcohol-related assault
- Security Data including with ‘alcohol not involved’

123 incidents counted
ED accuracy?