

By Accident or Design

Using collected data to improve services and prevent injuries

Why Injury?

Intentional and unintentional injuries are responsible for the deaths of 5 million people each year globally with injuries being responsible for 20,000 deaths in the UK annually, Merseyside deaths being in excess of 450 each year. The World Health Organisation has specified violence as the 3rd leading cause of death globally in the 15 - 44 year age group. 30,000,000 visits for medical attention result from intentional and unintentional injuries in England each year (BMA 2001) Long term ill health and disability can result from non fatal injuries. The cost to the individual and the NHS is considerable with an estimated cost to the NHS alone of £1.6 billion. However it is difficult to obtain more definitive data to enable targeting of resources.

The Inequalities Agenda

Although anyone can experience injury, the poorest in UK society appear to be at greatest risk.

- Residential fire death rates for children are 15 times greater in social class 5 compared to social class 1.
- Child pedestrian death rates are 5 times higher in social class 5 than in social class 1.

The Importance of Data

Reliable, timely, complete and good quality data on injuries is notoriously hard to find combined in one place. However, good quality data is required to plan systems to address the issues of intentional and unintentional injuries. It is necessary to identify the numbers of those sustaining injuries and in what ways injuries occur. Understanding of the causes and contributory factors is also required. Monitoring of data allows organisations to establish if injury rates are changing and contributes to the evaluation of interventions.

Development of TIIG

Previous research carried out in three Accident and Emergency Departments in the Merseyside area into assaults has demonstrated the efficacy of additional data collection. An Assault Patient Questionnaire developed by Young & Hirschfield (1999) at the University of Liverpool drew upon the work of Goodwin & Shepherd (2000) and was used to evaluate the Operation Crystal and Crystal Clear Campaigns to reduce glass-related injuries. This together with the work of the North West Regional Accident Task Force and other sources was utilised to inform the Trauma and

cont.

Access to quality and reliable injury information is one of the most difficult challenges facing the agencies responsible for crime reduction and health improvement

Martin Newton
Head of Safety Merseyside Partnership

Section 115 establishes the power to disclose information, which is central to the Act's partnership approach

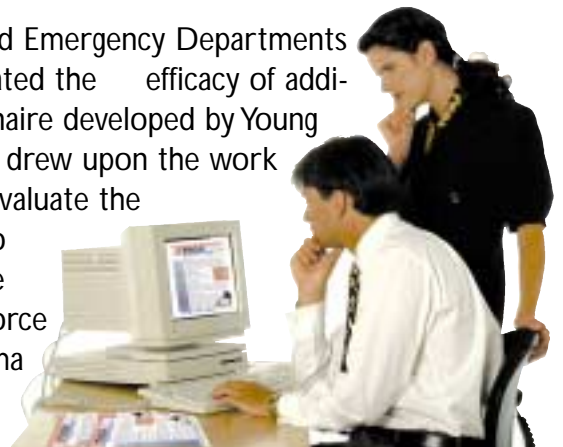
Crime & Disorder Act
1998

THE TIIG PARTNERSHIP

National Health Service
NW Public Health Observatory
Merseyside Ambulance Service
Merseyside Fire Service
Merseyside Police
Safer Merseyside Partnership
University of Liverpool
Merseyside Health Action Zone
North West Accident Task Force

- National Data is fragmented
- Regional Data hardly exists
- Local Data also fragmented

Measuring & Monitoring Working Group (2002)



A surveillance system includes a functional capacity of data collection, analysis and dissemination linked to public health programmes

TIIG Forward Development Strategy (2002)

Injury Intelligence Group (TIIG) in the developmental process of a Merseyside Injury Surveillance System. The Crime and Disorder Act recommended sharing data on intentional injuries when auditing Crime and Disorder and developing Community Safety Strategies. Moreover, views gained at a Merseyside conference in February 2000 highlighted the need for a collaborative approach to Injury Information. The Trauma and Injury Intelligence Group was established to proactively meet these needs.

Structure of TIIG

The Trauma and Injury Intelligence Group (TIIG) is one of four sub-groups under the direction of the Merseyside Accident Strategy Co-ordinating Group (fig.1). It demonstrates the value of the partnership approach by bringing together and making connections between the crime and health agenda in real terms as evidenced in both funding and work practice.

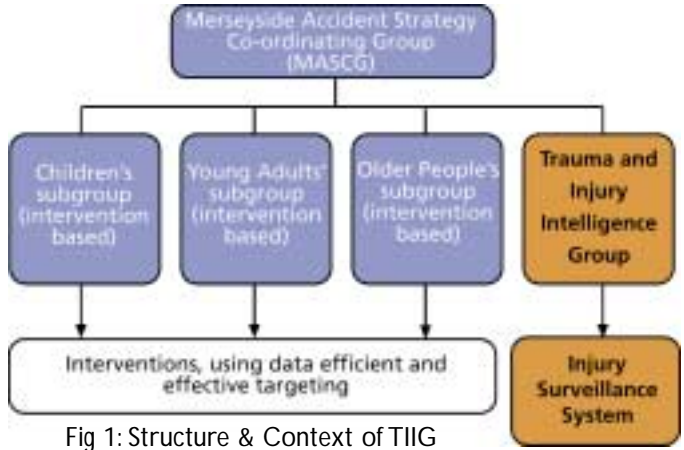
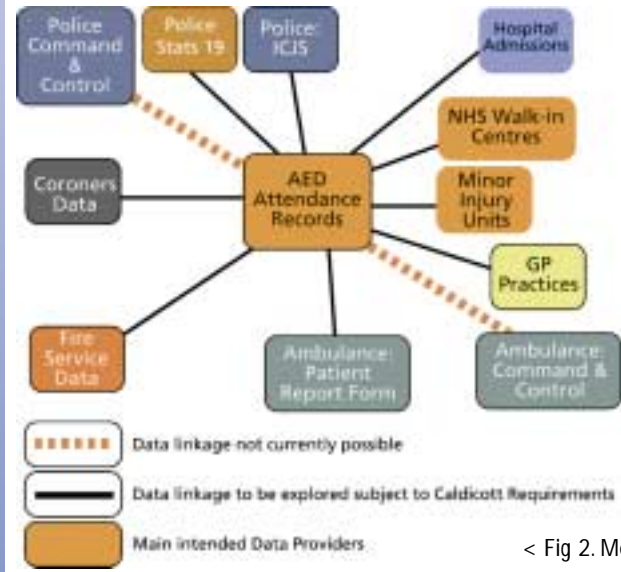


Fig 1: Structure & Context of TIIG

The TIIG is overseeing the development of an Injury Surveillance System for Merseyside (fig 2.). Initially this will utilise data submitted from Accident and Emergency Departments (AEDs) in Merseyside hospitals, overlaid with relevant geographical socio-economic statistics and establish regular reporting mechanisms.

A dissemination protocol has been developed to ensure appropriate use of intelligence and regular feedback to hospitals not only in the form of the reports themselves but also of outcomes of intelligence based interventions. Users of the intelligence will be registered appropriate agencies approved by TIIG. The capability of expansion of the system to assimilate other relevant data sources is also an integral element.



< Fig 2. Merseyside Injury Surveillance System

WORKING WITH ACCIDENT & EMERGENCY DEPARTMENTS (AEDs)

A number of potential sources of data to inform injury prevention have been explored by the World Health Organisation. Their findings, summarised as an appendix to their Injury Surveillance Guidelines (2001), expressed the view that AEDs provide an excellent opportunity for information gathering. This is largely due to the fact that they represent the most comprehensive single 'collector' of data relating to intentional and unintentional injuries. Work has also taken place with other providers of data although GP Practices and coroners's data has not yet been drawn into the system.

TIIG has been working with each AED department in Merseyside to build on their existing systems for collecting data on injuries and to introduce a common dataset. Three hospitals were already collecting assault data, but the format required standardising and building into existing systems. Other hospitals had strengths that could contribute to setting up a consistent collections system and sharing good practice in terms of areas of special interest. Figure 3 demonstrates proposed data flows from hospital AED departments, through the TIIG surveillance system, to the reporting and interpretation of the analysis.

Surveillance is an ongoing activity that can be built into the day-to-day operations of an agency

Injury Surveillance Guidelines - World Health Organisation (2002)

There is sufficient evidence to implicate alcohol misuse as a major factor in night time or weekend violence and disorder as demonstrated in national crime surveys and surveys of case loads in accident and emergency departments

Alcohol Concern 2002

Arrowe Park Hospital

An earlier scoping exercise, conducted by Haig Associates (2001) to inform the TIIG, had highlighted previous good practice at Arrowe Park Hospital. TIIG officers assisted in amending data collected within the AED, to include a number of additional fields. These were identified by Public Health Specialists and other agencies involved in injury prevention work. AED information is now submitted on a regular basis for analysis by the TIIG Technical Advisor. This process is facilitated by a Liaison Officer, part funded by the TIIG, within the AED.

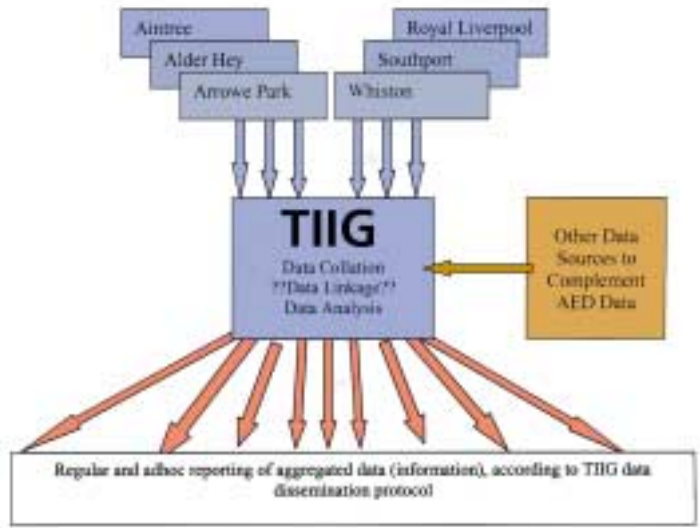


Fig 3: Proposed Data Flows

The importance of the injury intelligence derived from the AED data has been recognised by the Wirral Accident Modernisation Team and included in their Business Plan.

Royal Liverpool Children's Hospital Alder Hey

Early meetings in Alder Hey Childrens hospital highlighted the strong commitment and enthusiasm of staff in the prevention of childhood injuries across Merseyside. Work is ongoing with AED on the regular submission of data and the collection of additional key injury information fields, this being facilitated by funding from TIIG. Links have also been established with the Institute of Child Health, based at Alder Hey Hospital, and their support has been requested for Dangerzone - a high-profile injury prevention facility designed to benefit the whole of Merseyside.

Southport District General Hospital

Colleagues at Southport General Hospital in both AED and the Information Department have displayed interest in the development of the Injury Surveillance System and have identified relevant data currently being collected. It is envisaged that it may be possible in the future to work together towards providing useful information to support injury prevention within Sefton and therefore contribute towards a reduction in intentional and unintentional injuries.

Royal Liverpool University Hospital, Aintree University Hospital and Whiston Hospital

Three AEDs in Merseyside Hospitals namely the Royal, Aintree and Whiston have supported and continue to support the collection of assault data to inform initiatives to reduce the number of assaults, particularly those that are glass-related, across Merseyside. The value of the data is demonstrated by its use in the Merseyside Police Licensing Department. The aggregated data is collated with Police recorded crime and Command and Control data to critically consider applications for license renewals. However, the remit for licensing of premises is due to be passed to Local Authority control. The AED at the Royal is situated within the heart of Liverpool and the work on the collection of assault data has contributed greatly to the understanding of preventing injuries within the town centre. Sample data has already been provided for analysis and establishment of regular submission of data has been agreed for inclusion in the Merseyside Injury Surveillance System.

Aintree University Hospital is another of the three Merseyside hospitals participating in the seminal work of contributing assault data. However, although relationships with TIIG were established early it was when the AED was integrated/interfaced with main Patient Administration System that it was possible to explore extraction of TIIG data. Traditionally the Assault Patient Questionnaire (APQ) used to collect assault data was supplied on paper. The APQ became electronic in April/May 2002. Currently work is taking place on setting up a TIIG extract alongside

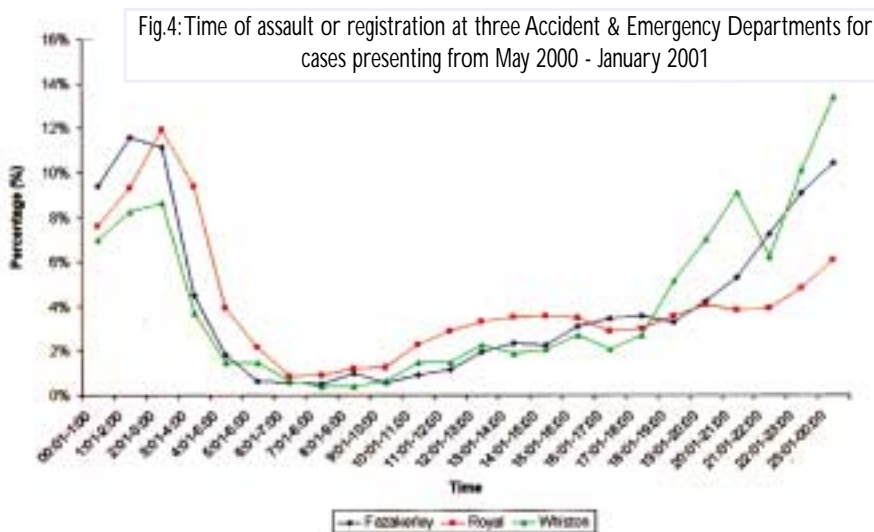


Crystal Clear Campaign Poster - Reducing Glass Related Injury

For Info contact HIT on 0870 990 9702 or www.HIT.org.uk

the Common Data Sets for submission. Funding has also been granted from TIIG for a liaison person within AED. Whiston Hospital, has contributed assault data on a regular basis. A multi-agency strategic forum, hosted by AED, has been reconvened in response to the development of the Merseyside Injury Surveillance System. AED staff have been supported to attend specialised courses to provide expertise in the collection of data related to alcohol and injury. The AED has provided information to underpin the work on falls prevention by St Helens PCT. Considerable redevelopment is taking place at Whiston Hospital and a new IT System for AED is currently in the developmental stage. It is envisaged that additional data items will feature on the system and the forum will continue to address issues arising from the provision of injury intelligence.

In conclusion, routine data from AED departments such as time of assault or registration can be used to inform police and local authorities of peak times at which these incidents occur and assist in planning the most effective deployment of resources (Fig.4).



"In order to achieve the most effective outputs in practice it is important that all relevant disciplines and individuals have a common baseline of information and understanding to underpin their joint working and initiatives"

Preventing Accidental Injury Priorities for Action (DOH 2002)



Maureen McEvoy receiving the Community Safety Award

and result in hospital treatment than are recorded by the police (Silvarajasingam & Shepherd, 1999). Aggregated data from AEDs is useful to highlight areas in which this occurs to enable targeting of valuable police resources and make communities safer.

Mersey Region Ambulance Service

An aspiration of the Merseyside Injury Surveillance System is to create a system utilising many forms of injury information. Walk-in Centres and the Ambulance Service therefore could make a valuable contribution. In particular, data collected by the Ambulance Service feature a full (one metre accuracy) grid reference for the destination of their vehicles. This could provide important information on the geographical location of incidences of injury and enable targeting of resources to injury hotspots (Fig 6).

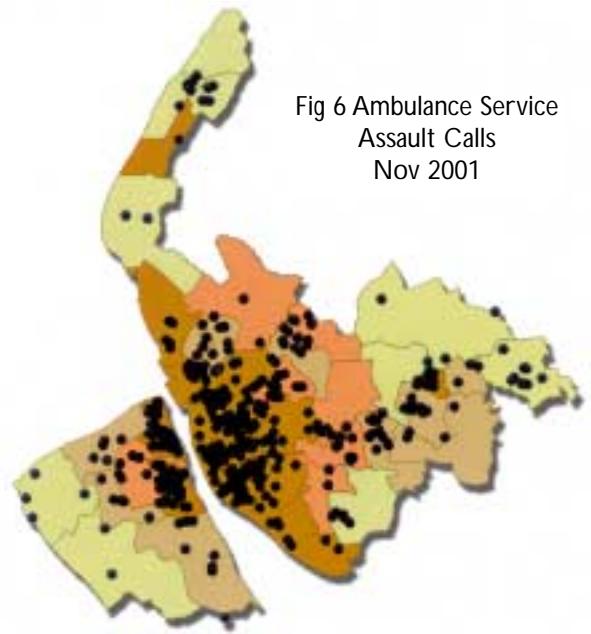


Fig 6 Ambulance Service Assault Calls Nov 2001

CELEBRATING SUCCESS

Merseyside Community Safety Award

The Trauma and injury Intelligence Group were recognised by Merseyside Police Authority as an example of good practice by making an outstanding contribution to crime reduction and community safety on Merseyside.

Spreading the public health message

This can be seen in the involvement of AEDs in the public health agenda by raising the profile of prevention work within the hospital environment and developing links into the wider community.

Both the police and health agenda share a common aim in the prevention of injuries however specific objectives may be at variance in the saving of costs on police services or on treatment within the NHS respectively. Therefore primary prevention of assaults or RTAs by police may impact considerably on the work of AEDs. The TIIG Partnership provides a forum for bringing together agencies to recognise shared needs and aims.

Forward Development Strategy and Sustainability

A comprehensive Forward Development Strategy has been prepared to enable the Injury Surveillance System to be taken forward from the initial stage. The document also provides a vehicle to encourage other areas in the Northwest region to consider development of the project with this process being supported by the North West Region Accident Taskforce.

The TIIG Forward Development Strategy can be accessed via the North West Public Health Observatory Website (www.nwpho.org.uk).

TIIG is working with the North West public Health Observatory, public health networks and the North West Region Accident Task Force to promote better injury information and address the sustainability of the surveillance system. Progress will be reported to a wide audience in future bulletins.

Examples of New Approaches and documentation developed by TIIG

- AED Dataset developed from a number of sources and providing guidelines on appropriate data fields for injury prevention purposes.
- Data Sharing Agreement informed by discussion and consultation with Caldicott Guardians and IT Directors
- Expression of Interest Form for evaluation and developing a contact database
- Dissemination Protocol formulated to provide structure and safeguards

Requests to TIIG for Data

- School Nurses - School Profiling and Healthy Schools Schemes
- Public Health Specialists - Falls Prevention Strategies
- RTA Prevention Officers - Targeted campaigns
- Sure Start Co-ordinators - Programme planning, monitoring & evaluation
- Community Safety Officers - Community Safety Strategies
- Police - Monitoring licensing applications

Reports Produced by TIIG

- AED Hospital Profiles
- Use of Ambulance Data to Inform Injury Prevention
- Road Traffic Accident Data
- Collecting Ethnicity Data in AEDs
- Assault Data
- Trauma & Injury Data Collected at Alder Hey

Useful References & Websites

Accidental Injury Task Force Preventing Accidental Injury Priorities for Action (2002) Report to the Chief Medical Officer Department of Health.

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Sheperd J, Sirarajasingm V, Rivara F. - *British Medical Journal* 2000;321:1481-1482 Using injury data for violence prevention

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