

COSTS OF INJURY STRATEGY (PAPER 2):

INFORMATION FRAMEWORK

The following medium-long term output is proposed for the Costs of Injury Strategy:

A Costs of Injury Framework that allows us—as accurately as possible—to use, improve and supplement existing information on costs of injury in New Zealand in a way that meets different agencies’ policy and research needs, as well as the needs of non-government researchers and employer groups.

There is a great deal of information on costs of injury in agencies’ administrative databases as well as a range of relevant ad hoc survey and case-study information. This information could be of value to a range of agencies if it were properly amalgamated and readily accessible for day-to-day policy purposes.¹

A Costs of Injury (COI) Framework would supplement the wider injury database being developed by the injury information manager.

Statistics New Zealand is in the process of setting up a data warehouse and access systems. Agencies collecting injury data will gradually align their data sets with Statistic’s standards.²

Administrative data on costs of injury will eventually form part of this data warehouse, and it is intended that the Information Manager will regularly produce a set of key cost statistics.

A costs of injury framework, however, will need to co-exist with the injury data warehouse so agencies can identify where non-statistical information will have a bearing on their decision-making.

A COI framework will facilitate better and more consistent use of existing information across agencies, and better understanding of the shortcomings of using that information, and provide ideas (and direction) for further research.

A framework would expose information duplication and gaps, and provide a basis for identifying where agencies’ research, data collection, and system changes can usefully be extended to address these gaps.

¹ Of course, practical issues like privacy that need to be worked through.

² Statistics New Zealand is the Injury Information Manager. The Manager’s functions are set out in s289 of the IPRC Act 2001 as: (a) to develop, set, publish, and maintain standards for the [management of injury-related information] after consultation with such persons or organisations as the Manager considers appropriate (b) to collect and aggregate injury-related information (c) to facilitate access (including by publishing) to injury-related information and unit record data (d) to consider and review current and future injury-related information requirements.

The COI framework can be thought of as a ‘virtual’ database: a map of what exists and where, with instructions (or qualifications) for using it.

The table below provides a very broad outline of what could be included in the ‘virtual database’.³

		Cost categories and components					
		1. Resource (e.g. medical expenses, forgone earnings)					
		2. Human (e.g. pain and suffering)					
Injury categories							
1. Injury severity (e.g. AIS)		Type of information					
2. Injury setting (workplace, motor vehicle, sport, etc)		• \$, other #					
3. Types of injuries (diagnosis, e.g. ICD10)		• Qualitative, Quantitative					
4. Cost burden (govt, society, individuals, families, etc)		• Statistics (averages, distribution, etc)					
5. Population sub-groups affected (ethnicity, gender, age, etc)		• Actual (annual), Full (lifetime)					
6. Geo. location of injury							
		Information sources					
		Data	Models	“Guestimates”			
		Data integration	Case studies	Surveys			

Injury categories (vertical axis)

The injury categories will form the scope or width of the framework, and they refer to the specific groups of injuries that we are interested in having costs information on. They could include, by way of example only, all fatal and severe injuries, all injuries that occur in the work place, all injuries to Maori, or all injuries in the South Island.

The injury categories identified in the table above are consistent with the conceptual framework for injury data developed as part of the Injury Data Review in 2000, and being implemented by the Information Manager.⁴ Where possible, the definitions and/or coding instruments for the different injury categories will be consistent with those adopted by the Information Manager.

Agencies have different outcomes and legislative requirements that impact on their use and demand for injury costs information. Where possible, the COI Framework will facilitate aggregation (and dis-aggregation) of different cost components across different population groups, and sectors.

Cost components (horizontal axis)

The cost components will form the level or depth of the framework, and refer to the specific costs incurred (or avoided) in relation to an injury event. The following are examples of cost components: hospital treatment, emergency transport, medication, property modifications, income loss, childcare, home help, and suffering. At this stage, we are looking at costs to the injured person as well as costs to others and to property.

³ This table is based on Table 5.1 of BERL’s Review of Alternative Cost Methodologies.

⁴ New Zealand Injury Data Review April 2000 – December 2001, Department of Labour and Statistics New Zealand

At some stage, there will need to be some consensus across agencies about what injury cost components should be included in the COI Framework. This will make it transparent where any variations in injury costs agencies use reflect variations in cost accounting (i.e. the costs they choose to add together) or variations in the costs themselves (and hence of more cause for concern).

Further, there will need to be some consensus across agencies about how these injury cost components are measured. Some variation in measurement is desirable, and should be accommodated in the framework, because it reflects different policy uses for the information produced. (But, we need to be aware of the differences and cautious of merely adding them together.)

One example of this is the distinction between measuring costs incurred *ex post* (a resource approach – where we can rely heavily on administrative datasets) and measuring costs avoided *ex ante* (a willingness to pay approach – where we need to rely on carefully constructed surveys).

Type of information

The type of information we are interested in having on costs of injury could be either qualitative or quantitative. If it is quantitative, we need to consider whether we are interested in annual or lifetime costs, dollars or some other numeric measure.

The level of detail we are interested in for each cost component is also a consideration. We are not necessarily interested in unit cost information for all cost components. Average cost information may be sufficient, depending on our policy uses.

Information sources

Raw data does not exist for all injury costs components we are interested in, and may constrain our ability to generate unit cost information where this desired.

Raw data can be generated from integrating administrative and survey data, as well as from case-studies or surveys. Limited data is available from administrative databases (e.g. ACC, Land Transport Safety Authority, New Zealand Health Information Service), surveys (e.g. Value of Statistical Life, Household Labour Force Survey, Household Economic Survey, Health Survey), and case-studies (e.g. the Department of Labour and ACC's Social and Economic Consequences of Workplace Injury and Illness).

A key limitation with administrative data is that it sheds light on the resource costs to government only and ignores resource costs borne by individuals and others, as well as most human costs.

Where raw data does not exist, or cannot be generated, there is potential for creating synthetic information on costs of injury from analytical models (including micro simulation), or simply best guesses (“guestimates”).

The COI Framework will be populated in stages, over several years. It is not envisaged, however, that the Framework will ever be completely populated.

There is not sufficient need for, or return on investing in, information across all cost and injury categories, irrespective of the type and origin of information. There are also practical constraints. The COI Framework will allow us to build on information that already exists and ensure that it, along with any new information, is capable of being integrated with the injury database being developed by the Information Manager.

The Framework would allow us to identify areas not worth progressing at this stage, as well as clear priorities for areas that are. A key criteria for setting priorities will be what policy questions agencies can specifically identify that they need the information for.