Police Service of Northern Ireland

User Guide to

Police Recorded Injury Road Traffic Collision Statistics Northern Ireland

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Keeping People Safe

Northern Ireland Statistics & Research agency

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This document is intended as a User Guide to help users of the statistics form a fuller picture of the data and to help users put the data into context. Please contact us via our website if you require any further information.

Section 1

Introduction

The Police Service of Northern Ireland (PSNI) produces statistics on injury road traffic collisions (RTCs) that are reported to the Police. Damage only collisions or those collisions resulting in no injuries are excluded from these statistics. Records on road traffic fatalities and casualties are held for each year dating back to 1931 with the differentiation between slight and serious injuries having been introduced in 1971.

The statistics contained in these publications reflect the number of injury collisions and associated casualties that were reported to and recorded by the police. It is possible that some collisions or casualties were not brought to the PSNI's attention for a variety of reasons. Recent research conducted in England & Wales has identified discrepancies between casualty data recorded by police compared with that sourced from hospitals and it is assumed that the same finding may well apply to Northern Ireland. However, the PSNI is only in a position to report on those collisions and casualties that are brought to their attention and hence this report is based on police recorded injury road traffic collisions.

The type of information that is collated and reported is as follows:

- Summary of casualty figures for current year, compared with previous years
- Casualties killed or seriously injured by road user class
- The main causes of fatal and serious injuries
- Seat belt usage
- Child casualties
- Summary of collision figures for current year, compared with previous years
- Main causes of collisions
- Where do collisions occur?
- When do fatal and serious collisions occur?
- Responsibility for fatal and serious collisions
- Type of vehicle involved in injury road traffic collisions
- Single vehicle collisions
- Road and weather conditions

Key Uses of the Statistics

The purpose of collating and reporting on injury road traffic collision statistics is to provide accurate and timely management information to the PSNI to assist them with tracking trends, identifying problem areas and in developing policies related to road policing issues. Police recorded injury road traffic collision and casualty statistics are also used by a variety of organisations and individuals in the public and private sector as well as by the wider general public.

PSNI Statisticians attend the Standing Committee on Accident Statistics (SCRAS) and this gives a UK-wide focus to our work. We work closely with the Department for Transport to ensure that our work is comparable with other regions of the UK.

The Department of the Environment for Northern Ireland uses the PSNI's injury road traffic statistics to inform policy and monitor performance in relation to various road safety strategies. Similarly, the statistics are key to informing colleagues in the Department for Regional Development's Road Service in relation to identifying the location and causes of collisions so that they can assess whether a road engineering solution is required.

The statistics are also used to inform the Northern Ireland Road Safety Partnership on the need for cameras to enforce identified roads which are prone to injury RTCs due to speeding or road junctions where collisions result from drivers ignoring the mechanical traffic signals (red light running). The statistics are also widely referred to in the media and are used by those individuals or organisations with an interest in road safety.

We are regularly contacted by school and community groups with requests to provide information on road traffic collisions in their local area. We also assist academics and engineering companies with more detailed requests on collision histories for specific stretches of road or areas. Copies of the PSNI's injury road traffic collision database are placed each year in the UK Data Archive at Essex University to enable those researchers interested in being able to access the data for more detailed analysis purposes (www.data-archive.ac.uk).

Section 2

Data Sources and Collection Methods

As per the PSNI Statement of Administrative Sources included in the Statistics section of the PSNI website, information on injury road traffic collisions is collected using the organisation's own administrative and management sources. There are two main IT systems involved in collating official statistics within PSNI, namely; (i) NICHE – the PSNI's integrated IT system for recording information on occurrences, and (ii) the Command & Control system which is used to record calls for service and to ensure that the correct police response is provided. These operational systems provide administrative datasets that are analysed and reported on by the PSNI's Statistics Branch.

Much of the data collation is still reliant on paper forms being completed by police officers and then forwarded to the local police District for input onto police systems. However, increasing use is being made of technology with many police officers now using mobile data devices to record the information at the scene which is then transferred directly to PSNI systems.

As with all administrative systems, statistics are a by-product of the process and are heavily reliant on the information being entered correctly by staff across PSNI. To address this risk, Statistics Branch has developed a wide range of quality assurance measures and data validation checks to ensure that the statistics are as accurate and meaningful as possible within the given resource and time constraints. These processes are outlined in more detail in subsequent sections of this user guide.

Recent Changes to the PSNI's injury Road Traffic Collision Statistics

The PSNI introduced a new integrated occurrence management system in April 2007 which meant that the majority of police processes were recorded onto the same system. One of the main advantages of this new system was that it enabled all injury collisions reported to the PSNI to be tracked electronically from the point of initial report to the police right up to stage where the final details were collated and the collision was ready for being included in the official statistics. This more joined up approach meant that all collisions reported to the police could then be followed up to ensure that they were included in the statistics, thus improving the reliability of the recording process. As a result, a slight increase in recorded collisions and casualties was recorded at this time (2007/08) and this is most likely due to the benefits gained from the introduction of the new system during that year.

In April 2010 the causation factor 'Alcohol/ drugs' was split into two separate factors, 'Impaired by alcohol' and 'Impaired by drugs (illicit or medicinal)'. As this occurred part-way through the year, the reporting of causation factors remains unchanged in this report, with the two new factors being combined post April 2010 for ease of reporting. It should also be borne in mind that alcohol and drugs causation factors are the best estimate based on the evidence available at the time of publishing. It may be the case that additional forensic information will become available after the time of publishing. Details of all changes to the variables collated in the PSNI's injury road traffic collisions are provided on the website.

Methodology

Those injury road traffic collisions that are reported to the Police are firstly recorded on the PSNI's command & control system before transferring onto our integrated IT system (NICHE). A pre-defined national set of closing codes is used to classify all incidents that are recorded on command & control system and individual codes are available for fatal, serious and slight road traffic collisions. These closing codes are used to identify the number of injury collisions reported to the police and form the baseline for following up on each to ensure the correct information is collated and input by police in Districts.

Each stage of the process is managed by various status codes applied to the individual 'occurrences' on Niche. These describe the status of the incident and allow staff in Statistics Branch to identify at which stage in the process each collision report is at any given time. A number of internal PSNI forms (Collision Report Forms (CRFs) as outlined below) are used to capture the relevant information on each collision including one that contains a sketch of the collision location and the various vehicles/cyclists or pedestrians involved. The exact location of each injury collision is also determined and the relevant mapping coordinates recorded.

PSNI Statistics Branch staff use the Collision Report Form (CRF) to extract the detailed information collected by the police officer when an injury road collision is reported to them. The CRF reports are analysed nationally by reference to a great variety of characteristics and attendant circumstances and the results are used extensively for research work and for guidance in the improvement of road safety in relation to roads, road users, vehicles and traffic movement.

Validation Process / Quality Assurance

Detailed quality assurance checks have been developed over the years to ensure that the RTC statistics we produce are of high quality, accurate and meaningful. Each individual injury collision is checked for accuracy and completeness by staff within the PSNI's Statistics branch before being validated and becoming an official statistic. We adhere to the same national guidance for recording injury road traffic collisions as colleagues in England, Wales & Scotland and members of the branch attend regular meeting of the Standing Committee on Road Accident Statistics (SCRAS) to ensure that we keep up to date with changes in the national approach.

Our internal quality assurance and validation procedures are regularly tested, reviewed and updated. Validation checks include matching the vehicles and casualties, contributory factors to the collisions, weather and road conditions, driver alcohol test results, geographical grid references and seat belt usage.

PSNI's Collision Report Form (CRF) is based on the Department for Transport STATS19 form. This allows data to be checked and validated to an agreed set of standards. This also allows the output to be compared at a UK level.

STATS19 provides a set of established guidelines which are followed. For example, all road collisions involving human death or personal injury occurring on the public road and notified to the police within 30 days of the occurrence, and in which one or more vehicles are involved, are to be reported. This is a wider definition of road collisions than that used in Road Traffic Acts.

Examples of collisions to be reported include:

(a) collisions which commence on the public road but which involve casualties off the road (eg. Where a vehicle runs out of control while on the road and causes casualties elsewhere);
(b) collisions involving the boarding and alighting of buses or coaches and collisions in which passengers are already on board a bus / coach are injured, whether or not another vehicle or a pedestrian is involved;
(c) collisions to pedal cyclists or horse riders, where they injure themselves or a pedestrian;
(d) collisions resulting from deliberate acts of violence, but excluding casualties who are subsequently identified as confirmed suicides;

Examples of collisions which should not be reported include:

(a) collisions which do not involve personal injury;
(b) collisions on private roads or in car parks;
(c) collisions reported to the police 30 or more days after they occurred;
(d) collisions involving confirmed suicides only.

In the past the interpretation of a ‘mechanically propelled vehicle’ as specified in the Road Traffic Act 1988 (section 170) has varied widely between police forces, particularly about whether pedal cycle collisions, not involving a motor vehicle, should be reported. The CRF requirement is clear that all collisions involving non-motor vehicles such as pedal cycles and ridden on ‘public roads’ should be reported, regardless of motor vehicle or pedestrian involvement.

Complete vehicle details, regardless of whether the vehicle was damaged or not, are required for each vehicle which was involved in, or contributed to, an injury collision. This includes pedal cycles, ridden horses and horse-drawn vehicles.

The ‘contributory factors’ in a road collisions are the key actions and failures that led directly to the actual impact. They show why the collision occurred and give clues about how it may have been prevented. The ‘contributory factors’ reflect the Police Officer’s opinion at the time of reporting and are not necessarily the result of extensive investigation. Furthermore it is recognised that subsequent enquiries could lead to the reporting officer changing his opinion, this is not a problem.

The CRF document is continually updated and variables are added or excluded regularly after user consultation. More police forces are also moving towards capturing this information on mobile devices.

Variables

There are a number of variables that are available for this data set, some of which are outlined below. This allows manipulation of the data to provide the vast array of tables and explanation of factors. This also allows us to analyse the factors attributing to a collision such as the time of day and the weather. For further explanation of these variables or to access the data set itself, please visit the UK Data Archive at www.data-archive.ac.uk

Year of Collision
Policing Area
Collision Severity
Number of Vehicles
Number of Casualties
Weekday of Collision
Time of Day of Collision
Carriageway Type
Speed Limit
Junction Detail
Weather Conditions
Road Surface Conditions
Vehicle Data
Casualty Data

Definitions

The differentiation of a slight casualty from a serious casualty is not always a straightforward decision, especially for the more 'minor' serious injury types. It should be remembered that the collision and casualty information is collected by operational police officers whose main priority at the scene of the collision is to assist the injured, prevent other collisions from occurring and to gather evidence for a prosecution if any offence has been committed. As a result, there may be a small proportion of collisions that are incorrectly classified.

Collisions: Collisions involving personal injury occurring on the public highway (including footpaths) in which a vehicle is involved. Collisions are categorised as either 'Fatal', 'Serious' or 'Slight' according to the most severely injured casualty.

Killed: Died within 30 days from injuries received in a collision

Serious Injury: An injury for which a person is detained in hospital as an 'in-patient', or any of the following injuries whether or not the person is detained in hospital: fractures, concussion, internal injuries, crushing's, burns, severe cuts and lacerations or severe general shock requiring medical treatment.

Slight Injury: An injury of a minor character such as a sprain, bruise or cut not judged to be severe, or slight shock requiring roadside attention.

Casualty: A person who sustains a slight, serious or fatal injury.

Children: Persons under 16 years of age

Vehicles Involved: Vehicles whose occupants are injured, vehicles suffering damage, vehicles that contribute to the collision, and horses being ridden at the time of the collision. Vehicles that collide after the initial impact causing injury are not included unless they aggravate the degree of injury or lead to further casualties.

Drivers of motor vehicles: Drivers of hackneys, cars, motor caravans, LGVs, HGVs, cars used as taxis, minibuses and buses

Motorcyclists: Drivers/riders of mopeds and motorcycles. Includes riders of two-wheeled motor vehicles, motorcycle combinations, scooters and mopeds.

Pedal cyclists: Drivers/riders of pedal cycles. Includes children riding toy cycles on the carriageway and the first rider of a tandem.

Passengers: Occupants of vehicles other than the driver or rider. Passengers of hackneys, cars, motor caravans, LGVs, HGVs, cars used as taxis, minibuses, buses and pedal cycles

Pillion passengers: Passenger on a moped or motorcycle

Other road users: Drivers and passengers of invalid/3 wheelers, tractors, ridden horses, other motor vehicles and other non motor vehicles.

Pedestrians: Include:

- Children on scooters, roller skates or skateboards;
- Children riding toy cycles on the footpath;
- Persons pushing bicycles or other vehicles or operating pedestrian controlled vehicles;
- Persons leading or herding animals;
- Occupants of prams or wheelchairs;
- People who alight safely from vehicles and are subsequently injured;
- Persons pushing or pulling a vehicle;
- Persons other than cyclists holding on to the back of a moving vehicle.

FYTD: Financial Year to date. Figures can be reported on a financial year from April to March.

PFYTD: Previous Financial Year to date. Figures can be compared to the previous financial year period, from April to March.

Strengths and Limitations of the data

Strengths

The purpose of collating and reporting on injury road traffic collisions is to provide accurate and timely management information to the PSNI to assist them with tracking trends, identifying problem areas and in developing policies related to road policing issues. Police recorded injury road traffic collision and casualty statistics are used by a variety of organisations and individuals in the public and private sector as well as by the wider general public.

PSNI Statisticians attend the Standing Committee on Accident Statistics (SCRAS) and this gives a UK-wide focus to our work. We work closely with the Department for Transport to ensure that our work is comparable with other regions of the UK.

The Department of the Environment for Northern Ireland uses the PSNI's injury road traffic statistics to inform policy and monitor performance in relation to various road safety strategies. Similarly, the statistics are key to informing colleagues in the Department for Regional Development's Road Service in relation to identifying the location and causes of collisions so that they can assess whether a road engineering solution is required.

The statistics are also used to inform the Northern Ireland Road Safety Partnership on the need for cameras to enforce identified roads which are prone to injury RTC's due to speeding or road junctions where collisions result from drivers ignoring the mechanical traffic signals (red light running). The statistics are widely referred to in the media and are used by those individuals or organisations with an interest in road safety.

Limitations

One of the main limitations of police recorded injury road traffic collision statistics is the extent to which they represent the true level of injury road traffic collisions and casualties that occur within the UK. Extensive research has been conducted within GB in order to get an estimate of the level of this under-reporting. The research has generally focused on 2 sources of comparable information, (i) hospital admissions data[1] and (ii) survey data from The National Travel Survey[2].

[1] Police Road Casualties in Great Britain: 2010 Annual Report.: Hospital Admissions data on Road Casualties. Department for Transport http://assets.dft.gov.uk/statistics/releases/road-accidents-and-safety-annual-report-2010/rrcgb2010-06.pdf

[2] Police Road Casualties in Great Britain: 2010 Annual Report. Survey Data on Road Accidents. Department for Transport http://assets.dft.gov.uk/statistics/releases/road-accidents-and-safety-annual-report-2010/rrcgb2010-05.pdf

While both comparisons would indicate that police recorded injury collision statistics are less complete than other sources, there are many reasons why this may be the case. For example, the police recorded statistics only relate to collisions that take place on the public roads and exclude collisions that occur on private land or public parks etc. Similarly, persons injured in certain types of collisions may be less likely to report these to the police. For example casualties resulting from collisions where no motor vehicle is involved (cyclists falling off their bikes or colliding with pedestrians).

In Northern Ireland, police recorded serious injury collision casualties over the 3 year period 2009/10 -2011/12 equate to around 65%-69% of the comparable figures on road casualties obtained from hospital admission statistics over the same period. The Northern Ireland Travel Survey has only recently been modified to include the relevant road collision questions and therefore comparable information is not yet available.

National Statistics

The UK Statistics Authority is an independent body established in 2008. It has a statutory role to scrutinise (through monitoring & assessment) all UK official statistics.

Statisticians from the Northern Ireland Statistics & Research Agency (NISRA) are seconded to the PSNI and oversee the collation and reporting of the injury road traffic collision statistics.

The UK Statistics Authority has designated the PSNI's injury road traffic collision statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. Designation can be broadly interpreted to mean that the statistics:

- **meet identified user needs;**
- **are well explained and readily accessible;**
- **are produced according to sound methods; and**
- **are managed impartially and objectively in the public interest.**

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

More information about the UK Statistics Authority, the Code of Practice for Official Statistics and assessment can be found on their website at www.statisticsauthority.gov.uk

Confidentiality

The PSNI's Statistics Branch complies with the requirements of the Code of Practice for Official Statistics in relation to Principle 5: Confidentiality. A Confidentiality Protection Arrangements document is available on the statistics section of the PSNI website. It outlines the arrangements for maintaining confidentiality of statistical data and covers:

- Physical Security
- Technical Security
- Staff Training
- Statistical Disclosure Control
- Sharing of data with a third party

Disclosure control has been applied to some tables in line with the requirements of the Code of Practice for Official Statistics. Where this applies cells have been merged or suppressed in order to ensure that the identity of individuals or any private information relating to them is not revealed.

Comparability within UK, ROI and Internationally

Promoting comparability is an important requirement of the Code of Practice for Official Statistics which aids interpretation for the users of the injury road traffic collision statistics. Obviously, comparisons within the UK are the most valid as the PSNI adopts the same national approach to the recording on injury road traffic collisions as all the other regions of the UK. Where possible, we will provide the most recent comparisons within the reports and bulletins that we publish. More general comparisons are listed below and provide useful comparative sources of injury road traffic collisions.

Transport Statistics Scotland
http://www.scotland.gov.uk/Topics/Statistics/Browse/Transport-Travel

Transport Statistics Wales
http://wales.gov.uk/topics/statistics/headlines/trans2009/hdw20091110/?lang=en

Department for Transport
http://www.dft.gov.uk/statistics/series/road-accidents-and-safety/

Traffic Statistics Ireland
http://www.garda.ie/Controller.aspx?Page=138

Road Safety Authority – ROI
http://www.rsa.ie/en/RSA/Road-Safety/Our-Research/

European Commission Road Safety
http://ec.europa.eu/transport/road_safety/index_en.htm

Traffic Statistics USA
http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/stsi/usa%20web%20report.htm

Further Research

One of the main areas of research in recent years has been in attempting to reconcile police recorded injury road traffic collision statistics with those collated by hospitals. A number of different research studies have been conducted in this area in recent years (see links below) and both the police and hospital datasets each have their own strengths and weaknesses. Most of the research relates to England, Wales & Scotland and it is assumed that the same findings would apply in Northern Ireland. As such, any interpretation of injury road traffic collision statistics should not be based on police recording injury road traffic collisions/casualties data alone. Other sources of statistics on road traffic collision statistics should also be considered.

Relevant research

1) Road Safety Research Report 69: Under reporting of Road Casualties Phase 1: a research report commissioned by the Dept of Transport in England & Wales, H Ward et al. April 2006

2) Department for Transport : Accident Statistics Reporting

3) BMJ Research: Changes in safety on England's roads: Analysis of hospital statistics

4) Science Direct Article: Using multiple datasets to understand trends in serious road traffic casualties (Note: Users may need to register for this website)

5) Linking STATS19 and Scottish Hospital In-Patient data for the SafetyNet project

Section 3

Publication Process and Methods

Police recorded Injury Road Traffic Collision statistics for Northern Ireland are published on the Police Service of Northern Ireland website under the Statistics section http://www.psni.police.uk/index/updates/updates_statistics/updates_road_traffic_statistics.htm

Within a given financial year, in-year injury road traffic collision statistics are updated a number of times whenever they are complete enough to provide reliable and meaningful information. These in-year statistical updates are provisional and any subsequent in-year publications will contain revised figures for those months already published.

The final figures for the reporting period (financial year) are published in early/mid May each year with the publication date pre-announced in line with the PSNI's publication scheme. These final year figures cover headline findings for both the financial and calendar year period and are contained in a Key Statistics bulletin that has been developed in response to user needs.

A detailed Annual Report covering information for the previous calendar year is released in the following Autumn each year. This publication gives more detailed information about all of the police recorded injury road traffic collisions including detailed analyses of the casualty and collision types as well as key causation factors.

The PSNI website contains a range of publications of interest to persons who want information on police recorded injury road traffic collisions.

i) Daily road traffic fatality report (lists the number of road deaths per calendar and financial year and is updated each working day with comparisons with the previous 2 years)
http://www.psni.police.uk/daily_fatal.xls

ii) Regular in-year injury road traffic collision reports are made available whenever the statistics are complete enough to provide meaningful information (an accompanying Excel spreadsheet is also made available)
http://www.psni.police.uk/rtc_monthly_update_november_2012.pdf

iii) The full statistics for the last financial year are also available (2011/12)
http://www.psni.police.uk/annual_report_police_recorded_traffic_collisions_2011.12.pdf

iv). A detailed report relating to the last calendar year period is available (2011) along with an accompanying Excel spreadsheet
http://www.psni.police.uk/2011_annual_report.pdf

v). Older reports can be accessed from the archive section on the website
http://www.psni.police.uk/directory/updates/updates_statistics/updates_road_traffic_statistics/updates_road_traffic_statisyics_archive.htm

Publication Schedule

In line with National Statistics guidelines our publication dates are pre-announced and are available on our website under Publication Schedule.

Section 4

User Consultation : Feedback and Actions

User consultation is an important aspect of our work. It informs our work schedules and statistical planning process. Our Customer Service and Engagement Statement is available on our website and highlights our aims and standards for dealing with key users and requests from members of the public.

Following a recent consultation exercise, it was decided that the calendar year annual report would be available as a web only document. As a result, printed and bound hard copies of the report will no longer be made available.

Minutes of meetings in the user consultation process are published on our website in summary form.

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Addressing Feedback from Users

We are always considering improvements to our publications and seek feedback from our consultations with users as to what changes would best meet their needs. We also monitor the reports produced by colleagues in other regions and countries to see if aspects of their reports would add value to our outputs. The most recent change that we have adopted following consultation is to review the age bands categories that are provided in our publications to see if they can be made more comparable with those in other parts of the UK. We are also looking at the methodology used by the Department for Transport to provide approximate costs associated with fatal and serious collisions.

Users will be fully consulted about any potential changes before they are introduced.

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