

Chapter 17

Assessing the classification of work-relatedness of fatal incidents by different countries: a comparison between Australia, New Zealand and the United States

17.1 INTRODUCTION

When studying work-related injury or disease, it is important to consider the definitions to be used. The definition of “working” and “work-related” can seem synonymous and straightforward. However, there are many different arrangements in which people derive benefit from activities, and many situations that expose them or others to associated health and safety hazards. Work-related injuries and illnesses can occur away from a formal workplace, and some incidents that occur at a workplace may not be considered to be related to work. This variety of arrangements and situations that can be seen as encompassing work or as being related to work can lead to different interpretations and definitions of “working” and “work-relatedness”. In addition, there can be subtle differences in the way the same definitions are applied. Examples of situations that may lead to different interpretations include persons receiving non-monetary “compensation” for jobs; children “working” in a family-owned business such as a corner store or farm; fringe “jobs” such as collecting discarded cans to sell; social functions sponsored by an employer; volunteers; “bystanders”; and people performing “domestic” duties⁹². (The definitions of “injury” and “disease” can also differ³¹⁰, but these are not the main focus of this analysis.)

The definitions of “working” and “work-related” have practical importance in a number of situations. They are particularly important when interpreting or comparing results from different studies. For example, when considering work-related injury, the

application of different definitions, or the differing application of the same definitions, will result in the differential inclusion and exclusion of people injured in the same types of incidents. This has led to the development of several approaches designed to better understand and standardise the coding and reporting of disorders related to work, such as Eurostat³¹¹, the International Conferences of Labour Statisticians³¹², the International Classification for External Causes of Injury [World Health Organization (WHO)]³¹³ and the International Statistical Classification of Diseases and Related Health Problems, tenth revision (ICD-10)³⁰⁹. If comparisons are to be as valid as possible, it is essential to understand how the case definitions and their application differ.

This Chapter describes a comparison of the classification of work-relatedness by research groups in three countries – the Australia, New Zealand and the United States – using the same scenarios developed for use in the Australian study. This was conducted as part of a broader study comparing the number, rate and circumstances of work-related fatalities of workers in the three countries. For the broader comparison, the study team used the various explicit inclusion and exclusion criteria of the data collections in the three countries --to produce a common definition of “work-relatedness”. Essentially, this meant using the inclusion criteria of the data collection with the narrowest definitions²³².

The aim of the comparison presented here was to identify similarities and differences in the understanding of what was meant by work-relatedness in the three involved countries, and to highlight circumstances in which the classification varied. This information could then be used to clarify the definitions of work-relatedness used in the overall comparison study, and more generally in other studies of work-related injury and disease.

17.2 METHODS

Groups from three countries – United States, New Zealand and Australia – were involved in the current analysis, which developed as part of larger study comparing the work-related fatalities of workers in the three countries. For the larger study, the Australian and New Zealand groups obtained their data on work-related fatalities primarily from coronial records as part of one-time studies of work-related fatalities in their countries^{67, 314}. The United States' data came from their on-going surveillance of work-related fatalities using death certificate information⁵³. The analysis presented here involved an assessment of the similarities and differences between the three groups in identifying fatal incidents as work-related. The basic definitions for the New Zealand and United States studies are shown at the end of this Chapter.

The same 333 brief scenarios described in Chapter 14 were used for this comparison. However, for this analysis, all 333 scenarios were coded at the same time, and the coding approach was slightly different. The scenarios, randomly sorted, were coded by one or two researchers from each country for this analysis. The categories used were:

- 1 Worker
- 2 Bystander
- 3 Commuter
- 4 Volunteer
- 5 Student
- 6 Suicide
- 7 Other category included in the country's data set
- 9 Unknown
- 0 Not work-related (ie not in any of the above categories)

For each scenario, three decisions were required and three codes were recorded. The first decision required the coder to choose the most appropriate category (from those shown above) to which the scenario should be assigned. If a scenario equally satisfied more than one category, coders were instructed to choose the higher category on the list (ie, the one with the smallest number). The second decision concerned the coder's certainty that, on the basis of the information provided, the scenario belonged in that category (coded as "definite" or "indeterminate"). Finally, the coders indicated whether the type of incident described in the scenario would have been included in their country's data set (ie in the research team data sets in Australia and New Zealand, and the death certificate-based centralized system in the United States) of work-related deaths (coded as "definitely", "definitely not" or "indeterminate"). "Unknown" and "Indeterminate" (regarding the category selection) covered different aspects of the coding process. The "Unknown" choice in the first decision was used when the coder could not decide which specific category was the most appropriate. The second decision indicated the perceived strength of the evidence on which the first decision was based, and the "Indeterminate" choice indicated that the evidence was not strong or was ambiguous.

During the data collection and coding for each country, there were usually multiple coders involved in assigning cases as work-related or not. This posed difficulties in deciding who the most appropriate representatives of each country were for inclusion in the comparison of coding. In New Zealand and Australia, the original study teams (of which the coders were members) were small and worked closely together, so any of the coders could be expected to apply the definitions in a similar manner to all the members of their respective study team. The situation was different for the United States, in which the coding came from death certificates for which the "at work" information is

completed by the decedents' funeral directors. Thus coding in the United States is usually completed by hundreds of different people in different places at different times. Since it was not possible to identify and include a representative group of these coders for this analysis, it was decided to use the researchers who maintain the surveillance program. These researchers were familiar with the definitions used in the United States and the instructions for coding "at work" on the death certificate. The final choice of participants was based on these factors and the availability of suitable personnel.

Two persons from New Zealand participated, each coding about half the scenarios. The author coded all scenarios from Australia. The scenarios were also independently coded by two other members of the Australian study team, each of whom coded about half the scenarios. Any discrepancies with the author's codes were discussed and the author's assigned code changed where appropriate. The coding from the United States was done independently by two researchers, who compared their coding and agreed on a final code if there was initial variation between them.

The results presented here focus on the classification of deaths as involving workers or not. They include the level of agreement obtained, expressed as the percentage of all scenarios which were classified the same by all three countries, and the associated overall, and category-specific, Kappa scores as a standardised measure of agreement³¹⁵. All Kappa scores were un-weighted. For the main analysis of the *Worker* category, the categories were collapsed into three – *working* (those classified to category 1), *not working* (those classified to any other category except 9), and *unknown if working* (those classified to category 9), regardless of degree of certainty. At the time of coding, the coders were not asked to indicate which categories were being considered when a scenario was coded as *unknown*. This information would have been useful for category

specific analyses, in order to determine whether the difficulty in making the classification was related to the category of interest. For example, a scenario coded initially as *unknown* because there was insufficient information to determine whether the circumstances described a bystander or a student, would probably have been classified as *not working* if the choice was only between workers and non-workers. However, such an indication **was** made by Australia. Therefore, when codes were collapsed into three categories, those scenarios initially coded as *unknown* by Australia were re-classified as *unknown* or *not working*, depending on the categories under consideration by Australia when the initial coding of *unknown* was made. As the required information was not known for the United States and New Zealand, their codes of *unknown* were not changed.

17.3 RESULTS

The overall assigning of cases to most groups was similar for the three countries. The main differences were that the United States had a lower proportion in the *Bystander* and *Volunteer* categories, and a higher proportion in the *Not work-related* category, compared with the other countries. The confidence with which the assignments were made was very similar between the three countries, with each country identifying about 85% as being assigned definitely in the assigned category (Table 17.1).

The agreement in overall classification was similar between the pairs of countries (Australia-United States: 72%; Australia-New Zealand: 77%; New Zealand-United States: 70%). Overall, 208 (62%) of the scenarios were given exactly the same classification by all three countries, and only 18 (5%) were classified differently by all three countries. However, for some categories, there was considerable disagreement between the classification of scenarios (Table 17.2).

**Table 17.1 Overall classification of scenarios by country
Number and percent (n=333)**

Category	Australia		New Zealand		United States	
	n	(%)	n	(%)	n	(%)
Worker	82	(25)	73	(22)	77	(23)
Bystander	52	(16)	57	(17)	36	(11)
Commuter	22	(7)	16	(5)	16	(5)
Volunteer	25	(8)	22	(7)	13	(4)
Student	21	(6)	17	(5)	18	(5)
Suicide	6	(2)	6	(2)	6	(2)
Unknown	29	(9)	29	(9)	24	(7)
Not work-related	96	(29)	113	(34)	143	(43)
Total	333	(100)	333	(100)	333	(100)
Confident classification ¹	280	(84)	283	(85)	284	(85)

1: Scenarios identified as “definitely” in the chosen category.

**Table 17.2 Category specific agreement between countries¹
Number and percent²**

Category	Complete agreement ³		Two countries agreed ⁴		One Country ⁵		Total ⁶	
	n	(%)	n	(%)	n	(%)	n	(%)
Worker	62	(68)	17	(19)	12	(13)	91	(100)
Bystander	23	(30)	22	(29)	32	(42)	77	(100)
Commuter	11	(38)	3	(10)	15	(52)	29	(100)
Volunteer	10	(39)	14	(54)	2	(8)	26	(100)
Student	12	(48)	7	(28)	6	(24)	25	(100)
Suicide	6	(100)	0	(-)	0	(-)	6	(100)
Unknown	5	(10)	9	(17)	38	(73)	52	(100)
Not work-related	53	(32)	50	(30)	62	(38)	165	(100)
Overall⁷	208	(62)	107	(32)	18	(5)	333	(100)

- 1: For each comparison, the cases were classified as in the category, in another the category, or unknown which category.
- 2: Percent based on total cases coded in the category by at least one country.
- 3: Cases that all three countries coded the same.
- 4: Cases that two of the three countries coded in the category.
- 5: Cases that two of the three countries coded in a different category.
- 6: Total number of cases that were coded in the category by at least one country.
- 7: Overall agreement for all categories.

17.3.1 WORKING

The main comparison of interest was for the classification of cases as working.

Grouping all 333 cases into three categories (*Working*, *Not Working*, and *Unknown*), the classifications were compared between countries. The overall agreement was very good and similar between pairs of countries and among all three countries at once (Table 17.3).

Table 17.3 Overall agreement between countries classifying cases as working, not working and unknown – percent and Kappa values (n=333)

Comparison	Agreement (percent)	Kappa
Australia – United States	90	0.77
Australia – New Zealand	86	0.70
United States – New Zealand	83	0.63
Overall	80	0.71

For the 91 scenarios identified as *Working* by at least one country, there was complete agreement for 68% and agreement in the *Working* classification between at least two countries in 87%. Of the 258 scenarios identified as *Not Working* by at least one country, there was complete agreement for 78%. However, the agreement for the 52 cases identified as *Unknown* by at least one country was much lower, with complete agreement in only 10%. The difference in agreement between the three categories was reflected in the Kappa values, with high Kappas for *Working* and *Not Working* and a lower Kappa for *Unknown* (Table 17.4).

**Table 17.4 Category-specific agreement between countries classifying cases as working, not working or unknown
Number, percent¹ and Kappa values**

Category	Complete agreement ²		One different ³		Two different ⁴		Total ⁵		Kappa
	n	(%)	n	(%)	n	(%)	n	(%)	
Working by at least one country	62	(68)	17	(19)	12	(13)	91	(100)	0.84
Not working by at least one country	200	(78)	38	(15)	20	(8)	258	(100)	0.73
Unknown by at least one country	5	(10)	9	(17)	38	(73)	52	(100)	0.46
Overall⁶	267	(80)	6	(19)	2	(1)	333	(100)	0.71

1: Percent based on total cases coded in the category by at least one country.

2: Cases that all three countries coded the same.

3: Cases that two of the three countries coded in the category.

4: Cases that two of the three countries coded in a different category.

5: Total number of cases that were coded in the category by at least one country.

6: Overall agreement classifying the countries as working, not working or unknown if working.

The scenarios were examined to see which of the described circumstances appeared more difficult to classify clearly as work-related deaths of workers or not. For most types of circumstances, there was little variation in classification of scenarios. This was true for incidents that occurred in fixed workplaces, domestic settings, on the road or in other public places, and whether they involved children or adults. However, there were some common themes in the scenarios where the coding of work-related deaths of workers varied. The main themes were:

- Instances of domestic violence that occurred in the workplace of the fatally injured person were considered to be work-related by the United States and New Zealand, but were coded as not being work-related by Australia. Examples of relevant scenarios were:
 - ‘A public servant engaged in a torrid affair at work is shot in her office by her jealous husband.’; and
 - ‘A man is brutally murdered by his wife because, she says, he spends too much time at his computer working on his “damned Work-Related Fatalities Study”.’.

- Persons fatally injured on business trips were coded as *working* by Australia regardless of the activity at the time of injury, but either as *working*, *commuting* or *not work-related* by the United States and New Zealand, depending on the specific circumstances described. An example of relevant scenarios was:
 - ‘A business executive is murdered walking back from a restaurant to her hotel during an interstate business trip.’
- Social functions on work-premises, or held elsewhere but sponsored by the employer, were coded as *working* by Australia, whereas the United States and New Zealand tended to code them as *working* if they occurred at the workplace, and *not work-related* if they occurred elsewhere. An example of relevant scenarios was:
 - ‘A man dies when he falls from a balcony during the office Christmas party.’
- There was variation between the three countries regarding which circumstances in farm incidents were classified as working. These included the involvement of hobby farmers and of casual fruit pickers, who were more often considered to have been working by Australia, and persons hunting on farms (with no other information), who were more often considered to have been working by New Zealand, to have been coded as *unknown* by Australia and to have been coded as *not work-related* by the United States. Examples of relevant scenarios were:
 - ‘A doctor dies in a tractor rollover incident whilst working on his hobby farm.’;
 - ‘A backpacker from Sweden dies whilst picking fruit for casual wages when he falls from a ladder and strikes his head on a tree stump.’; and
 - ‘A man hunting rabbits on a farm trips whilst jumping over a log and accidentally shoots himself. He dies three weeks later as a result of the wound.’
- Persons involved in motor vehicle incidents tended to be coded as *not work-related* by the United States and New Zealand unless there was definitive

evidence to suggest that the person was working, whereas Australia tended to code these scenarios as *unknown* unless there was specific evidence that the person was, or was not, working at the time. An example of relevant scenarios was:

- *'The single occupant in a motor vehicle is killed when the car runs off the road and strikes a tree. No other information is known.'*

- There was variation between countries in terms of distinguishing between volunteer work and paid work. Volunteer fire fighters were classified as *working* by the United States, but were included with the other volunteer workers by New Zealand and Australia. Examples of relevant scenarios were:
 - *'A volunteer fireman dies when struck on the head by a falling branch while he mops up after a bushfire.'*
 - *'Country volunteer firefighters are trapped when a fire changes direction. Two are killed as they huddle in their truck.'*

17.3.2 BYSTANDERS

There was considerable variation in the classification of scenarios as *bystander deaths*. Of the 77 scenarios classified by at least one country as involving a bystander, only 23 (29.9%) were classified as *bystanders* by all three countries, and 45 (58.4%) were classified as *bystanders* by at least two of the three countries. The common themes in the scenarios where the coding of bystanders varied were:

- motor vehicle incidents

Scenarios describing motor vehicle incidents where a vehicle being driven by a non-worker or commuter (the fatally injured person) collided with a working vehicle (eg a semi-trailer or bus) tended to be coded as bystander events by the United States and New Zealand, but as *unknown* (or to another relevant category such as *commuting*) by Australia. This difference probably reflects the Australian approach of distinguishing between motor vehicle crashes where the

working vehicle was “at fault” (ie, was primarily responsible for the incident occurring – these events were classed as bystander events) and those where the working vehicle was not “at fault” (which were not classed as bystander events). Those scenarios that did not state or imply which vehicle was at fault therefore tended to be coded as *unknown* or to another category.

- farms

Fatal incidents in which people died as a result of contact with farm equipment or structures were coded as bystander events by Australia, but were commonly coded as not work-related by the United States and New Zealand unless there was working activity described as occurring at the time. Common examples were drowning in a farm dam, becoming entangled in a farm fence, and being run over by farm equipment being used for leisure, such as during a joy-ride on a tractor.

17.3.3 COMMUTING

The main variation with the coding of commuters appeared to arise from the different approaches taken to coding bystanders, as described above. Of the 29 scenarios classified by at least one country as involving a commuter, only 14 (48.3%) were classified as *Commuter* by at least two of the three countries. The main apparent cause of the variation in classification of commuting scenarios was with those that described people driving to or from work, who were involved in a motor vehicle incident with a working vehicle, but where the “fault” for the incident was not clear. These tended to be coded as bystander events by the United States and New Zealand (on the basis that the scenarios satisfied their bystander and commuter definitions, and using the rule of coding to the higher category if more than one was equally appropriate), but as commuting events by Australia (on the basis that the scenarios definitely satisfied the commuter definition but only possibly satisfied the bystander definition).

Another apparent cause of difference was in the significance placed on a break in the travel to or from work. Short breaks were accepted by all countries. Longer breaks (such as shopping) tended to result in the scenario being excluded by Australia but not by the United States or New Zealand.

17.3.4 VOLUNTEERS

There was good agreement in the classification of volunteers between Australia and New Zealand, but far fewer scenarios classified by the United States as involving volunteers. Of the 26 scenarios classified by at least one country as involving a volunteer, 24 (92.3%) were classified as volunteers by at least two of the three countries, but only 10 (41.7%) were classified as volunteers by all three countries. The differences with the United States' approach included classification of volunteer fire fighters as workers (as mentioned above), and a tendency to only classify scenarios as involving volunteers if the scenarios described a very formal relationship between the injured person and the volunteer organisation. This was due to the United States' case definition including volunteer fire fighters and law enforcement officers as workers.

17.3.5 STUDENTS

Agreement regarding which scenarios described fatal injury of students was reasonable. Of the 25 scenarios classified by at least one country as involving a student, 19 (76.0%) were classified as students by at least two of the three countries. The main types of scenarios which resulted in variation in coding described events which could also be seen as bystander events, scenarios in which the formality of the student's status was uncertain, or scenarios in which the student activity might not have been viewed as being connected to their student status.

17.3.6 SUICIDE

There was complete agreement as to which scenarios did, or did not, describe suicide.

The extent to which these suicides were related to work was not explored in this analysis. This category was included because the United States data include suicides “at work.”

17.3.7 UNKNOWN

There was poor agreement between classification of scenarios as unknown, probably reflecting the different level of certainty required by countries before they were prepared to make a specific classification.

17.3.8 NONE OF THE ABOVE

There was only moderate agreement in classification of scenarios as not being in any of the other categories, with the United States, and to a lesser extent New Zealand, probably applying narrower definitions to the various categories than Australia.

17.4 DISCUSSION

The comparison presented here was primarily designed to better understand differences in what is meant by “working” and “work-related” in terms of the recording of fatal injury in three developed countries, as part of a larger comparison study of work-related deaths which occurred in the countries. Note that this comparison is actually between research teams in Australia and New Zealand and representatives of the United States official centralised recording system. This is because Australia and New Zealand do not have official definitions of work-relatedness, nor centralised recording systems for work-related deaths. No common definitions were used prior to the data collection in the respective countries, so the results reflect the way the coders in each country applied

their own definitions, rather than the ability of coders in each country to apply the same definitions. Differences in classification between these national data sets can therefore be due to variations between countries in both the definitions used and their application. The coders from Australia and New Zealand who took part in the comparison were members of small study teams and were likely to be representative of all the coders involved in the two countries' studies. The situation is less clear for the United States, where hundreds of people were potentially involved in coding, and there was no way to easily identify a representative sample of them. Nevertheless, the researchers who were included were very familiar with the coding rules and, in broad terms, with the way they are applied in the field.

Considering this, there was a high level of agreement in this analysis between the coding of working status (whether the person was working or not), with complete agreement between the three countries for 80% of all the scenarios. Also, of the scenarios classified as work-related deaths of workers by at least one country, 87% had at least one other country making the same classification. There was also reasonable agreement as to whether the scenarios involved students, volunteers or suicides, but only moderate agreement for classifying bystanders and commuters. The overall study, from which this analysis arose, included only "workers", and used common general inclusion and exclusion criteria for the data sets from the three countries involved, in an attempt to make the information from them as comparable as possible. Such comparisons are still heavily reliant on each country's application of its own definition of working. The results presented here suggest that the definitions, and their application, are similar in the involved countries.

A number of characteristics of potentially work-related incidents that can cause classification difficulties were also identified. Domestic violence incidents at work, volunteer workers, business trips, social functions connected to work, hobby farmers and some possible bystander incidents which occurred on farms or on the roads were areas where coding was most variable between the three countries. Each of these areas has an overlap between an individual's roles and responsibilities as a worker and as a private citizen. Each also contains uncertainty regarding where the responsibilities of the employer stop. The disparity between countries in coding some of the categories stems from differences in coding practices and in different interpretations of the extent of responsibility of the employer. For example, in the United States' definition, bystanders, commuters, and farm non-work are all considered "not work related" and are not separately distinguished. Thus, coders are unaccustomed to recognizing or coding such cases into independent classes. When the coding was collapsed to "working" (the common case definition used in the collaborative comparison) versus all other categories, the agreement between countries was acceptable.

There was also variation in the level of certainty of information required by the coders to make a definitive choice for individual scenarios, although the overall proportion of scenarios being "Definitely" assigned to a category was similar in each country. This is likely to be partly the result of the scenarios presented, which were brief and therefore didn't contain information on every possible contingency, reflecting the kind of information typically recorded on death certificates and other public health data. The instructions to coders, which suggested not requiring too high a level of information to make a definitive classification, may also have caused some variation. However, in the occupational (and broader public health) setting, information on incidents that result in injury is often brief or incomplete, particularly on death certificates. Also, short

narratives are increasingly advocated as an important component of recording information on injurious incidents (whether work-related or not) that are recorded in settings such as emergency departments. Therefore, it is important to establish the level of detail required by a coder before a definitive classification is made.

These two key findings – variation in the understanding of what is and what is not work-related, and variation in the amount or type of information required to make a definitive classification – highlight the need for definitions which are as clear and unambiguous as possible. Fortunately, the high level of agreement obtained in this analysis for most scenarios describing fatal injuries to persons whilst working, even without the use of standard definitions, suggests that comparisons between the datasets of the countries involved in this analysis can be made with confidence.

However, it should be noted that this analysis only examined the approach taken by the three countries to classifying brief scenarios. The New Zealand and Australia data from their overall studies were obtained from coronial records, so classification was based on information of widely varying detail and quality, but nearly always of more depth than provided by the scenarios used for this analysis. The United States' data, which generally were much less detailed, were obtained from death certificates. The sensitivity and specificity of classification of work-relatedness using these differing data sources is not known. Therefore, this analysis provides a good understanding of how the three countries classify potentially work-related circumstances based on the same information, but only an indirect understanding of how the classification is made in real life. Results also show that, even with the same general inclusion and exclusion criteria, some differences in coding of similar circumstances can be expected. This emphasises the importance of minimising ambiguity in the definitions used, and of attempting to

understand the manner in which the definitions are applied, when comparing data from different sources. Standardised coding schemes, such as ICD-10³⁰⁹ and ICECI³¹³, and attempts to better understand, and to minimize, the differences between coding approaches, such as those undertaken by Eurostat³¹¹ and the International Conferences of Labour Statisticians³¹², are important in this regard. Also, it is important not to assume that all persons will code in the same manner even if they do use the same coding scheme. In some situations, it is necessary to use the lowest common denominator, and thus to exclude certain groups of cases, in order to produce data sets with acceptably similar inclusion criteria.

17.5 CONCLUSION

In summary, this analysis has shown that Australia, New Zealand and the United States have a similar understanding of what constitutes work and work-relatedness, and that valid comparisons of work-related death data that were collected using different definitions or philosophies are possible when the data sets can be modified on the basis of common inclusion criteria.

Work-related definitions used in the New Zealand and United States studies.

NEW ZEALAND

(Taken from Feyer et al, 1999⁶⁸.)

The definition of work-relatedness in the work-related fatal injuries study encompassed all deaths that occurred:

- unintentionally, or due to homicide;
- when people were working for pay, profit or payment-in-kind, including for example unpaid family assisting with a family business;
- when people were assisting as with work activity in an unpaid capacity as official volunteers or students;
- away from the workplace or in a non-work period, but to which work contributed;
- due to incidents which were in New Zealand waters;
- due to injuries on public roads which did not involve traffic;
- due to traffic accidents on private roads, e.g. accidents involving vehicles on private access roads to farms or quarries.

Deaths to which work exposures may have contributed but which were specifically excluded were those which occurred:

- due to traffic crashes on public roads;
- one year or longer after the injury;
- due to suicide;
- due to occupational diseases, and non-discrete events;
- due to injuries to the military or involving the military which did not occur in New Zealand territory;
- due to unpaid home duties;
- through medical misadventure or complications;
- for individuals less than 15 years of age, or greater than 84 years of age;
- due to the commission of a crime by the victim.

UNITED STATES

(Taken from NIOSH, 1993⁵³.)

Operational Guidelines for determination of injury at work

1. Complete the injury at work item if any other than natural cause of death is mentioned in Part I or Part II of the medical certification, including homicides, suicides, and accidents, including motor vehicle deaths.
2. The injury at work item **must** be completed for decedents aged 14 or over and may be completed for those less than 14 years of age if warranted. Consider possibility of work injury regardless of whether injury occurred in the course of work in “usual” or other occupation and/or industry. If decedent’s “usual” occupation is housewife, student or retired consider possible injury during other employment. If occupation is transportation-related, suspect injury at work and evaluate per criteria.
3. Consider available information with regard to location and activity at time of injury. If location is farm, suspect work-related and evaluate per criteria.

Criteria	Injury at work
On Employer Premises	
Engaged in work activity, apprentice, vocational training	Yes
On break, in hallways, rest room, cafeteria, storage area	Yes
In employer parking lots while working, arriving or leaving	Yes
Engaged in recreational activities on employer controlled facilities (games, etc.) for personal enjoyment	No
As a visitor for non-work purposes, not on official business	No
Off Employer Premises	
Working for pay or compensation, including at home	Yes
Working as a volunteer EMS, firefighter, or law enforcement officer	Yes
Working in a family business, including family farm. Activity should be clearly related to a profit-oriented business	Yes
Traveling on business, including to and from customer/business contacts	Yes
Engaged in work activity where vehicle is considered the work environment (e.g., taxi driver, truck driver, etc.)	Yes
Homemaker working at homemaking activities	No
Working for self – non profit, i.e., mowing lawn, repairing own roof, hobby, or recreation activities	No
Student engaged in school activities	No
Operating vehicle (personal or commercial) for non-work activities	No
Commuting to or from work site	No