Using speed-crash models appropriately

|  |
| --- |
| According to Ministry of Transport statistics[[1]](#footnote-2) excessive speed is a prime contributer to road trauma In 2022 there were 104 fatal crashes, 459 serious injury crashes, and 1405 minor injury crashes where travelling too fast for the conditions was a contributing factor. In these crashes, 114 deaths, 572 serious injuries, and 2043 minor injuries.There is a need to be able to assess the crash impact of speed changes. These changes may be upward or downward and may result from road safety measures, other unrelated factors or a combination of both. In many cases this requires models which link speed changes to crash changes (speed-crash models) as there may be little or no crash information availableSpeed crash models are well established in the literature but there is little in the way of simple guidance for practitioners on which models are appropriate to use in what contexts. For instance different models may apply to diifferent road types. Different models may also apply when the speed distribution changes in different ways, The speed distribution may be truncated, as in the case of a successful deployment of mandatory intelligent speed adaptation, In the case of successful Police enforcement the distribution may to subject an overall downward move and some truncation accompanied by a reduction in the width of the distribution.These impacts may, of course happen in the reverse direction where speeds are allowed to increase. When choosing a model in a particular situation the principles on which the model is based are important.This paper is intended to provide practitioners with some simple guidance on the type of speed crash model they might use when asessing the crash impact of a speed change, both before and after the event. |

**words)**

|  |
| --- |
| Title:Using: Speed-Crash Models AppropriatelyAccording to Ministry of Transport statistics[[2]](#footnote-3) excessive speed is a prime contributer to road trauma In 2022 there were 104 fatal crashes, 459 serious injury crashes, and 1405 minor injury crashes where travelling too fast for the conditions was a contributing factor. In these crashes, 114 deaths, 572 serious injuries, and 2043 minor injuries.There is a need to be able to assess the crash impact of speed changes. These changes may be upward or downward and may result from road safety measures, other unrelated factors or a combination of both. In many cases this requires models which link speed changes to crash changes (speed-crash models) as there may be little or no crash information availableSpeed crash models are well established in the literature but there is little in the way of simple guidance for practitioners on which models are appropriate to use in what contexts. For instance different models may apply to diifferent road types. Different models may also apply when the speed distribution changes in different ways, The speed distribution may be truncated, as in the case of a successful deployment of mandatory intelligent speed adaptation, In the case of successful Police enforcement the distribution may to subject an overall downward move and some truncation accompanied by a reduction in the width of the distribution.These impacts may, of course happen in the reverse direction where speeds are allowed to increase. When choosing a model in a particular situation the principles on which the model is based are important.This paper is intended to provide practitioners with some simple guidance on the type of speed crash model they might use when asessing the crash impact of a speed change, both before and after the event. |

Type your abstract here. (300 words max.)

1. [Safety — Annual statistics | Ministry of Transport](https://www.transport.govt.nz/statistics-and-insights/safety-annual-statistics/sheet/speed) [↑](#footnote-ref-2)
2. [Safety — Annual statistics | Ministry of Transport](https://www.transport.govt.nz/statistics-and-insights/safety-annual-statistics/sheet/speed) [↑](#footnote-ref-3)