

Understanding variation in ambulance non-conveyance (VAN) rates: a mixed method study



Background

In England in 2015/2016 the ambulance service responded to approximately eleven million calls. Data from ambulance quality indicators found that nearly fifty percent of incidents were not conveyed to hospital after an assessment either by telephone or face to face, it was also found that the non-conveyance rate varied between forty and sixty-eight percent between services.

Further analysis of the ambulance quality indicators found that on average eleven percent of patients were discharged over the phone with only telephone advice (5-17%) while an average of thirty-eight percent were sent an ambulance but not conveyed to hospital (23-51%).

Due to the statistics found, the variation in ambulance non-conveyance (VAN) study was funded by the National Institute for Health Research with the goal of explaining the reasons for the variation in nonconveyance rates between services.

Methods

VAN was a mixed methods study consisting of an initial analysis of ambulance conveyance data followed by interviews with managers, paramedics and commissioners from each service. Later one month of data from each ambulance service was evaluated as well as an analysis of calls resolved by telephone advice with three services and lastly an analysis of data from one service comparing any links between conveyance, hospital admission and mortality.

Results

The initial analysis of ambulance quality indicators found an unpredictable variation between both nonconveyances and re-contact within twenty-four hours, reasons for these fluctuations could not be explained.

The interview stage of the study found that the use of specialist and advanced paramedics was believed to be beneficial to support non-conveyance of patients, other factors influencing non-conveyance included a perceived lack of support from managers and difficulties accessing the wider healthcare system.

The analysis also found that services that favour the use of specialist and advanced practitioners had a higher non-conveyance rate; while services that were highlighted as being risk averse towards nonconveyance from interviews, had a lower non-conveyance rate.

It was found that there was little difference between re-contact rate between paramedics and specialist/advanced paramedics. It was also suggested that the number of patients found to have a subsequent event after non-conveyance within three days was a 'minority'.

Conclusion

The study concluded that variations in ambulance non-conveyance could be reduced by increasing the availability of specialist and advanced practitioners while also addressing the perception of risk associated with non-conveyance from ambulance service managers.

Further information

The full VAN study can be found at: <https://www.sheffield.ac.uk/scharr/sections/hsr/mcru/van>

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