

Measuring the quality of the search activity

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**Letter to the editor.*

Dear Editor,

As Search & Rescue practitioners and trainers delivering to experienced full-time and volunteer searchers, a subject discussed with those who have been responsible for the coordination, management, or command and control of lost and missing person incidents is how do we measure the quality of the search activity that has been carried out on our (and our missing person's) behalf by the assets that have been identified, briefed, tasked and de-briefed by us?

The results of this discussion on the functioning of search assets, often leads to a response that fails to show as high a level of confidence (or assurance) as would be expected or desired. Although not always specifically mentioned or listed within post-incident lessons learnt reports, public enquiries or coroners court findings, there are many examples of missing persons being ultimately located, often by members of the public long after search operations have been suspended or terminated, in areas that have already been searched and considered completed from a tactical perspective.

This is important as a an apparently poorly coordinated and unsystematic search will damage reputations (both individual and an organisations'), will lower trust and confidence in statutory and voluntary bodies and can potentially increase the risk of a fatality for the missing person. Highlighted in the media, headlines such as those below illustrates the case.

'Surrey diver doesn't believe missing is in the River Wyre' (Ng and Manning, 2023)

On the 27th January 2023 a 45-year-old was reported missing. 23 days later and after multiple searches, her body was found by members of the public in an area considered searched.

‘Search expert’s frustration during hunt for missing Dorset teen’ (Minchin, 2022)

On the 7th November 2019 a 19-year-old female was reported missing. 11 days later, after multiple searches, her body was found less than a mile from where she went missing. This was also less than 300 metres from items of clothing that were located by a member of the public on the 16th November and in an area already covered by more than one search asset.

As we know, lost and missing person search often involves a joint response from a range of individuals and agencies. Each person in this group seeking the person(s) reported missing is acting in either a statutory, professional or spontaneous volunteer capacity. Completed search activity by an asset is normally fed back, debriefed and reviewed by the search management team with any results informing further action. There are many ways that feedback and results can be provided by search assets to their search management team. However, at this time, there are not consistently accepted national or international methods that are both qualitative and quantitative.

The authors believe that this leaves a gap for a method that mitigates the risks and limitations evident in a significant number of incidents. Initial searches (Google Scholar etc.) for studies that have already conducted research into areas such as ‘failures in search assurance’, ‘an evaluation of missing person search efficacy’ or ‘errors in the use of Probability of Detection and/or Area’, have failed to locate any content that specifically covers this concern.

However, within the ‘Compatibility of Land SAR Procedures with Search Theory (Cooper et al, 2003), the authors make reference to a ‘restriction’ that *‘simply means that searching does not guarantee detection, even if the search object is in the area when it is searched. SAR search planners the world over have seen this property of SAR searches demonstrated all too often.’*

Also, there does not appear to have been any formal studies carried out to evaluate those conjectures by SAR professionals for why search teams miss, such as:

- 1) Search management sending to the wrong location.
- 2) Search management tasking insufficient (or the wrong) assets.
- 3) Search management failing to resource mix (or tasking only one type of asset).
- 4) Team searched in the wrong area.
- 5) Team did not complete their task and left their area with the subject unfound.
- 6) Team deliberately missed part of their search area and failed to identify this to search management.
- 7) Team spacing was too wide.
- 8) Team did not check a unique feature within their search areas that hid the subject.
- 9) An individual searcher either missed or failed to recognise the subject.

As a 'positive declaration intended to give confidence' a calculation of search assurance ensures that those search assets tasked to a missing person incident adopt a coherent approach in evaluating their search activity and are able to provide the results of their activities as part of a structured debrief. We suggest that by evaluating the level of search assurance taking into account recognisable impact factors will allow those responsible for the coordination and direction of a search response to 'calculate' the probability of locating an item sought (the missing person, or items attributable to them). A further significant benefit would be a structured and targeted approach to subsequent taskings.

The United Kingdom has already made some progress with regard to search assurance, with members of the UK Police Search Governance Board agreeing a definition for Level of Assurance. We believe time spent in developing a universally consistent method of reporting search activity will lead to a measurable level of search assurance, an opportunity to remove areas of uncertainty, provide data that can inform the search strategy, increase confidence in search assets (often with differing skill sets and operating procedures), provide evidence for future reviews and ultimately increase the levels of efficiency within lost and missing person searches.

The authors recognise that there is work to be done in the research and testing of this idea but believe that given public expectations, the continued development of a search assurance methodology should be considered an essential requirement for those undertaking, managing and coordinating a search response. The authors are seeking individuals and organisations who are interested in a collaborative approach to developing this concept.

Yours faithfully,

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References

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