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The analysis that follows entails four important caveats.

1. The probability of apprehension (for either vehicle or suspect) is assumed to be constant for all of the pursuit events. An example of the probability *not* being constant is if, given a proper tag deployment, some officers are better than others are at apprehending the suspect at the conclusion of a pursuit.
2. The analysis does not account for other factors that might affect the apprehension probability, such as weather, driving conditions, and suspect behavior.
3. Improper tag deployment is not the same as not using StarChase at all. As a result, one should not assume the apprehension probabilities under these two conditions are similar. As an example, consider an improper deployment in which a tag is fired, strikes the suspect vehicle, but bounces or falls off. Upon hearing the tag strike his/her vehicle, the suspect might believe he/she is being tracked and alter his/her behavior. This behavior could be different than if StarChase was not used at all (and the suspect had no reason to think he/she was being tracked).
4. For some pursuits, a second StarChase tag was fired because the first one either missed the suspect vehicle or failed to adhere. In these cases, the status of the second tag was considered. If it adhered to the vehicle and GPS tracking data was received, the pursuit event was counted as having a proper tag deployment.

Because of the limited data provided by the case study agencies, the study team had to make these assumptions in order to proceed with the analysis. If the user agencies believe the caveats are substantially violated, then more detailed data is required. For instance, if one has reason to think the pursuit outcome depends on the experience of the law enforcement officer, each pursuit event should include the officer's experience, e.g., number of years on the job.

4.7 Assumptions and Limitations

- The StarChase system is a relatively new pursuit management technology that tags and tracks a fleeing vehicle. The technology has matured over the past several years, with Star Chase providing next generation system versions based on end-user feedback and StarChase internal research and development. As a result, the systems employed by the end-user agencies are of varying technology maturity.
- The analysis provided in this assessment is limited to qualitative and quantitative data available to the assessment team as provided by the end-user agencies.
- The quantitative analysis in this assessment does not account for factors that could affect the outcome of a pursuit other than those identified. Such factors might include weather, pursuit speed, and whether a suspect's driving behavior changes if he/she thinks his/her vehicle is tagged.
- This assessment is not intended to be a performance test or evaluation of the StarChase system.

