

The Changing World of Collision Fraud Investigation

By Erin J. Potma, Ph.D., and Jason Young, M.A.Sc., P.Eng.
Advantage Forensics Inc.



Erin J. Potma



Jason Young

Automotive insurance (AI) fraud is on the rise in Ontario and is a growing problem for the insurance industry. Recent attempts to estimate the extent of AI fraud suggest that fraudulent claims cost insurance companies up to 1.6 billion dollars (18% of total insurance premiums) annually.

Fraudulent claims continue to increase in value, but more troubling is the fact that fraudulent claims are becoming more sophisticated.

Fraudsters are shifting away from purely fictitious claims and creating real accident scenarios, often with witnesses to support their allegations. These sophisticated fraud claims are more difficult to detect, and include both opportunistic fraud and premeditated fraud. AI fraud may be attractive to individuals who believe that there are few resources available to challenge these types of sophisticated claims, and that there is minimal risk of being caught.

Fortunately, this is not true. Forensic engineering provides the

industry with the necessary tools and resources to detect and dispute these fraudulent claims.

Opportunistic Fraud

Opportunistic fraud, also known as “build up” fraud, involves inflating a legitimate claim. An individual who is genuinely involved in a collision may claim damages or injuries that were not caused by the accident, or unnecessary medical treatments. Other individuals in the vehicle may also claim injuries if one of the occupants was genuinely injured. These fraudulent claims may be difficult to challenge since there is some genuine damage to the vehicle, albeit minor, and the claimed injuries are broad and non-specific, such as back

pain, whiplash and fibromyalgia. The extent of opportunistic AI fraud in Ontario is thought to be fairly high, representing about 15% of total claims paid ¹.

Premeditated Fraud

Premeditated fraud involves a purposeful false claim that was planned in advance. The sophistication of these schemes has increased significantly over the decades. Early variants of these schemes involved “fake” accidents, often with vehicles that did not exist and repair services that were not actually performed. As the industry grew wise to these schemes, more elaborate ploys developed including “staged” collisions between vehicles, where the vehicle damage was actually from a wall or a barrier and not from the other vehicle. Over the past two decades, forensic engi-

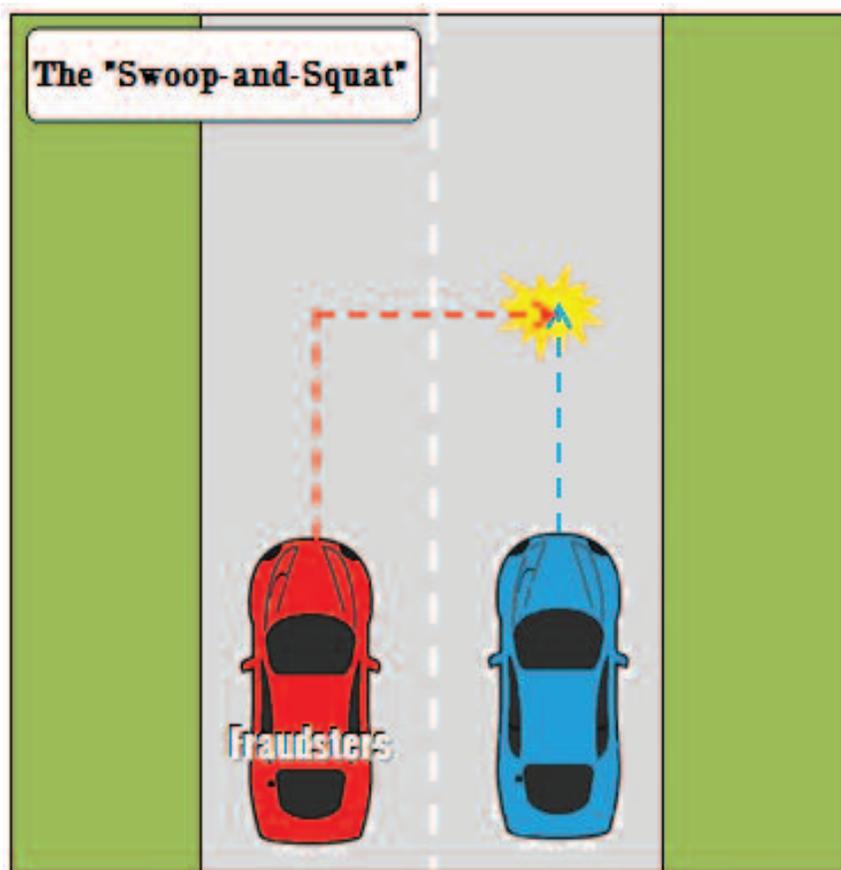
neering investigators have met with great success in challenging such claims based on mismatched damage patterns, mismatched damage severity, or mismatched paint transfers. As a result, hundreds of such fraudulent insurance claims have been successfully denied or reduced to nuisance claims. In February 2012, after a lengthy investigation, Toronto police arrested 37 individuals, including some rehab clinics, medical clinics, and paralegals involved in multimillion-dollar insurance scams involving staged car crashes ².

Now, fraudsters are taking “staged” collisions to the next level by actually driving the two involved vehicles into each other to create matching damage characteristics, and then claiming exaggerated injuries. Often, these staged collisions occur in low traffic areas,

where there are unlikely to be other witnesses, and convenient “witnesses” may then appear to provide an account of the accident. The physical evidence from the vehicles in these sophisticated frauds schemes verifies that the two vehicles indeed contacted each other.

Another new variant of sophistication in staged collisions is intentionally impacting an innocent driver, as shown in the following three illustrated examples:

“Swoop-and-Squat”: The fraudulent claimant pulls in front of the innocent driver and then intentionally brakes suddenly, forcing a low severity rear-end collision as the innocent driver unsuccessfully attempts to brake in time. This scheme may also involve a second fraudulent driver in a vehicle ahead that initiates the braking sequence at a pre-determined location.



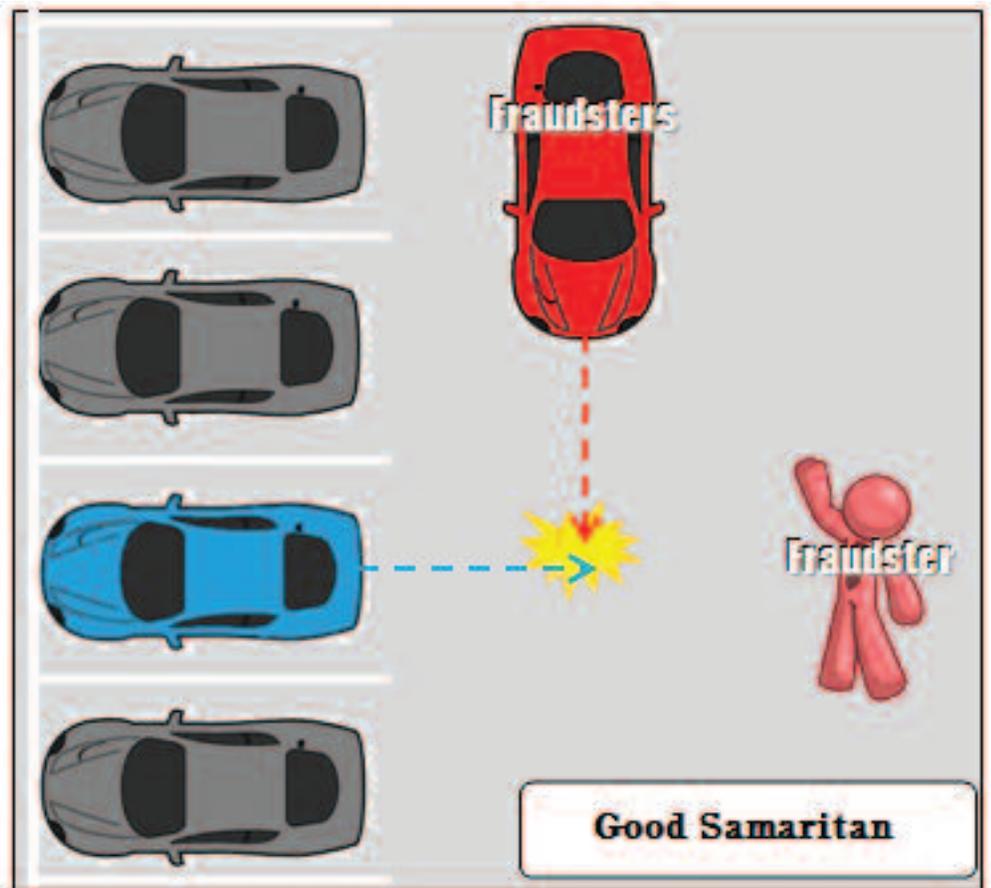
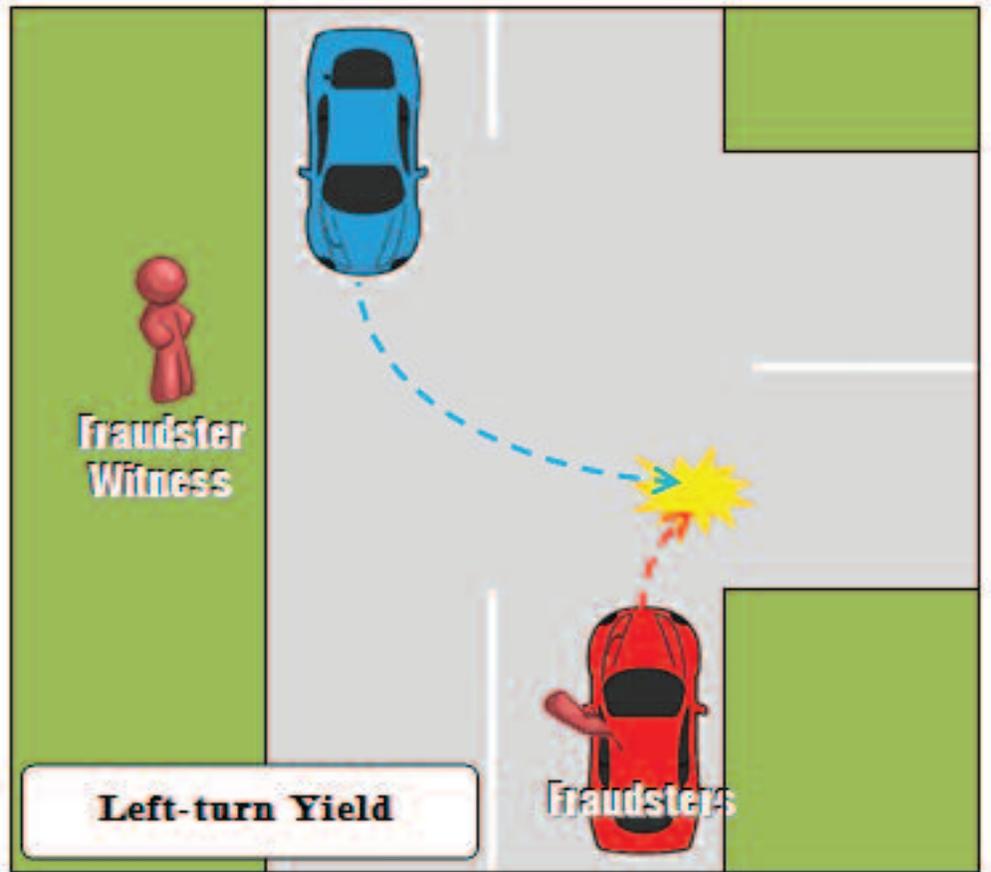
“Gracious yield”: The fraudulent claimant graciously waves their right-of-way and motions to the innocent driver to proceed with his or her left turn (or lane change, or parking manoeuvre). When the innocent driver proceeds, the fraudulent claimant then pulls ahead into that vehicle.

“Good Samaritan”: In this fraudulent scenario, used in parking lots, the accomplice pedestrian assists an innocent driver by helping them back out of the parking space. As the vehicle backs out, the fraudulent claimant then drives into it. The “good Samaritan” pedestrian then claims he was waving at someone else and provides a false witness statement.

How Forensic Engineering Can Help

Despite the sophistication in current fraudulent AI claims, forensic engineers and biomechanists are well-armed with the research expertise and investigative tools to help assess such claims with confidence. The mere fact that two vehicles have come into contact with each other does not mean that injuries will result. The claimed injuries must be consistent with the type of vehicular impact and the severity of collision damage to that vehicle.

Forensic engineers use a combination of tools to assess injury potential. It is generally well-known that forensic engineers can determine collision severity through a combination of momentum analysis, crash test data analysis, and ECM (black box) download analysis. However, adjusters are sometimes surprised to learn that biomedical engineers and biomechanists can



give expert testimony on the likelihood of injury. Biomedical engineers and biomechanists use collision injury research to bridge the causation gap that exists between collision severity and injury potential.

Some types of injuries are chronic in nature and are not related to collision trauma. Some types of pre-existing chronic injuries are not exacerbated by low speed impacts. Some injuries, including whiplash, require minimum thresholds of collision severity, below which that injury is not reported in the biomedical injury literature. A forensic investigation by a qualified team will be able to distinguish between valid collision-related injuries and injuries that are not supported by the collision evidence. Each case of suspected AI fraud must be assessed

on an individual basis from the details of that case.

As fraudulent AI claims continue to become more sophisticated in the future, so too will the toolkit of the forensic engineer develop to stay one step ahead.

¹ Insurance Bureau of Canada. Automotive Insurance Fraud in Ontario. Forensic report prepared by KPMG, June 2012. Available at: www.abc.ca/en/Insurance_Crime/

² www.thestar.com/news/crime/2012/02/23/car_insurance_scam_37_arrested_in_project_whiplash_rails.html

Dr. Erin Potma is a senior forensic investigator and biomechanist at Advantage Forensics Inc. in Toronto. Erin has bachelors, masters, and

doctorate degrees in Mechanical Engineering from Queen's University with an additional two years of medical and surgical training in Australia.

Jason Young is the President of Advantage Forensics and has investigated more than 1400 claims for the insurance and legal industries. Jason has testified numerous times in Ontario over the past decade as an expert in collision reconstruction, slips, trips & falls, and human factors. Jason is a leading contributor to forensic engineering research in Ontario and is invited regularly by insurers, lawyers, municipalities, and academia to lecture on new developments in forensics.

WP