



The Legal Nurse Consultant and Injury Consistency Analysis

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Legal Nurse Consultants (LNCs) have a vast array of skills and experiences that allow them to think and work 'outside the box.' LNCs use their knowledge to point out factors that are not obvious or readily apparent to attorneys, adjustors, or even physicians. The nuance of medical-legal work requires a great deal of flexibility regarding the knowledge and expertise of the LNC; this flexibility gives rise to niche practices within the LNC world. This article will explore one of those niches: injury consistency analysis.

Injury consistency analysis is a complex type of analysis done cohesively by a biomechanical engineer and a legal nurse consultant. The LNC plays a crucial role in the analysis by defining reported injuries that may have occurred during an incident and pre-existing conditions that may alter an individual's propensity to injury. By delving into the medical records, the LNC can provide evidence that may assist in assessing the feasibility of claims made. This is vital to guide the biomechanical expert to the motions, forces, and mechanisms required to induce the injuries diagnosed.

Injury consistency analysis is done by biomechanical engineers using Newton's Laws, other tools of physics, and engineering mechanics in conjunction with knowledge of human biology and physiology to define and explain an injury scenario (Ozkaya et al., 2017). This information is utilized to explain the mechanics associated with a particular condition in the context of an accidental event. Attorneys and insurance adjusters then use this analysis to determine if the injuries claimed were consistent with the mechanics of the incident. Incidents such as motor vehicle accidents (MVAs), slips/trips/falls, or worker's compensation injuries are common occurrences that can benefit from an injury consistency analysis.

Medical records are a vital component to injury consistency analysis. A targeted medical record summary for injury consistency analysis differs from the standard and usual medical record summary done by an LNC. The medical record summary has a specific focus on information needed for the biomechanical engineer. To assist in the analysis, the LNC should focus on finding as much information as possible around the date of injury (DOI). It is important to find as much data as possible on pre-existing history, both medical and surgical,

This activity is designed to increase the LNC understanding of and skill in assisting in Injury Consistency Analysis.

Upon completion of the learning activity the learner will be able to:

- Define injury consistency analysis and how it is utilized.
- Identify what is important for the LNC to note when reviewing medical records for injury consistency analysis.
- Identify crucial information needed for the biomechanical engineer expert to evaluate the motions, forces, and mechanisms required to induce injuries diagnosed.

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as well as hobbies, occupation, social history, and height and weight.

Questions that should be considered by the LNC during injury-consistency analysis:

- ♦ Did the claimant have prior accidents or injuries that could explain current stated reported injuries?
- ♦ Does the claimant have medical conditions that could contribute to the stated reported injuries, such as osteoarthritis, rheumatoid arthritis, or auto-immune conditions, etc.?
- These pre-existing conditions or lack thereof can be used to explain alleged reported injuries.
- Any reports of completed imaging can be important in the discovery of what is degenerative and what is acute. For example, is the intervertebral disc bulge found on the CT scan consistent with the mechanisms of the noted accident?
- ♦ Does the claimant have an occupation that requires heavy lifting, such as work in construction or an oilfield?



- ♦ Is the claimant sedentary in their activities?
- ♦ Do they smoke or use e-cigarettes/vape?

misremembered, misinterpreted, or fabricated. There are times when others influence and distort memories with conflicting information. And as



All this information is taken into consideration when determining body conditioning prior to the incident and the possible incidence of degenerative changes versus acute changes.

Another element that affects injury analysis is the written account of the incident. Memories can be tricky, complex, and fragmented. Under stressful situations, recollections can change in even the most conscientious person. This makes the notation of the incident's description especially important. Many times, facts are forgotten or

time passes, memories get less clear, and imaginations can create an entirely different scenario. For this reason, it is especially important to make a word-for-word record of what the claimant said during the first medical visit. This description is the most accurate, reliable, and least likely to be tainted by outside influences. Utilizing a combination of medical knowledge and clinical experience, LNCs can review incident reports to determine which claims are supported and which may be inaccurate.

As most injuries that occur or are claimed with MVAs are structural, it is important to have an extensive working knowledge of orthopedics, neurology, and neurosurgery. To delineate potential inconsistencies, it is important to know what is normal and what are the practical and functional implications of pathologic conditions. Having a strong background in orthopedics and neurosurgery will be an asset to the LNC. Being able to draw from prior knowledge and experience allows the LNC to give knowledge-based, insightful comments to help the biomechanical engineer and the client understand the injuries.

Another aspect of the LNC's summary that is of importance to the biomechanical engineer is maintaining simplicity. LNCs must eliminate as much extraneous information as possible within the summary. Taking out superfluous prepositions, such as 'the,' 'an,' and 'a,' allows a condensation of verbiage, and thus, the information noted to have the most importance. Having a contextual understanding of when to take out prepositions or when to keep them for easier understanding, is also important. The medical record summary or grid should be clear, concise, and quick to read for both the biomechanical engineer and the client. The summary can be added to the analysis report given to the client, as requested. It is also important that the comments made within the grid are neutral and fact-based, as the client may be able to discover the comments even when deleted.



CASE STUDY:

RC is a 65-year-old female restrained driver who was at a stop, waiting to turn right at an intersection. As the traffic cleared, she eased ahead but saw another car coming from her left and stopped quickly. The car behind her did not see that she had stopped and rear-ended her. The airbags did not deploy; there was no head strike within the car, and no loss of consciousness (LOC). Police arrived, and a citation was given to the other driver for failure to stop and following too close. RC declined EMS transfer, as she said she was fine and without pain. She drove herself home and went to sleep. RC's pain increased overnight, and she presented in the Emergency Department (ED) with reported injuries of neck pain, radiating to the bilateral shoulders, and low back pain, radiating to the bilateral buttocks. She is a retired schoolteacher and enjoys gardening and walking for exercise. She admits to smoking a ½-pack of cigarettes daily for the past 45 years, with no desire to stop. She has a history of asthma, two heart attacks with a stent placement, and anxiety/depression. She had one prior MVA, 10 years ago, with slight residual pain in neck and low back.

♦ **Radiology:**

- CT scan C-spine showed multilevel degenerative disc disease with disc herniation at C4-5, C5-6, and C6-7.
- CT scan L-spine showed multilevel degenerative disc disease with disc herniation at L3-4, L4-5, and L5-S1.

Diagnosis: C-spine sprain, cervicgia, C-spine radiculopathy, L-spine sprain, lumbago, L-spine radiculopathy

Points of interest for the LNC:

- ♦ Restrained
- ♦ No airbag deployment
- ♦ Rear-ended
- ♦ No head strike or LOC
- ♦ No pain immediately after impact
- ♦ Walks for exercise
- ♦ Smoker without desire to quit
- ♦ Asthma
- ♦ Heart attack with stent placement
- ♦ Anxiety/depression
- ♦ Prior MVA with prior injury to neck and low back with residual pain
- ♦ Radiology imaging showed both C-spine and L-spine multilevel

degenerative disc disease. C-spine has disc herniations at C4-5, C5-6, and C6-7. L-spine has disc herniations at L3-4, L4-5, and L5-S1.

Diagnosis from ER provider: C-spine and L-spine radiculopathy

What does this all mean?

- ♦ RC was restrained with modern seatbelts equipped with pretensioners and inertial-locking retractors. As the pretensioners do not fire in a rear-end impact, the retractors will prevent the person from striking the steering wheel.
- ♦ No airbag deployment, so there were no airbag injuries.
- ♦ No pain immediately after impact. This is common, as most often pain is due to muscle strain.
- ♦ RC admits to smoking a ½-pack of cigarettes per day. Many people underestimate how much they truly smoke.
- ♦ "Depression and anxiety are associated with increased perception of pain severity" (Michaelides, 2019).
- ♦ A prior MVA caused prior injury to RC's neck and low back.
- ♦ CT scans showed degenerative changes and disc herniations on both C-spine and L-spine. The degenerative changes are age-related, and the disc herniations have no causal link to rear-end impact or any type of low-speed, low-velocity impact. (Wood, Grrenston, Charles, & Charles, 2018)
- ♦ Because of the low speed of this MVA, it is expected that the pain experienced to resolve within six weeks (about one and a half months) with physical therapy and rest (Karlsson et al., 2020).

OUTCOME

- ♦ A verbal report was made to the client with all the facts given. As this was pre-trial, no written report was requested. The

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accident was at low speed, and the pain was assessed as acute muscular pain that would resolve within a few months. No further treatment would be needed. Acute muscular pain should resolve in seven days to three months (Delaney et al., 2020)

Legal nurse consultants are highly valued for their vast array of skills and experiences, allowing each LNC the opportunity for niche practices. One such niche is a targeted medical record review used in conjunction with a biomechanical engineer to provide injury consistency analysis. The medical record review and summary point out areas that are vital facts needed for the injury analysis, allowing the client

to use them for legal proceedings or insurance investigations. The LNC, with the appropriate knowledge and experience, provides the crucial information needed for the biomechanical engineer and the client.

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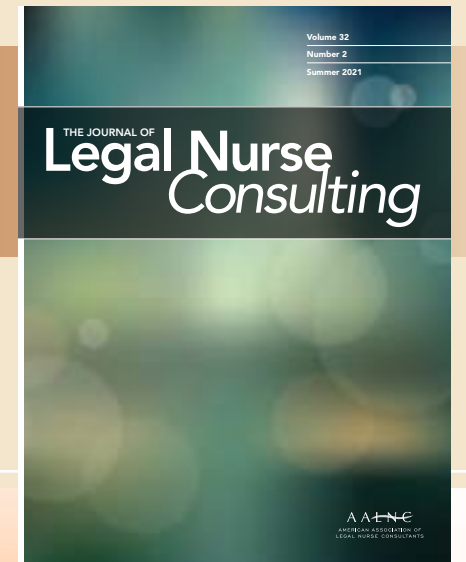


Lisa Powers, BSN, RN, CNOR, CAIS, LNCC has 37 years of nursing experience with focus on orthopedic, ortho-trauma, sports medicine, and operating

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