Causation Analysis

Case **test-case-5-6143587d0932ce510d808ba396be34fb** · Generated 2026-08-02T 17:41:02+00:00 · Sources: chronology events, deviation of care snapshot

Section 12 currently shows protocol-comparison candidates (not confirmed rule deviations). Load curated pathways that match this chart to promote candidates into confirmed Standard-of-Care findings

Counsel Briefing — Causation at a Glance

Post-Injection Complication (Separate Causation Pathway)

1. **03/05/2024–03/09/2024: Cellulitis → Sepsis hospitalization**
   Hospital Admission — Inpatient — [Name]
2. **04/10/2024: Subacromial / joint steroid injection**
   Orthopedic MMI / RTW Summary — ENCOUNTER 24 — Orthopedic MMI / RTW Summary Date: 04/10/2024 | MMI reached; return to work; demand/damages

⚠ This is not biomechanically linked to the fall
⚠ This is a procedure-related complication pathway

The sepsis/cellulitis hospital course and shoulder injection are modeled as a procedure-related pathway separate from the index fall MOI — not a biomechanical consequence of the original injury mechanism

MOI CONTRADICTION — ONE-SENTENCE SYNTHESIS

The patient alternates between 'kitchen fall', 'ice slip', 'lifting strain', but the earliest and most reliable account (01/08/2024 Initial ED Note) anchors the MOI as a right-hip fall with secondary shoulder involvement

Causation Narrative (Deterministic — Non-Opinion)

Ten-sentence chronology story for counsel orientation. Signals cited are deterministic flags — expert review required for causation opinions

1. On 01/08/2024, the chart opens with right-hip fall with secondary shoulder involvement as the index mechanism of injury
   Signals: MOI contradiction cluster
2. Later records introduce competing MOI accounts (kitchen fall, ice slip, lifting strain)
   Signals: MOI contradiction cluster; Documentation integrity cluster
3. The patient alternates between 'kitchen fall', 'ice slip', 'lifting strain', but the earliest and most reliable account (01/08/2024 Initial ED Note) anchors the MOI as a right-hip fall with secondary shoulder involvement
   Signals: MOI contradiction cluster; Documentation integrity cluster
4. Recovery is mixed non linear; imaging shows Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit Date: 01/08/2024 | Index fall; mild shoulder/hi
   Signals: Care-gap cluster; Pharmacy-opioid cluster; Missed PCP appointment — care-gap signal; Missed PCP appointment — care-gap signal
5. Diagnostic and follow-up delays are documented: Missed PCP appointment — care-gap signal; Hip MRI — clarifies hip vs shoulder MOI separation; MRI delay (02/05/2024)
   Signals: Delayed imaging cluster; Care-gap cluster; Missed PCP appointment — care-gap signal; Missed PCP appointment — care-gap signal
6. Care-gap and pharmacy-opioid signals (missed follow-up, early refill, multi-pharmacy fills) appear in the medication and scheduling record
   Signals: Care-gap cluster; Pharmacy-opioid cluster; Missed PCP appointment — care-gap signal; Missed PCP appointment — care-gap signal

7. The sepsis/cellulitis hospital course and shoulder injection are modeled as a procedure-related pathway separate from the index fall MOI — not a biomechanical consequence of the original injury mechanism

   Signals: Post-injection complication cluster

8. Neurologic symptoms are evaluated on a separate CTS track — not automatically linked to the shoulder fall pathway
9. MMI language appears on 04/05/2024; 6 deterministic pathway(s) and 7 causation node cluster(s) summarize the chart for counsel
10. Each step above is a deterministic, source-linked screen — not a medical opinion or legal conclusion of proximate cause

Causation Snapshot (Tier 0 — Counsel Quick Scan)

Deterministic screen only — not a medical opinion, legal conclusion, or expert causation determination

1. Primary MOI: fall — Mechanism of Injury (MOI): Patient slipped in kitchen, landed primarily on RIGHT — 01/08/2024
2. Contradictions: fall vs lifting strain
3. Care gaps: Missed PCP appointment — care-gap signal
4. Delays: XR delay (01/19/2024); MRI delay (02/05/2024); Neurology delay (02/18/2024); Hip MRI — clarifies hip vs shoulder MOI separation
5. Billing: Suspicious ICD code (e.g. X 99.555) — billing integrity flag
6. Pharmacy: Early opioid refill before days-supply elapsed; Multi-pharmacy / pharmacy-hopping pattern documented
7. Imaging: MRI tear, severity unspecified (planned) (01/24/2024); MRI tear, severity mild; tear, severity unspecified; tear, severity unspecified (planned) (02/05/2024)
8. Neurologic: Delayed neurologic consult (03/11/2024); Carpal tunnel / neurologic workup documented
9. Pathways modeled: 6 deterministic chain(s); 8 integrated case signal(s)

Primary MOI	fall — Mechanism of Injury (MOI): Patient slipped in kitchen, landed primarily on RIGHT — 01/08/2024
Key contradictions	fall vs lifting strain
Key care gaps	Missed PCP appointment — care-gap signal
Key delays	XR delay (01/19/2024); MRI delay (02/05/2024); Neurology delay (02/18/2024); Hip MRI — clarifies hip vs shoulder MOI separation
Key billing anomalies	Suspicious ICD code (e.g. X 99.555) — billing integrity flag
Key pharmacy anomalies	Early opioid refill before days-supply elapsed; Multi-pharmacy / pharmacy-hopping pattern documented
Key imaging findings	MRI tear, severity unspecified (planned) (01/24/2024); MRI tear, severity mild; tear, severity unspecified; tear, severity unspecified (planned) (02/05/2024)
Key neurologic red flags	Delayed neurologic consult (03/11/2024); Carpal tunnel / neurologic workup documented

Deterministic Causation Nodes (Non-Legal)

Labeled signal clusters — factual anchors for counsel and expert review. Not legal causation conclusions.

DETERMINISTIC CAUSATION NODE (NON-LEGAL) · **HIGH**

MOI contradiction cluster

fall vs lifting strain

- fall
- lifting strain
- Multiple distinct mechanism categories referenced (fall, lifting strain); resolved via Hierarchy of Reliability (Intake Notes > Initial ED Notes > Subsequent Progress Notes) — "fall" (Initial ED Note) is treated as the Primary MOI, with 1 secondary account(s) listed for counsel

> The patient alternates between 'kitchen fall', 'ice slip', 'lifting strain', but the earliest and most reliable account (01/08/2024 Initial ED Note) anchors the MOI as a right-hip fall with secondary shoulder involvement

DETERMINISTIC CAUSATION NODE (NON-LEGAL) · MODERATE

Delayed imaging cluster

XR delay documented (01/19/2024) (3.5 hrs); XR delay documented (01/19/2024); MRI delay documented (02/05/2024) (~12 days)

- XR delay documented (01/19/2024) (3.5 hrs)
- XR delay documented (01/19/2024)
- MRI delay documented (02/05/2024) (~12 days)
- MRI delay documented (02/18/2024)
- Hip MRI — clarifies hip vs shoulder MOI separation

> Imaging and neurology delays extend the shoulder pathway and may affect damages framing for diagnostic workup latency

DETERMINISTIC CAUSATION NODE (NON-LEGAL) · HIGH

Care-gap cluster

Missed PCP appointment — care-gap signal; Delayed neurologic evaluation / consult

- Missed PCP appointment — care-gap signal
- Delayed neurologic evaluation / consult

> Missed follow-up and delayed specialty access create care-gap signals that may compound non-linear recovery

DETERMINISTIC CAUSATION NODE (NON-LEGAL) · MODERATE

Pharmacy-opioid cluster

Early opioid refill before days-supply elapsed; Pharmacy hopping / multi-pharmacy fills

- Early opioid refill before days-supply elapsed
- Pharmacy hopping / multi-pharmacy fills

> Early refill and pharmacy-hopping patterns affect pain-management credibility and medication timeline analysis

DETERMINISTIC CAUSATION NODE (NON-LEGAL) · HIGH

Documentation integrity cluster

Blank DOS pages; fake ICD; OCR medication anomalies

- Zorpedrine — likely OCR / formulary anomaly (not a verified medication)
- Suspicious ICD code (e.g. X 99.555) — billing integrity flag

> Blank DOS pages, OCR medication anomalies, and suspicious ICD codes affect record credibility — not clinical causation by themselves

DETERMINISTIC CAUSATION NODE (NON-LEGAL) · MODERATE

Vitals non-escalation cluster

01/08/2024 — abnormal vitals without escalation; 03/01/2024 — abnormal vitals without escalation

- 01/08/2024 — abnormal vitals without escalation
- 03/01/2024 — abnormal vitals without escalation

> Abnormal vitals without documented escalation are reliability markers for deterioration-risk review

DETERMINISTIC CAUSATION NODE (NON-LEGAL) · HIGH

Post-injection complication cluster

Cellulitis → sepsis → hospitalization (separate from fall MOI)

- Shoulder / joint injection
- Cellulitis / local infection
- Sepsis hospitalization

> The sepsis/cellulitis hospital course and shoulder injection are modeled as a procedure-related pathway separate from the index fall MOI — not a biomechanical consequence of the original injury mechanism

Causation Stressors Map

Structured stress indicators — not causation conclusions

Chronology stress
Missed PCP appointment — care-gap signal; Missed PCP appointment — care-gap signal

60

Documentation stress
Zorpedrine — likely OCR / formulary anomaly (not a verified medication)

60

MOI stress
Multiple distinct mechanism categories referenced (fall, lifting strain); resolved via Hierarchy of

70

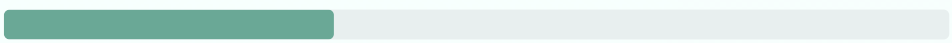
Imaging stress
Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit Date: 01/08/2024 | Index fa; EMERGENCY Department Visit — ENCOUNTER 04 — EMERGENCY Department Visit Date: 01/

50

Pharmacy stress
Early opioid refill before days-supply elapsed; Early opioid refill before days-supply elapsed

60

Billing stress
Suspicious ICD code (e.g. X 99.555) — billing integrity flag



35

Neurologic delay stress
Neurology Consult — ENCOUNTER 18 — Neurology Consult Date: 03/11/2024 | Delayed

66

Post-procedure complication stress Cellulitis → sepsis → hospitalization (separate from fall MOI)		40

1. Case Header / Scope of Review

Patient, facilities, and providers are shown in the Tier 1 — Core Foundation panel on the left.

Encounter dates: 12/15/2023 → 04/10/2024

Outcomes analyzed: delay

Scope: Deterministic causation framing for case test-case-5-6143587d 0932 ce 510d 808 ba 396 be 34 fb from chronology events, optional Deviation-of-Care findings, and medication causation maps. Not a legal conclusion

> **What this report does not opine on:** This report does not opine on negligence, breach of the standard of care, legal causation, or the probability that any act or omission caused the alleged injury. It presents a deterministic, source-linked plausibility framework for counsel and any retained medical expert to evaluate — not an expert medical or legal opinion

2. Mechanism of Injury – Reliability Matrix

Neutral, descriptive framing only — no conclusions drawn here.

Primary Storyline (Hierarchy of Reliability: Intake > Initial ED > Progress Notes)

Primary MOI (Initial ED Note, 01/08/2024): Mechanism of Injury (MOI): Patient slipped in kitchen, landed primarily on RIGHT HIP [Urgent Care Visit (01/08/2024)]

Multiple distinct mechanism categories referenced (fall, lifting strain); resolved via Hierarchy of Reliability (Intake Notes > Initial ED Notes > Subsequent Progress Notes) — "fall" (Initial ED Note) is treated as the Primary MOI, with 1 secondary account(s) listed for counsel review rather than silently discarded

> **MOI CONTRADICTION — ONE-SENTENCE SYNTHESIS**
>
> The patient alternates between 'kitchen fall', 'ice slip', 'lifting strain', but the earliest and most reliable account (01/08/2024 Initial ED Note) anchors the MOI as a right-hip fall with secondary shoulder involvement

Key competing accounts

Source reliability	When	MOI category	Excerpt	Source
Initial ED Note	01/24/2024	lifting strain	/week x 6 weeks. Restrictions: no heavy lifting; light duty only. Billing: pain	Orthopedic Clinic (01/24/2024)

▶ Detailed MOI History (12 accounts) — expand for paralegal / attorney review

Biomechanical capability: MOI category identified: fall, lifting strain. Whether this mechanism is biomechanically capable of producing the alleged injury requires clinical / biomechanical expert review — not determined by this deterministic screen

3. Clinical Course – Symptom & Treatment Timeline

Recovery trajectory: **mixed non linear**

Deviations / care gaps Contradictions Confirmed findings Neutral clinical facts

Case-file signals (integrated)

When	Signal	Category	Source excerpt	Strength	Source
01/08/2024	Missed PCP appointment — care-gap signal	☑ care gap	Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit Date: 01/08/2024 | Index fall...	**high**	Urgent Care Visit (01/08/2024)
01/12/2024	Missed PCP appointment — care-gap signal	☑ care gap	Primary Care Office — ENCOUNTER 03 — Primary Care Office Date: 01/12/2024 | NO-SHOW /...	**high**	Primary Care Office (01/12/2024)
01/19/2024	Suspicious ICD code (e.g. X 99.555) — billing integrity flag	☑ billing integrity	EMERGENCY Department Visit — ENCOUNTER 04 — EMERGENCY Department Visit Date: 01/19/2024...	**high**	EMERGENCY Department Visit (01/19/2024)
01/19/2024	Zorpedrine — likely OCR / formulary anomaly (not a verified medication)	☑ documentation integrity	EMERGENCY Department Visit — ENCOUNTER 04 — EMERGENCY Department Visit Date: 01/19/2024...	**moderate**	EMERGENCY Department Visit (01/19/2024)
01/20/2024	Early opioid refill before days-supply elapsed	☑ pharmacy opioid	Pharmacy Fill Record — ENCOUNTER 06 — Pharmacy Fill Record Date: 01/20/2024 | CVS...	**moderate**	Pharmacy Fill Record (01/20/2024)
02/14/2024	Early opioid refill before days-supply elapsed	☑ pharmacy opioid	Pharmacy Fill Record — ENCOUNTER 11 — Pharmacy Fill Record Date: 02/14/2024 | Walgreens...	**moderate**	Pharmacy Fill Record (02/14/2024)
03/18/2024	Hip MRI — clarifies hip vs shoulder MOI separation	☑ imaging moi	MRI Hip (Out-of-Order Date Stress) — ENCOUNTER 20 — MRI Hip (Out-of-Order Date Stress)...	**moderate**	MRI Hip (Out-of-Order Date Stress) (03/18/2024)
03/20/2024	Gabapentin started — neuropathic pain-management trajectory	☑ pain management	Pharmacy Fill Record — ENCOUNTER 21 — Pharmacy Fill Record Date: 03/20/2024...	low	Pharmacy Fill Record (03/20/2024)

Symptoms by body region

Shoulder / musculoskeletal

When	Symptom	Source
01/08/2024	Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit Date: 01/08/2024 | Index fall; mild shoulder/hip; no imaging; PCP	Urgent Care Visit (01/08/2024)
01/19/2024	EMERGENCY Department Visit — ENCOUNTER 04 — EMERGENCY Department Visit Date: 01/19/2024 | ED: MOI contradiction; vitals	EMERGENCY Department Visit (01/19/2024)
01/19/2024	Radiology / Imaging Report — ENCOUNTER 05 — Radiology / Imaging Report Date: 01/19/2024 | Delayed XR left shoulder	Radiology / Imaging Report (01/19/2024)

When	Symptom	Source
01/24/2024	Orthopedic Clinic — ENCOUNTER 07 — Orthopedic Clinic Date: 01/24/2024 | Ortho eval; MRI + PT ordered FACILITY: Harlan	Orthopedic Clinic (01/24/2024)
02/05/2024	MRI Imaging — ENCOUNTER 08 — MRI Imaging Date: 02/05/2024 | Delayed MRI (~12 days after ortho) FACILITY: Mountain View	MRI Imaging (02/05/2024)
02/08/2024	Physical Therapy Evaluation — ENCOUNTER 09 — Physical Therapy Evaluation Date: 02/08/2024 | PT eval + multi-session	Physical Therapy Evaluation (02/08/2024)
02/18/2024	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI review; delayed neurology for hand	Orthopedic Follow-up (02/18/2024)
03/01/2024	Urgent Care Visit — ENCOUNTER 14 — Urgent Care Visit Date: 03/01/2024 | Acute flare; abnormal vitals not escalated	Urgent Care Visit (03/01/2024)
03/05/2024	Hospital Admission — Inpatient — [Name]	Hospital Admission — Inpatient (03/05/2024)
03/11/2024	Neurology Consult — ENCOUNTER 18 — Neurology Consult Date: 03/11/2024 | Delayed neuro consult (~7 weeks after	Neurology Consult (03/11/2024)
03/18/2024	MRI Hip (Out-of-Order Date Stress) — ENCOUNTER 20 — MRI Hip (Out-of-Order Date Stress) Date: 03/18/2024 | Hip MRI dated	MRI Hip (Out-of-Order Date Stress) (03/18/2024)
04/10/2024	Orthopedic MMI / RTW Summary — ENCOUNTER 24 — Orthopedic MMI / RTW Summary Date: 04/10/2024 | MMI reached; return to	Orthopedic MMI / RTW Summary (04/10/2024)

Neurologic

When	Symptom	Source
01/19/2024	tingling	EMERGENCY Department Visit (01/19/2024)
02/18/2024	tingling	Orthopedic Follow-up (02/18/2024)
01/19/2024	EMERGENCY Department Visit — ENCOUNTER 04 — EMERGENCY Department Visit Date: 01/19/2024 | ED: MOI contradiction; vitals	EMERGENCY Department Visit (01/19/2024)
02/18/2024	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI review; delayed neurology for hand	Orthopedic Follow-up (02/18/2024)
03/11/2024	Neurology Consult — ENCOUNTER 18 — Neurology Consult Date: 03/11/2024 | Delayed neuro consult (~7 weeks after	Neurology Consult (03/11/2024)
03/15/2024	EMG / Nerve Study — ENCOUNTER 19 — EMG / Nerve Study Date: 03/15/2024 | Electrodiagnostics supporting CTS Metro Neuro	EMG / Nerve Study (03/15/2024)

Systemic / infection

When	Symptom	Source
03/02/2024	nausea	Pharmacy Fill Record (03/02/2024)
03/02/2024	Pharmacy Fill Record — ENCOUNTER 15 — Pharmacy Fill Record Date: 03/02/2024 | CVS refill; multi-pharmacy pattern	Pharmacy Fill Record (03/02/2024)
03/05/2024	Hospital Admission — Inpatient — [Name]	Hospital Admission — Inpatient (03/05/2024)

Other symptoms

When	Symptom	Source
01/08/2024	pain	Urgent Care Visit (01/08/2024)
01/19/2024	pain	EMERGENCY Department Visit (01/19/2024)
01/19/2024	headache	EMERGENCY Department Visit (01/19/2024)
01/20/2024	pain	Pharmacy Fill Record (01/20/2024)
01/24/2024	pain	Orthopedic Clinic (01/24/2024)
02/08/2024	pain	Physical Therapy Evaluation (02/08/2024)
02/12/2024	pain	Physical Therapy Progress (02/12/2024)
02/22/2024	pain	Physical Therapy Progress (02/22/2024)
03/01/2024	pain	Urgent Care Visit (03/01/2024)
03/05/2024	shortness of breath	Hospital Admission — Inpatient (03/05/2024)
03/11/2024	numbness	Neurology Consult (03/11/2024)
03/11/2024	neck pain	Neurology Consult (03/11/2024)
03/11/2024	pain	Neurology Consult (03/11/2024)
03/11/2024	radiating pain	Neurology Consult (03/11/2024)
04/05/2024	pain	Physical Therapy Progress — Plateau / MMI path (04/05/2024)
04/10/2024	pain	Orthopedic MMI / RTW Summary (04/10/2024)
12/15/2023	back pain	Primary Care — Pre-Existing (12/15/2023)

Reliability markers

When	Marker	Weight	Source
01/19/2024	Night pain documented — reliability / severity marker	**high**	EMERGENCY Department Visit (01/19/2024)
04/10/2024	Night pain documented — reliability / severity marker	**moderate**	Orthopedic MMI / RTW Summary (04/10/2024)

Timeline of symptoms

When	Symptoms	Source
01/08/2024	pain	Urgent Care Visit (01/08/2024)
01/19/2024	pain, headache, tingling	EMERGENCY Department Visit (01/19/2024)
01/20/2024	pain	Pharmacy Fill Record (01/20/2024)
01/24/2024	pain	Orthopedic Clinic (01/24/2024)
02/08/2024	pain	Physical Therapy Evaluation (02/08/2024)
02/12/2024	pain	Physical Therapy Progress (02/12/2024)
02/18/2024	tingling	Orthopedic Follow-up (02/18/2024)
02/22/2024	pain	Physical Therapy Progress (02/22/2024)
03/01/2024	pain	Urgent Care Visit (03/01/2024)

When	Symptoms	Source
03/02/2024	nausea	Pharmacy Fill Record (03/02/2024)
03/05/2024	shortness of breath	Hospital Admission — Inpatient (03/05/2024)
03/11/2024	numbness, neck pain, pain, radiating pain	Neurology Consult (03/11/2024)
04/05/2024	pain	Physical Therapy Progress — Plateau / MMI path (04/05/2024)
04/10/2024	pain	Orthopedic MMI / RTW Summary (04/10/2024)
12/15/2023	back pain	Primary Care — Pre-Existing (12/15/2023)

Imaging results

When	Finding	Source
01/08/2024	Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit	Urgent Care Visit (01/08/2024)
01/19/2024	EMERGENCY Department Visit — ENCOUNTER 04 — EMERGENCY Department Visit	EMERGENCY Department Visit (01/19/2024)
01/19/2024	Radiology / Imaging Report — ENCOUNTER 05 — Radiology / Imaging Report	Radiology / Imaging Report (01/19/2024)
01/24/2024	MRI tear, severity unspecified (planned)	Orthopedic Clinic (01/24/2024)
02/05/2024	MRI tear, severity mild; tear, severity unspecified; tear, severity unspecified (planned)	MRI Imaging (02/05/2024)
02/18/2024	MRI tear, severity unspecified (planned)	Orthopedic Follow-up (02/18/2024)
03/05/2024	CT tear, severity unspecified (planned)	Hospital Admission — Inpatient (03/05/2024)
03/11/2024	Neurology Consult — ENCOUNTER 18 — Neurology Consult	Neurology Consult (03/11/2024)
03/15/2024	EMG / Nerve Study — ENCOUNTER 19 — EMG / Nerve Study	EMG / Nerve Study (03/15/2024)
03/18/2024	—	MRI Hip (Out-of-Order Date Stress) (03/18/2024)

Treatment progression

When	Procedures	Medications	Source
01/08/2024	—	(patient reported): - Lisinopril 10 mg PO daily - Atorvastatin 20 mg PO nightly - Multivitamin daily, ibuprofen. Return if worsens. No imaging ordered. Home Medications (patient reported): - Lisinopril 10 mg PO daily	Urgent Care Visit (01/08/2024)
01/19/2024	—	Toradol 30 mg IM, Acetaminophen 1,000 mg PO, Zorpedrine 5 mg IV, Morphine 4 mg IV	EMERGENCY Department Visit (01/19/2024)
01/20/2024	—	Hydrocodone-Acetaminophen 5-325 mg, Ibuprofen 800 mg	Pharmacy Fill Record (01/20/2024)
01/24/2024	—	Lisinopril 10 mg qhs, APAP 5-325 PRN (from ED) - Ibuprofen 800 mg TID, daily - Atorvastatin 20 mg, Hydrocodone-Acetaminophen 5-325 PRN (from ED) - Ibuprofen 800 mg TID	Orthopedic Clinic (01/24/2024)
02/14/2024	—	Cyclobenzaprine 10 mg, Hydrocodone-Acetaminophen 5-325 mg	Pharmacy Fill Record (02/14/2024)
02/18/2024	—	Gastrozex, Painsolve	Orthopedic Follow-up (02/18/2024)

When	Procedures	Medications	Source
03/01/2024	—	Ketorolac 60 mg IM, Toradol 60 mg	Urgent Care Visit (03/01/2024)
03/02/2024	—	Ibuprofen 800 mg, ondansetron 4 mg	Pharmacy Fill Record (03/02/2024)
03/05/2024	—	Vancomycin 1 g IV, Cefepime 2 g IV	Hospital Admission — Inpatient (03/05/2024)
12/15/2023	—	Lisinopril 10 mg PO daily, Atorvastatin 20 mg PO	Primary Care — Pre-Existing (12/15/2023)

Red flags (neurologic / vascular / deterioration)

When	Red flag	Source
03/11/2024	Neurology Consult — ENCOUNTER 18 — Neurology Consult Date: 03/11/2024 | Delayed neuro consult (~7 weeks after paresthesias) FACILITY: Metro Neuro Associates Con	Neurology Consult (03/11/2024)

4. Medical Plausibility Layer

This is a plausibility screen only — not a medical or legal causation opinion

Shoulder fall pathway, injection/infection pathway, and CTS/neurologic tracks are modeled separately in Section 8 — sepsis/cellulitis is not treated as biomechanically caused by the fall unless chart explicitly links them

Billing / ICD integrity flags present (1) — cross-walk to treatment dates for damages credibility; not standalone proof of clinical causation

MOI plausibility screen: MOI language identified; mechanical plausibility requires clinical/biomechanical expert confirmation

Clinical course alignment: Clinical-course data available for comparison against the expected recovery pattern for this type of injury

Alternative explanations considered: true

Contradictions present: true

Flagged causal signals: 7

Screen result: plausible pending expert review

5. Causation Pathways – Deterministic Map (Executive Summary)

1	3	15	6	7
PRIMARY FACTORS	SECONDARY	NON-CAUSAL LISTED	CAUSAL CHAINS	FLAGGED EVENTS

Preventable? uncertain · **Deviations contributed?** true · **Harm timeline:** 03/05/2024

Primary causal factors

When	Factor	Strength
01/08/2024	Contusion	**moderate**

Secondary contributing

When	Factor	Strength
01/08/2024	Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit Date: 01/08/2024 | Index fall; mild shoulder/hip; no imaging; PCP f/u not booked FACILITY: Quick Care Urgent Clinic Visit Date: 01/08/2024 Provider: A. Nguyen, PA-C	**moderate**
02/18/2024	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI review; delayed neurology for hand tingling Harlan Shoulder Clinic — FOLLOW-UP Visit Date: 02/18/2024 Patient: [Name]	**moderate**
02/22/2024	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 | Missed appointment + regression language PT NOTE — Peak Motion Date: 02/22/2024 Pt: [Name] — L shldr Scheduled session	**moderate**

Case-file signals integrated: Missed PCP appointment — care-gap signal, Missed PCP appointment — care-gap signal, Suspicious ICD code (e.g. X 99.555) — billing integrity flag, Zorpedrine — likely OCR / formulary anomaly (not a verified . Temporal linkage screen: Contusion on 01/08/2024 is 0 day(s) from the index MOI date (01/08/2024). Summary is deterministic framing from chronology / deviation / medication signals. Not a legal determination of proximate cause

Attorney quick-scan summary

Topic	Status	Detail
MOI contradictions	**flagged**	Multiple distinct mechanism categories referenced (fall, lifting strain); resolved via Hierarchy of Reliability (Intake Notes > Initial ED Notes > Subsequent Progress Notes) — "fall" (Initial ED Note)
Imaging delays	**flagged**	Cross-check shoulder vs hip MRI timing against MOI accounts
PT regression	**flagged**	Non-linear PT course may support plateau / MMI framing
Pharmacy hopping / early refill	**flagged**	Early refill and multi-pharmacy patterns affect pain-management credibility
Neurologic delay	**flagged**	Delayed neuro eval relevant to CTS vs shoulder separation
Sepsis / infection bundle gaps	**flagged**	Injection → cellulitis → sepsis pathway is separate from fall MOI
MMI date	**flagged**	MMI language on 04/05/2024
Permanent / work restrictions	**flagged**	Permanent restrictions support damages / disability framing
Billing / ICD integrity	**flagged**	Fake ICD, unbundling, and modifier patterns integrated into causation context
Deterministic chains reconstructed	**flagged**	6 pathway(s); 7 flagged timeline event(s)
Attorney quick-scan summary	**flagged**	9 of 9 scan topics flagged for counsel review

6. Deterministic Causation Signals

Factual, non-opinion signals — the raw material for causation argument development.

Timestamp	Event	Expected action	Actual action	Deviation	Missed care	Deterioration	Doc gap	Strength	Source
01/08/2024	Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit Date: 01/08/2024 | Index fall; mild	—	Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit Date:	N	N	N	N	**moderate**	Urgent Care Visit (01/08/2024)

Timestamp	Event	Expected action	Actual action	Deviation	Missed care	Deterioration	Doc gap	Strength	Source
	shoulder/hip; no…		01/08/2024 | Index fall;…						
01/12/2024	Primary Care Office — ENCOUNTER 03 — Primary Care Office Date: 01/12/2024 | NO-SHOW / MISSED APPOINTMENT…	Timely order / performance of indicated care	Primary Care Office — ENCOUNTER 03 — Primary Care Office Date: 01/12/2024 | NO-SHOW /…	N	Y	N	N	low	Primary Care Office (01/12/2024)
02/05/2024	MRI Imaging — ENCOUNTER 08 — MRI Imaging Date: 02/05/2024 | Delayed MRI (~12 days after ortho) FACILITY:…	—	MRI Imaging — ENCOUNTER 08 — MRI Imaging Date: 02/05/2024 | Delayed MRI (~12 days after…	Y	N	N	N	low	MRI Imaging (02/05/2024)
02/18/2024	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI review; delayed neurology…	Action indicated by clinical context / standard of care	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI…	Y	Y	N	N	**moderate**	Orthopedic Follow-up (02/18/2024)
02/22/2024	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 | Missed appointment +…	Timely order / performance of indicated care	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 |…	N	Y	N	Y	**moderate**	Physical Therapy Progress (02/22/2024)
03/05/2024	Hospital Admission — Inpatient — [Name]	Recognition and escalation of deterioration	Hospital Admission — Inpatient — [Name]	N	N	Y	N	low	Hospital Admission — Inpatient…
03/11/2024	Neurology Consult — ENCOUNTER 18 — Neurology Consult Date:	Action indicated by clinical context /	Neurology Consult — ENCOUNTER 18 — Neurology	Y	N	N	N	low	Neurology Consult (03/11/2024)

Timestamp	Event	Expected action	Actual action	Deviation	Missed care	Deterioration	Doc gap	Strength	Source
	03/11/2024 | Delayed neuro consult (~7 weeks after…	standard of care	Consult Date: 03/11/2024 | Delayed neuro…						

7. Causation Map (Event → Effect)

When	Event	Physiologic effect	Clinical manifestation	Documentation support	Gaps
01/12/2024	Primary Care Office — ENCOUNTER 03 — Primary Care Office Date: 01/12/2024 | NO-SHOW / MISSED APPOINTMENT…	Delayed detection / treatment of the underlying condition	Primary Care Office — ENCOUNTER 03 — Primary Care Office Date: 01/12/2024 | NO-SHOW / MISSED APPOINTMENT (care-gap) FACILITY: Riverside Family Medicine Patient: [Name]	Primary Care Office (01/12/2024)	None noted
02/05/2024	MRI Imaging — ENCOUNTER 08 — MRI Imaging Date: 02/05/2024 | Delayed MRI (~12 days after ortho) FACILITY:…	Departure from the expected action sequence	MRI Imaging — ENCOUNTER 08 — MRI Imaging Date: 02/05/2024 | Delayed MRI (~12 days after ortho) FACILITY: Mountain View Imaging Center Patient: [Name]	MRI Imaging (02/05/2024)	None noted
02/18/2024	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI review; delayed neurology…	Departure from the expected action sequence; Delayed detection / treatment of the underlying condition	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI review; delayed neurology for hand tingling Harlan Shoulder Clinic — FOLLOW-UP Visit Date: 02/18/2024 Patient: [Name]	Orthopedic Follow-up (02/18/2024)	None noted
02/22/2024	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 | Missed appointment +…	Delayed detection / treatment of the underlying condition; Undocumented / unverifiable clinical status	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 | Missed appointment + regression language PT NOTE — Peak Motion Date: 02/22/2024 Pt: [Name] — L shldr Scheduled session	Physical Therapy Progress (02/22/2024)	Documentation gap present — source support limited
03/05/2024	Hospital Admission — Inpatient — [Name]	Progressive physiologic decline	Hospital Admission — Inpatient — [Name]	Hospital Admission — Inpatient (03/05/2024)	None noted
03/11/2024	Neurology Consult — ENCOUNTER 18 — Neurology Consult Date: 03/11/2024 | Delayed neuro consult (~7 weeks after…	Departure from the expected action sequence	Neurology Consult — ENCOUNTER 18 — Neurology Consult Date: 03/11/2024 | Delayed neuro consult (~7 weeks after paresthesias) FACILITY: Metro Neuro Associates Consult Date: 03/11/2024 Patient: [Name]	Neurology Consult (03/11/2024)	None noted

8. Causation Pathways – Deterministic Map

Shoulder fall pathway, injection/infection branch, and CTS/neurologic tracks are modeled separately. Sepsis/cellulitis is not treated as biomechanically caused by the fall unless the chart explicitly links them.

Shoulder causation pathway (fall-related) · high confidence

Mechanism of Injury (MOI): Patient slipped in kitchen, landed primarily on RIGHT → Shoulder soft-tissue injury → MRI-documented tear / structural finding →

PT / conservative course → Functional plateau / non-linear recovery → MMI documented

MOI → shoulder tear: High (MRI-confirmed soft-tissue injury)

Non-fall pathway: injection → infection → sepsis · high confidence

Shoulder / joint injection → Cellulitis / local infection → Sepsis hospitalization

Injection → cellulitis → sepsis: High (temporal proximity + clinical notes). Not biomechanically caused by the fall

Excluded / separate: Index fall MOI — treat as separate iatrogenic / complication pathway

Billing / coding deviations — causation narrative context · moderate confidence

Suspicious ICD code (e.g. X 99.555) — billing integrity flag

Billing anomalies do not prove injury causation but may affect damages / credibility framing and should be cross-walked to treatment dates

missed care→worsening→harm · moderate confidence

Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI review; delayed neurology for hand tingling Harlan Shoulder Clinic — FOLLOW-UP Visit Date: 02/18/2024 Patient: [Name] → Care not performed / delayed → Worsening / deterioration risk →

Potential harm pathway

Hip imaging — separate from shoulder MOI · moderate confidence

Hip MRI / hip-region workup documented → Supports MOI separation (hip vs shoulder mechanism)

Hip findings clarify that not all imaging maps to the shoulder fall mechanism

Excluded / separate: Shoulder fall pathway unless chart links hip to same event

Carpal tunnel — likely separate from shoulder tear · low confidence

Documented CTS / neurology evaluation	→	Separate upper-extremity neuropathy track

Shoulder tear → CTS: Low (CTS likely separate per neurology / occupational pattern)

Excluded / separate: Shoulder fall pathway unless expert links repetitive strain

9. Care Gaps & System Deviations (Missed Care → Harm)

When	Missed care	Category	Harm link	Strength	Source
01/08/2024	Missed PCP appointment — care-gap signal	follow up	Care-gap signal — temporal association; expert review for harm linkage	high	Urgent Care Visit (01/08/2024)
01/12/2024	Primary Care Office — ENCOUNTER 03 — Primary Care Office Date: 01/12/2024 | NO-SHOW / MISSED APPOINTMENT (care-gap) FACILITY: Riverside Family Medicine Patient: [Name]	other	Temporal association only — expert review required	low	Primary Care Office (01/12/2024)
01/12/2024	Missed PCP appointment — care-gap signal	follow up	Care-gap signal — temporal association; expert review for harm linkage	high	Primary Care Office (01/12/2024)
02/18/2024	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | MRI review; delayed neurology for hand tingling Harlan Shoulder Clinic — FOLLOW-UP Visit Date: 02/18/2024 Patient: [Name]	imaging, follow up	Temporal association only — expert review required	moderate	Orthopedic Follow-up (02/18/2024)
02/22/2024	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 | Missed appointment + regression language PT NOTE — Peak Motion Date: 02/22/2024 Pt: [Name] — L shldr Scheduled session	other	Temporal association only — expert review required	moderate	Physical Therapy Progress (02/22/2024)

10. Deterioration-Linked Causation

Timestamp	Event	Expected	Actual	Strength	Source
03/05/2024	Hospital Admission — Inpatient — [Name]	Recognition and escalation of deterioration	Hospital Admission — Inpatient — [Name]	low	Hospital Admission — Inpatient (03/05/2024)

11. Documentation-Linked Causation

Timestamp	Event	Expected	Actual	Strength	Source
02/22/2024	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 | Missed appointment + regression language PT NOTE — Peak Motion Date: 02/22/2024 Pt: [Name] — L shldr Scheduled session	Timely order / performance of indicated care	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 | Missed appointment + regression language PT NOTE — Peak Motion Date: 02/22/2024 Pt: [Name] — L shldr Scheduled session	moderate	Physical Therapy Progress (02/22/2024)

12. Standard-of-Care Rule Violations

Cross-referenced against the Deviation of Care / Sentinel snapshot by rule ID and finding status.

These rows are protocol-comparison **candidates** (from Deviation of Care potential candidates and/or Causation timeline signals). They are **not** confirmed Standard-of-Care rule violations until matching curated pathways are loaded and fire.

Rule ID	Rule violated	Deviation status	Expected	Actual	Causal impact	Severity	When	Source
Abnormal vitals not escalated	Abnormal vitals not escalated	candidate	Compare against curated protocol / reference standard	rr=tachypnea	rr=tachypnea Candidate	low	03/05/2024	chronology/vitals
Delayed imaging	Delayed imaging	candidate	Compare against curated protocol / reference standard	Chronology explicitly notes delayed imaging	Chronology explicitly notes delayed imaging Candidate	low	01/19/2024	chronology
Delayed imaging	Delayed imaging	candidate	Compare against curated protocol / reference standard	Chronology explicitly notes delayed imaging	Chronology explicitly notes delayed imaging Candidate	low	02/05/2024	chronology
Missed PCP follow-up	Missed PCP follow-up	candidate	Compare against curated protocol / reference standard	…scharged home with sling. ortho f/u written but not booked. no pcp follow-up arranged. — end encounter 04 / page section break…	…scharged home with sling. ortho f/u written but not booked. no pcp follow-up arranged. — end encounter 04 / page section break… Candidate	low	01/19/2024	chronology
Delayed neurology referral	Delayed neurology referral	candidate	Compare against curated protocol / reference standard	…rthopedic follow-up date: 02/18/2024 | purpose: mri review; delayed neurology for hand tingling bates-000012 harlan shoulder clinic —…	…rthopedic follow-up date: 02/18/2024 | purpose: mri review; delayed neurology for hand tingling bates-000012 harlan shoulder clinic —… Candidate	low	02/18/2024	chronology
MOI contradictions	MOI contradictions	candidate	Compare against curated protocol / reference standard	…emergency department visit date: 01/19/2024 | purpose: ed: moi contradiction; vitals non-escalation; fake med/icd;	…emergency department visit date: 01/19/2024 | purpose: ed: moi contradiction; vitals non-escalation; fake med/icd; delayed xr	low	01/19/2024	chronology

Rule ID	Rule violated	Deviation status	Expected	Actual	Causal impact	Severity	When	Source
				delayed xr bates-0000...	bates-0000... Candidate			

13. Non-Causal Events (Excluded)

Events without causation flags — useful for defense / insurer framing.

Timestamp	Event	Why non-causal	Source
01/19/2024	EMERGENCY Department Visit — ENCOUNTER 04 — EMERGENCY Department Visit Date: 01/19/2024 | ED: MOI...	No deviation / missed-care / deterioration / documentation-gap flags	EMERGENCY Department Visit (01/19/2024)
01/19/2024	Radiology / Imaging Report — ENCOUNTER 05 — Radiology / Imaging Report Date: 01/19/2024 | Delayed XR left...	No deviation / missed-care / deterioration / documentation-gap flags	Radiology / Imaging Report (01/19/2024)
01/20/2024	Pharmacy Fill Record — ENCOUNTER 06 — Pharmacy Fill Record Date: 01/20/2024 | CVS initial opioid + NSAID...	No deviation / missed-care / deterioration / documentation-gap flags	Pharmacy Fill Record (01/20/2024)
01/24/2024	Orthopedic Clinic — ENCOUNTER 07 — Orthopedic Clinic Date: 01/24/2024 | Ortho eval; MRI + PT ordered...	No deviation / missed-care / deterioration / documentation-gap flags	Orthopedic Clinic (01/24/2024)
02/08/2024	Physical Therapy Evaluation — ENCOUNTER 09 — Physical Therapy Evaluation Date: 02/08/2024 | PT eval +...	No deviation / missed-care / deterioration / documentation-gap flags	Physical Therapy Evaluation (02/08/2024)
02/12/2024	Physical Therapy Progress — ENCOUNTER 10 — Physical Therapy Progress Date: 02/12/2024 | Session improvement...	No deviation / missed-care / deterioration / documentation-gap flags	Physical Therapy Progress (02/12/2024)
02/14/2024	Pharmacy Fill Record — ENCOUNTER 11 — Pharmacy Fill Record Date: 02/14/2024 | Walgreens early opioid refill +...	No deviation / missed-care / deterioration / documentation-gap flags	Pharmacy Fill Record (02/14/2024)
03/01/2024	Urgent Care Visit — ENCOUNTER 14 — Urgent Care Visit Date: 03/01/2024 | Acute flare; abnormal vitals not...	No deviation / missed-care / deterioration / documentation-gap flags	Urgent Care Visit (03/01/2024)
03/02/2024	Pharmacy Fill Record — ENCOUNTER 15 — Pharmacy Fill Record Date: 03/02/2024 | CVS refill; multi-pharmacy...	No deviation / missed-care / deterioration / documentation-gap flags	Pharmacy Fill Record (03/02/2024)
03/15/2024	EMG / Nerve Study — ENCOUNTER 19 — EMG / Nerve Study Date: 03/15/2024 | Electrodiagnostics supporting CTS...	No deviation / missed-care / deterioration / documentation-gap flags	EMG / Nerve Study (03/15/2024)
03/18/2024	MRI Hip (Out-of-Order Date Stress) — ENCOUNTER 20 — MRI Hip (Out-of-Order Date Stress) Date: 03/18/2024 | Hip...	No deviation / missed-care / deterioration / documentation-gap flags	MRI Hip (Out-of-Order Date Stress) (03/18/2024)
03/20/2024	Pharmacy Fill Record — ENCOUNTER 21 — Pharmacy Fill Record Date: 03/20/2024 | Gabapentin start; return to CVS...	No deviation / missed-care / deterioration / documentation-gap flags	Pharmacy Fill Record (03/20/2024)

Timestamp	Event	Why non-causal	Source
04/05/2024	Physical Therapy Progress — Plateau / MMI path — ENCOUNTER 23 — Physical Therapy Progress — Plateau / MMI…	No deviation / missed-care / deterioration / documentation-gap flags	Physical Therapy Progress — Plateau / MMI path (04/05/2024)
04/10/2024	Orthopedic MMI / RTW Summary — ENCOUNTER 24 — Orthopedic MMI / RTW Summary Date: 04/10/2024 | MMI reached;…	No deviation / missed-care / deterioration / documentation-gap flags	Orthopedic MMI / RTW Summary (04/10/2024)
12/15/2023	Primary Care — Pre-Existing — ENCOUNTER 01 — Primary Care — Pre-Existing Date: 12/15/2023 | Pre-index chronic…	No deviation / missed-care / deterioration / documentation-gap flags	Primary Care — Pre-Existing (12/15/2023)

14. Causation Limitations / Abstentions

What this report does not do

This report does not opine on negligence, breach of the standard of care, legal causation, or the probability that any act or omission caused the alleged injury. It presents a deterministic, source-linked plausibility framework for counsel and any retained medical expert to evaluate — not an expert medical or legal opinion

4 of 10 Desired-State checks show gaps. Treat this section as a discovery / case-strategy action plan — obtain missing records and specialist input before relying on causation findings for expert designation, apportionment, or settlement posture

✓ = Desired State met. ▲ = Gap requiring discovery or expert action. RITA is a forensic auditor of the chart — not a treating physician or legal opinion

✓ Reference Standard-of-Care Protocols

Status: Loaded — curated reference protocols on file

Reference protocols on file

✓ Deviation of Care Snapshot

Status: Loaded and available

Deviation of Care snapshot available

✓ Mechanism-of-Injury Documentation

Status: Documented — grounded MOI language verified

Forensic Causation Module verified grounded MOI language in the chart

▲ Mechanism-of-Injury Consistency

Status: Gap — conflicting MOI categories (fall, lifting strain); 12 account(s) across 9 encounter(s). Expert resolution required

11 distinct mechanism-of-injury accounts found across 9 encounter(s) — resolve with counsel / treating provider before relying on a single MOI

> **Action required:** Reconcile competing MOI accounts via Hierarchy of Reliability review (Intake > Initial ED > Progress Notes) and obtain

clarifying statements from the claimant / treating providers

Opposing counsel will argue: Defense will highlight MOI contradictions to attack credibility and argue that any later diagnosis cannot be reliably linked to a single industrial event

✓ Imaging / Objective Findings

Status: Available — grounded imaging findings verified

Forensic Causation Module verified grounded imaging findings in the chart

▲ Documentation Completeness

Status: Gap — 1 documentation-gap event(s) flagged

1 documentation-gap event(s) flagged in the causation timeline

Action required: Issue record requests / subpoenas for: 02/22/2024 (unspecified facility): Timely order / performance of indicated care

- 02/22/2024 — unspecified facility: Timely order / performance of indicated care

Opposing counsel will argue: Defense will argue the chart is incomplete and that missing notes prevent reliable causation / deviation analysis — and may imply the gaps favor the defense narrative

▲ Medication-Causation Intelligence

Status: Gap — medication causation intelligence not available

Medication premium intelligence not available for this case

Action required: Enable medication premium enrichment / causation maps for pharmacology-linked theories

Opposing counsel will argue: Defense will challenge any medication-related causation theory as unsupported by chart intelligence

▲ Baseline / Pre-Existing Medical Records

Status: Gap — no records prior to DOI (12/15/2023)

Chronology contains zero encounters before the earliest MOI / injury date. Baseline status is required for apportionment analysis

Action required: Subpoena pre-injury primary-care / specialty records for the 2–5 years preceding 12/15/2023 (or longer if chronic conditions are alleged)

Opposing counsel will argue: Defense will argue any impairment is entirely pre-existing / degenerative and that apportionment cannot be performed without a documented pre-injury baseline

✓ Maximum Medical Improvement (MMI) Status

Status: Documented — MMI / permanent-and-stationary language found

MMI-related language identified in 2 encounter(s)

✓ Biomechanical / Job-Duty Description

Status: Documented — job-duty / physical-demands language found

Job-duty / RTW / physical-demands language identified in 2 encounter(s)

Discovery Hit-List

Hand to paralegal — draft requests / subpoenas for these items.

- [Mechanism-of-Injury Consistency] Reconcile competing MOI accounts via Hierarchy of Reliability review (Intake > Initial ED > Progress Notes) and obtain clarifying statements from the claimant / treating providers
- [Documentation Completeness] 02/22/2024 (unspecified facility): Timely order / performance of indicated care
- [Medication-Causation Intelligence] Enable medication premium enrichment / causation maps for pharmacology-linked theories
- [Baseline / Pre-Existing Medical Records] Subpoena pre-injury primary-care / specialty records for the 2–5 years preceding 12/15/2023 (or longer if chronic conditions are alleged)

Pre-Emptive Rebuttal / Anticipated Defense Arguments

Fear is a discovery motivator — close these gaps before opposing counsel weaponizes them.

Limitation leveraged: Mechanism-of-Injury Consistency
Opposing counsel will argue: Defense will highlight MOI contradictions to attack credibility and argue that any later diagnosis cannot be reliably linked to a single industrial event. Mitigation: Reconcile competing MOI accounts via Hierarchy of Reliability review (Intake > Initial ED > Progress Notes) and obtain clarifying statements from the claimant / treating providers

Limitation leveraged: Documentation Completeness
Opposing counsel will argue: Defense will argue the chart is incomplete and that missing notes prevent reliable causation / deviation analysis — and may imply the gaps favor the defense narrative. Mitigation: Issue record requests / subpoenas for: 02/22/2024 (unspecified facility): Timely order / performance of indicated care

Limitation leveraged: Medication-Causation Intelligence
Opposing counsel will argue: Defense will challenge any medication-related causation theory as unsupported by chart intelligence. Mitigation: Enable medication premium enrichment / causation maps for pharmacology-linked theories

Limitation leveraged: Baseline / Pre-Existing Medical Records
Opposing counsel will argue: Defense will argue any impairment is entirely pre-existing / degenerative and that apportionment cannot be performed without a documented pre-injury baseline. Mitigation: Subpoena pre-injury primary-care / specialty records for the 2–5 years preceding 12/15/2023 (or longer if chronic conditions are alleged)

Pre-existing condition / natural progression
Review the Aggravation vs. New Injury module and clinical-course timeline for acute-onset markers distinguishing aggravation from baseline disease; obtain complete pre-injury records for apportionment

Closing Synthesis (Non-Opinion)

This deterministic causation screen identifies multiple chronology, documentation, and care-gap stressors that may be relevant to counsel and any retained medical expert. No legal or medical conclusions are drawn. The report documents 7 deterministic causation node cluster(s) and 7 elevated stressor domain(s) for expert correlation

15. Document Index

Kind	Title	Facility	Summary	Date
source document	Urgent Care Visit (01/08/2024)	Quick Care Urgent Clinic	Urgent Care Visit — ENCOUNTER 02 — Urgent Care Visit Date: 01/08/2024 | Purpose: Index fall; mild shoulder/hip; no imaging; PCP f/u not booked BATES-000002 FACILITY: Quick Care U	01/08/2024

Kind	Title	Facility	Summary	Date
source document	Primary Care Office (01/12/2024)	Riverside Family Medicine	Primary Care Office — ENCOUNTER 03 — Primary Care Office Date: 01/12/2024 | Purpose: NO-SHOW / MISSED APPOINTMENT (care-gap) BATES-000003 FACILITY: Riverside Family Medicine Patient: [Name]	01/12/2024
source document	EMERGENCY Department Visit (01/19/2024)	Metro General Hospital	EMERGENCY Department Visit — ENCOUNTER 04 — EMERGENCY Department Visit Date: 01/19/2024 | Purpose: ED: MOI contradiction; vitals non-escalation; fake med/ICD; delayed XR BATES-000004 FACILITY: Metro General Hospital — EM	01/19/2024
source document	Radiology / Imaging Report (01/19/2024)	Metro General Imaging	Radiology / Imaging Report — ENCOUNTER 05 — Radiology / Imaging Report Date: 01/19/2024 | Purpose: Delayed XR left shoulder (delayed imaging key event) BATES-000005 FACILITY: Metro General Imaging	01/19/2024
source document	Pharmacy Fill Record (01/20/2024)	—	Pharmacy Fill Record — ENCOUNTER 06 — Pharmacy Fill Record Date: 01/20/2024 | Purpose: CVS initial opioid + NSAID (days supply for early-refill math) BATES-000006 PHARMACY FILL / DISPENSE RECORD Pharmacy: CVS Pharmacy #4	01/20/2024
source document	Orthopedic Clinic (01/24/2024)	Harlan Shoulder Clinic	Orthopedic Clinic — ENCOUNTER 07 — Orthopedic Clinic Date: 01/24/2024 | Purpose: Ortho eval; MRI + PT ordered BATES-000007 FACILITY: Harlan Shoulder Clinic — Orthopedics Visit Date: 01/24/2024 Patient: [Name]	01/24/2024
source document	MRI Imaging (02/05/2024)	Mountain View Imaging Center	MRI Imaging — ENCOUNTER 08 — MRI Imaging Date: 02/05/2024 | Purpose: Delayed MRI (~12 days after ortho) BATES-000008 FACILITY: Mountain View Imaging Center Patient: [Name]	02/05/2024
source document	Physical Therapy Evaluation (02/08/2024)	Peak Motion Physical Therapy	Physical Therapy Evaluation — ENCOUNTER 09 — Physical Therapy Evaluation Date: 02/08/2024 | Purpose: PT eval + multi-session plan (trajectory baseline) BATES-000009 ==== PT EVAL / OUTPT REHAB ==== Facility: Peak Motion P	02/08/2024
source document	Physical Therapy Progress (02/12/2024)	—	Physical Therapy Progress — ENCOUNTER 10 — Physical Therapy Progress Date: 02/12/2024 | Purpose: Session improvement BATES-000010 Peak Motion Physical Therapy — PROGRESS NOTE DOS: 02/12/2024 Patient: [Name]	02/12/2024
source document	Pharmacy Fill Record (02/14/2024)	—	Pharmacy Fill Record — ENCOUNTER 11 — Pharmacy Fill Record Date: 02/14/2024 | Purpose: Walgreens early opioid refill + pharmacy hopping BATES-000011 PHARMACY FILL / REFILL RECORD Pharmacy: Walgreens #2290 — different cha	02/14/2024
source document	Orthopedic Follow-up (02/18/2024)	—	Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up Date: 02/18/2024 | Purpose: MRI review; delayed neurology for hand tingling BATES-000012 Harlan Shoulder Clinic — FOLLOW-UP Visit Date: 02/18/2024 Patient: [Name]	02/18/2024
source document	Physical Therapy Progress (02/22/2024)	—	Physical Therapy Progress — ENCOUNTER 13 — Physical Therapy Progress Date: 02/22/2024 | Purpose: Missed appointment + regression language BATES-000013 PT NOTE — Peak Motion Date: 02/22/2024 Pt: [Name] — L shldr Sch	02/22/2024
source document	Urgent Care Visit (03/01/2024)	Quick Care Urgent Clinic	Urgent Care Visit — ENCOUNTER 14 — Urgent Care Visit Date: 03/01/2024 | Purpose: Acute flare; abnormal vitals not escalated BATES-000014 FACILITY: Quick Care Urgent Clinic Visit Date: 03/01/2024 Patient: [Name]	03/01/2024

Kind	Title	Facility	Summary	Date
source document	Pharmacy Fill Record (03/02/2024)	—	Pharmacy Fill Record — ENCOUNTER 15 — Pharmacy Fill Record Date: 03/02/2024 | Purpose: CVS refill; multi-pharmacy pattern continues BATES-000015 PHARMACY DISPENSE LOG Pharmacy: CVS Pharmacy (OCR abbreviated — not #4821)	03/02/2024
source document	Hospital Admission — Inpatient (03/05/2024)	Metro General Hospital	Hospital Admission — Inpatient — [Name]	03/05/2024
source document	Neurology Consult (03/11/2024)	Metro Neuro Associates	Neurology Consult — ENCOUNTER 18 — Neurology Consult Date: 03/11/2024 | Purpose: Delayed neuro consult (~7 weeks after paresthesias) BATES-000018 FACILITY: Metro Neuro Associates Consult Date: 03/11/2024 Patient: [Name]	03/11/2024
source document	EMG / Nerve Study (03/15/2024)	—	EMG / Nerve Study — ENCOUNTER 19 — EMG / Nerve Study Date: 03/15/2024 | Purpose: Electrodiagnostics supporting CTS BATES-000019 Metro Neuro Associates — EMG/NCS REPORT Study Date: 03/15/2024 Patient: [Name]	03/15/2024
source document	MRI Hip (Out-of-Order Date Stress) (03/18/2024)	Mountain View Imaging Center	MRI Hip (Out-of-Order Date Stress) — ENCOUNTER 20 — MRI Hip (Out-of-Order Date Stress) Date: 03/18/2024 | Purpose: Hip MRI dated after shoulder saga (chronology ordering stress) BATES-000020 FACILITY: Mountain View Imagi	03/18/2024
source document	Pharmacy Fill Record (03/20/2024)	—	Pharmacy Fill Record — ENCOUNTER 21 — Pharmacy Fill Record Date: 03/20/2024 | Purpose: Gabapentin start; return to CVS #4821 BATES-000021 RETAIL PHARMACY FILL Pharmacy: CVS Pharmacy #4821 (return to original store) Patie	03/20/2024
source document	Physical Therapy Progress — Plateau / MMI path (04/05/2024)	—	Physical Therapy Progress — Plateau / MMI path — ENCOUNTER 23 — Physical Therapy Progress — Plateau / MMI path Date: 04/05/2024 | Purpose: PT plateau language for MMI/RTW BATES-000023 Peak Motion Physical Therapy — PROGR	04/05/2024
source document	Orthopedic MMI / RTW Summary (04/10/2024)	—	Orthopedic MMI / RTW Summary — ENCOUNTER 24 — Orthopedic MMI / RTW Summary Date: 04/10/2024 | Purpose: MMI reached; return to work; demand/damages facts BATES-000024 Harlan Shoulder Clinic — MMI / WORK STATUS Date: 04/10	04/10/2024
source document	Primary Care — Pre-Existing (12/15/2023)	Riverside Family Medicine	Primary Care — Pre-Existing — ENCOUNTER 01 — Primary Care — Pre-Existing Date: 12/15/2023 | Purpose: Pre-index chronic LBP (pre-existing condition module) BATES-000001 [MRN: SYN	12/15/2023
case chronology	Case chronology (22 events)	—	Deterministic event timeline assembled from 22 source document(s)	—
deviation of care snapshot	Deviation of Care snapshot (rule findings)	—	Sentinel rule-engine findings comparing chart events to curated protocol objects	—
reference standard	RITA_Reference_SoC_Manual_Sepsis_STEMI	—	—	—
case document	RITA_Synthetic_Full Case_[Name].json	—	—	—

Visual Causation Map PREMIUM

Acute vs. Chronic Triggers

```
Acute [||||||||||||||||||||] 26 Chronic [|..................] 1
```

Counts are deterministic keyword screens of chronology language — not a medical determination of acuity or apportionment

Causal pathway steps

shoulder orthopedic pathway · high

Mechanism of Injury (MOI): Patient slipped in kitchen, landed primarily on RIGHT → Shoulder soft-tissue injury → MRI-documented tear / structural finding →

PT / conservative course → Functional plateau / non-linear recovery → MMI documented

injection infection pathway · high

Shoulder / joint injection → Cellulitis / local infection → Sepsis hospitalization

billing integrity causation context · moderate

Suspicious ICD code (e.g. X 99.555) — billing integrity flag

missed care→worsening→harm · moderate

Orthopedic Follow-up — ENCOUNTER 12 — Orthopedic Follow-up → Care not performed / delayed → Worsening / deterioration risk →

Potential harm pathway

hip moi separation · moderate

Hip MRI / hip-region workup documented → Supports MOI separation (hip vs shoulder mechanism)

cts separate etiology · low

Documented CTS / neurology evaluation → Separate upper-extremity neuropathy track

Causation Severity Scoring PREMIUM

Composite heuristic score: **47.6** · Flagged: 7

high: 0, moderate: 3, low: 4, none: 0

Composite is a heuristic index (0–100), not a liability percentage

Provider-Specific Causation Breakdown PREMIUM

Provider	High	Moderate	Low	Total
Provider Unassigned	0	2	2	4
A. Nguyen, PA-C	0	1	0	1
L. Cho, MD	0	0	1	1
S. Bernstein, MD	0	0	1	1

Outcome Overlay PREMIUM

Outcomes: delay · Harm dates: 03/05/2024 · Primary factors: 1

Outcome labels inferred from chronology language; confirm clinically

Standard-of-Care Causation Linkage PREMIUM

Ties deviations to harm — e.g. "Because imaging was delayed, the patient suffered X."

Rule	Expected	Actual	Impact	Severity
Abnormal vitals not escalated	Compare against curated protocol / reference standard	rr=tachypnea	rr=tachypnea	low
Delayed imaging	Compare against curated protocol / reference standard	Chronology explicitly notes delayed imaging	Chronology explicitly notes delayed imaging	low
Delayed imaging	Compare against curated protocol / reference standard	Chronology explicitly notes delayed imaging	Chronology explicitly notes delayed imaging	low
Missed PCP follow-up	Compare against curated protocol / reference standard	…scharged home with sling. ortho f/u written but not booked. no pcp follow-up arranged. — end encounter 04 / page section break…	…scharged home with sling. ortho f/u written but not booked. no pcp follow-up arranged. — end encounter 04 / page section break…	low
Delayed neurology referral	Compare against curated protocol / reference standard	…rthopedic follow-up date: 02/18/2024 | purpose: mri review; delayed neurology for hand tingling bates-000012 harlan shoulder clinic —…	…rthopedic follow-up date: 02/18/2024 | purpose: mri review; delayed neurology for hand tingling bates-000012 harlan shoulder clinic —…	low
MOI contradictions	Compare against curated protocol / reference standard	…emergency department visit date: 01/19/2024 | purpose: ed: moi contradiction; vitals non-escalation; fake med/icd; delayed xr bates-0000…	…emergency department visit date: 01/19/2024 | purpose: ed: moi contradiction; vitals non-escalation; fake med/icd; delayed xr bates-0000…	low

Expert-Style Causation Opinion (High Risk) Premium PREMIUM

Preventable: uncertain · Deviations contributed: true

- [01/08/2024] Contusion (strength: moderate)

Expert-ready draft only. Requires clinician expert review before use in affidavit or testimony

But-For Causation Analysis PREMIUM

- [01/08/2024] But for "Contusion" (strength: moderate), the downstream deterioration/harm pathway documented in the chart may not have occurred as recorded — counterfactual framing only, not a certainty determination (confidence: moderate)

Requires Expert Clinical Correlation: heuristic causal-strength signals were found, but no citation-grounded causal chain reached high confidence

Counterfactual framing for attorney argument development — requires expert corroboration before use in a filing or testimony

Aggravation vs. New Injury Analysis Grounded PREMIUM

Classification: **delayed diagnosis possible aggravation or progression**

Earliest MOI encounter: 01/08/2024

Initial diagnosis date: 01/19/2024

Days between: 11

When	Excerpt	Source
03/01/2024	ENCOUNTER 14 — Urgent Care Visit Date: 03/01/2024 | Purpose: Acute flare; abnormal vitals not escalated BATES-000014 FACILITY: Quick Care Urgent Clinic Visit Date: 03/01/2024 Patient: [Name]	Urgent Care Visit (03/01/2024)
12/15/2023	ENCOUNTER 01 — Primary Care — Pre-Existing Date: 12/15/2023 | Purpose: Pre-index chronic LBP (pre-existing condition module) BATES-000001 FACILITY: Riverside Fam	Primary Care — Pre-Existing (12/15/2023)

Timing comparison is deterministic date arithmetic only — whether this represents a new injury vs. acute aggravation of a pre-existing condition requires expert medical review

Differential Etiology Module Grounded PREMIUM

> **Physician triage tool — not a diagnostic determination.** Rule-Out Probability disclaimer: competing-diagnosis pairings and rule-in / rule-out candidates are a physician triage screen for chart review — not a diagnostic determination, probability of diagnosis, or medical opinion. This module does not establish or exclude disease. A reviewing physician / retained medical expert must independently confirm or reject each candidate before any clinical or medicolegal use

Differential pairing: **Cervical radiculopathy vs. Carpal tunnel syndrome**

Grounded clinical findings

Finding	Body region	Source
No acute fracture. Mild AC joint osteoarthritis. Soft tissue swelling	LEFT SHOULDER	RITA_Synthetic_Full Case_[Name].json
Partial-thickness bursal-sided tear of supraspinatus (~8 mm), Mild subacromial bursitis, Intact labrum; no full-thickness tear, AC joint: mild OA (aligns…	LEFT SHOULDER WITHOUT CONTRAST	RITA_Synthetic_Full Case_[Name].json
partial bursal-sided SST tear	shoulder	RITA_Synthetic_Full Case_[Name].json
no acute intracranial hemorrhage. Correlate clinically	head noncontrast	RITA_Synthetic_Full Case_[Name].json
Mild trochanteric bursitis. No fracture. Labrum intact	RIGHT HIP WITHOUT CONTRAST	RITA_Synthetic_Full Case_[Name].json

Biomechanical Causation Module Grounded PREMIUM

MOI categories: fall, lifting strain · Contradictions in MOI: true

Grounded MOI findings

Mechanism	Citation	Source
Contradictory MOI (hip vs shoulder; left vs right; ice vs kitchen)	Contradictory MOI (hip vs shoulder; left vs right; ice vs kitchen)	RITA_Synthetic_Full Case_[Name].json
Patient slipped in kitchen, landed primarily on RIGHT HIP	Mechanism of Injury (MOI): Patient slipped in kitchen, landed primarily on RIGHT HIP	RITA_Synthetic_Full Case_[Name].json
Trauma / fall	Trauma / fall	RITA_Synthetic_Full Case_[Name].json
Pt reports falling backwards, landing on RIGHT HIP, but pain is LEFT SHOULDER	Mechanism of Injury: Pt reports falling backwards, landing on RIGHT HIP, but pain is LEFT SHOULDER	RITA_Synthetic_Full Case_[Name].json
fall	Left shoulder pain s/p fall	RITA_Synthetic_Full Case_[Name].json
slipped on ice	"slipped on ice"	RITA_Synthetic_Full Case_[Name].json
kitchen floor	"kitchen floor"	RITA_Synthetic_Full Case_[Name].json
Fall on ice (per patient today)	Fall on ice (per patient today)	RITA_Synthetic_Full Case_[Name].json
January kitchen fall (index MOI)	Residual right hip pain after January kitchen fall (index MOI)	RITA_Synthetic_Full Case_[Name].json
the January 2024 slip-and-fall	not the January 2024 slip-and-fall	RITA_Synthetic_Full Case_[Name].json
Fall kitchen 01/08	Fall kitchen 01/08	RITA_Synthetic_Full Case_[Name].json

When	Force / mechanics language	Source
01/24/2024	ENCOUNTER 07 — Orthopedic Clinic Date: 01/24/2024 | Purpose: Ortho eval; MRI + PT ordered BATES-000007 FACILITY: Harlan Shoulder Clinic — Orthopedics Visit Date: 01/24/2024 Patient: [Name]	Orthopedic Clinic (01/24/2024)

Grounded MOI mechanism(s) identified — quantitative biomechanical analysis (force vectors, joint mechanics, tissue-injury plausibility) still requires a retained biomechanical or orthopedic expert; not performed by this tool

Prognostic Causation Module PREMIUM

Recovery trajectory: **mixed non linear** · Red flags: 1 · Outcomes: delay

Expected recovery, delayed recovery, permanent impairment, and future medical needs determinations require a treating physician or life-care planner; this module surfaces deterministic signals only

Litigation-Ready Causation Packet PREMIUM

Packet inventory — timeline rows: 7, chains: 6, primary: 1, rule rows: 6, non-causal: 15, visual map: included.

Exhibits

- **Visual Causation Map — Acute vs. Chronic Triggers** — ready
- **Causal chain pathways** — ready

Anticipated defense arguments (pre-emptive rebuttal)

- **Limitation leveraged: Mechanism-of-Injury Consistency** — Opposing counsel will argue: Defense will highlight MOI contradictions to attack credibility and argue that any later diagnosis cannot be reliably linked to a single industrial event. Mitigation: Reconcile competing MOI accounts via Hierarchy of Reliability review (Intake > Initial ED > Progress Notes) and obtain clarifying statements from the claimant / treating providers
- **Limitation leveraged: Documentation Completeness** — Opposing counsel will argue: Defense will argue the chart is incomplete and that missing notes prevent reliable causation / deviation analysis — and may imply the gaps favor the defense narrative. Mitigation: Issue record requests / subpoenas for: 02/22/2024 (unspecified facility): Timely order / performance of indicated care
- **Limitation leveraged: Medication-Causation Intelligence** — Opposing counsel will argue: Defense will challenge any medication-related causation theory as unsupported by chart intelligence. Mitigation: Enable medication premium enrichment / causation maps for pharmacology-linked theories
- **Limitation leveraged: Baseline / Pre-Existing Medical Records** — Opposing counsel will argue: Defense will argue any impairment is entirely pre-existing / degenerative and that apportionment cannot be performed without a documented pre-injury baseline. Mitigation: Subpoena pre-injury primary-care / specialty records for the 2–5 years preceding 12/15/2023 (or longer if chronic conditions are alleged)
- **Pre-existing condition / natural progression** — Review the Aggravation vs. New Injury module and clinical-course timeline for acute-onset markers distinguishing aggravation from baseline disease; obtain complete pre-injury records for apportionment

Packet inventory for counsel — anticipated defenses are mirrored from Section 14 (Case Strategy Action Plan). Exhibits should be cross-checked against Bates-stamped records before production

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QUALITY ASSURANCE: VERIFIED

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