Southern Nevada TRAUMA SYSTEM

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Understanding Trauma Catchment in Southern Nevada:

- **What is trauma catchment?**
- **Why was it established?**
- **How has it evolved?**
- **How is it reviewed and modified?**

A focused overview of trauma catchment within the larger system

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August 27, 2026

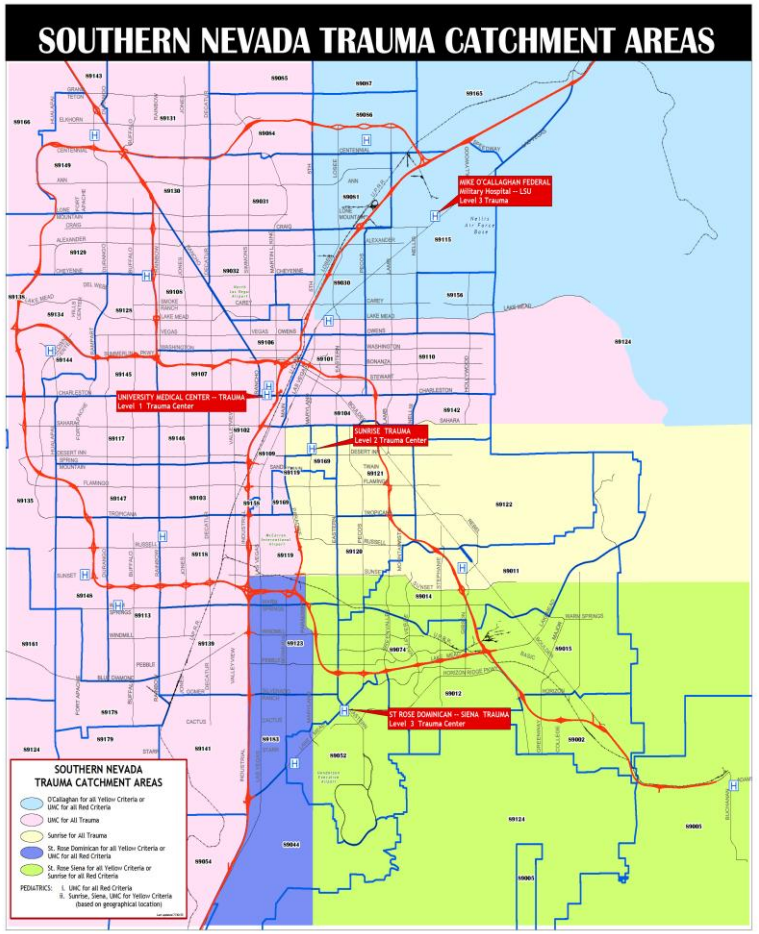
What is a Trauma Catchment?

A Geographic Guide for Trauma Patient Destination

Definition
Trauma catchment is a geographic framework used to help determine the appropriate trauma center destination for patients who meet established trauma destination criteria.

The purpose of the catchment system is to provide a consistent method for directing trauma patients to designated trauma centers within Southern Nevada.

🚑 **EMS Identifies a Trauma Patient**
↓
📍 **Location of Injury**
↓
🗺️ **Trauma Catchment Map**
↓
🏥 **Assigned Trauma Center**



🔴 **Red** — highest-level trauma destination criteria
🟡 **Yellow** — additional trauma destination criteria

Trauma catchment does not determine whether a patient is a trauma patient—it helps determine where that patient is transported once the need for specialized trauma care has already been identified.

Regulatory Framework

What Governs Trauma Catchment

Trauma Catchment is established through a combination of state law, local regulations, and regional policy

State	Local	Regional
⚖️ Nevada Administrative Code (NAC)	🏛️ Southern Nevada Health District EMS and Trauma System Regulations	🗺️ Trauma System Plan and EMS Protocols
Established requirements for trauma patient destination	Authorizes and administers the regional trauma system	Defines how destination decisions are implemented in daily EMS operations

Together, these authorities provide the framework for a consistent and coordinated trauma destination process throughout Southern Nevada.

OEMSTS is responsible for establishing, reviewing, and adjusting trauma catchment areas as part of planning, developing, coordinating, maintaining, modifying, and improving the regional trauma system.

How Is Catchment Reviewed?

The system is continually monitored through:

Quarterly

📊 RTAB/TMAC

Multi-source system review

- TFTC data
- Trauma center data
- Trauma mortality &coroner data

Annually

🚑 OEMSTS Annual Report

- Trends TFTC metrics

📋 State Trauma System Report

- Provides broader evaluation of trauma system performance

When Trends are Identified

🔎 RTAB / TMAC

- Additional data analysis
- Further system evaluation when warranted

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Catchment is not static; system performance is continuously monitored.

Why Was Trauma Catchment Established?

Building Southern Nevada's Trauma System

Historical Timeline

2002 • Trauma registry data analyzed to evaluate patient distribution

2003-2004 • Planning and development of a regional trauma system

2005 • Trauma catchment boundaries formally implemented

2022 • Catchment boundaries adjusted to include MOMMC as a new level III

Feb 2024 • Catchment boundary for MOMMC expanded

Why Catchment?

- Trauma centers
- Patient volumes
- Regional Coordination
- Access to Care

Established to create a consistent, objective process for trauma destination decisions.

Southern Nevada Trauma Catchment Areas

Current Trauma Catchment Map

Pink:
- UMC for all red and yellow

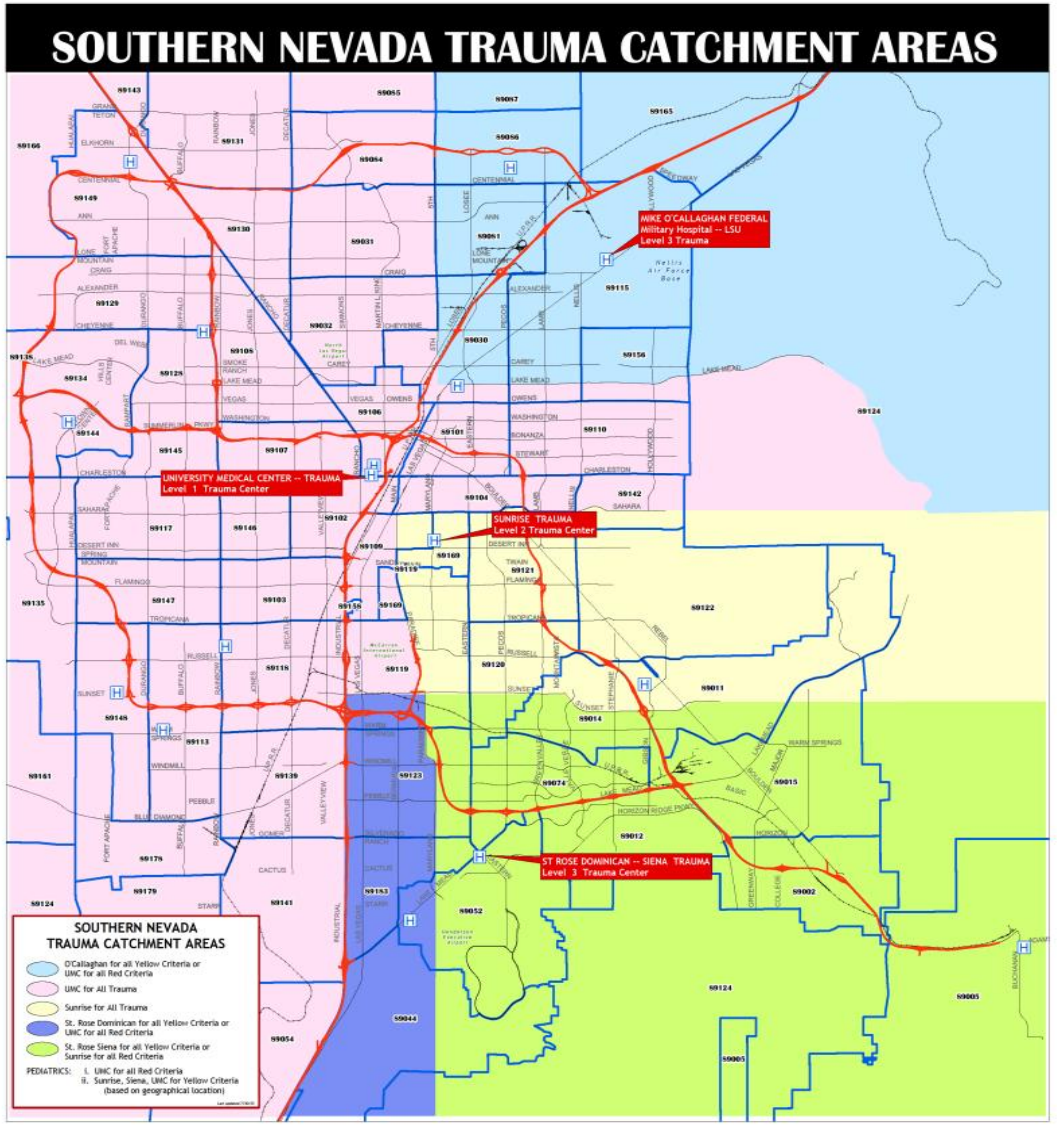
Yellow:
- Sunrise for all red and yellow

Green:
- St Rose Siena for all yellow
- Sunrise for all red

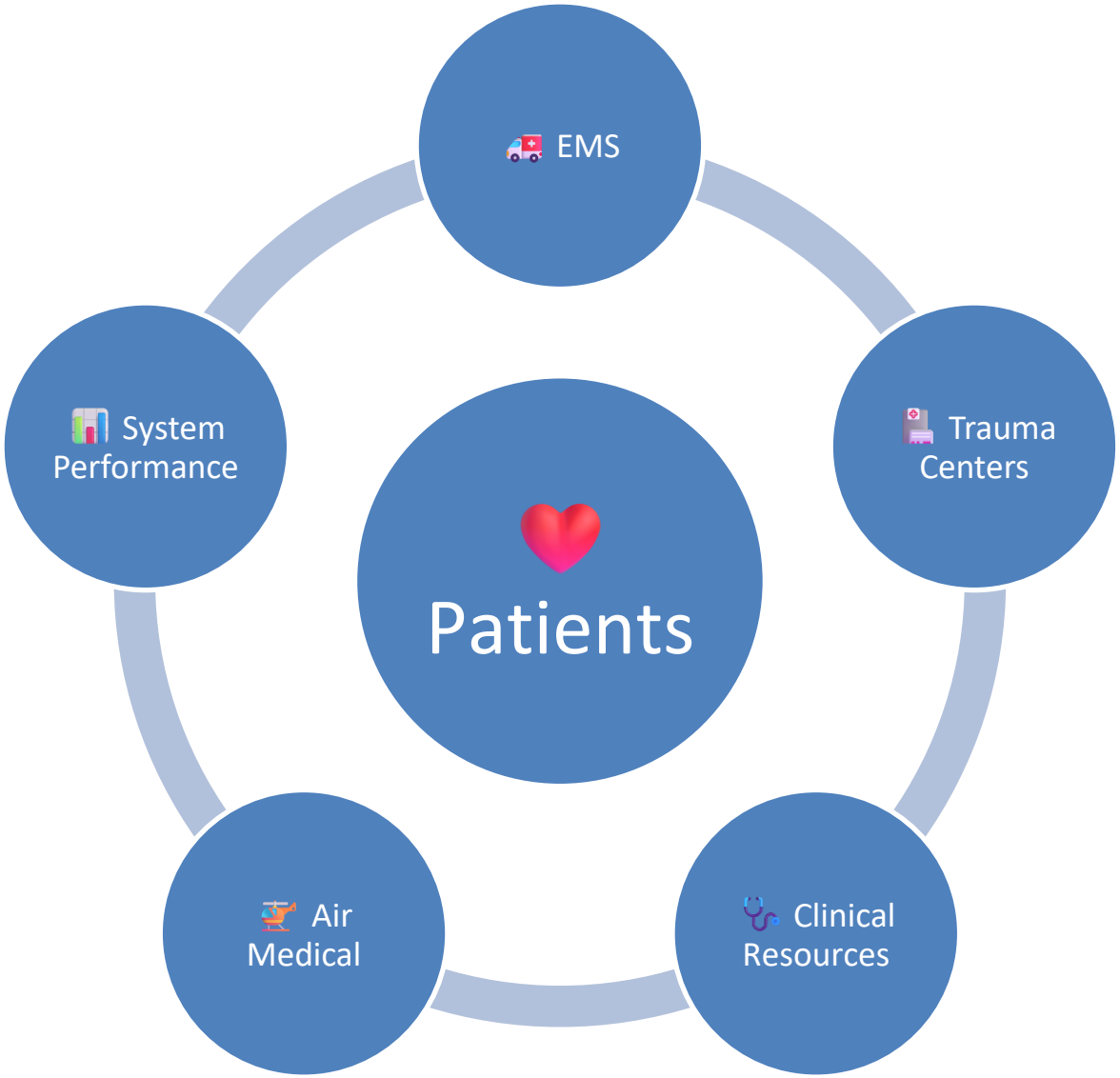
Dark Blue:
- St Rose Siena for all yellow
- UMC for all red

Light Blue:
- MOMMC for all yellow
- UMC for all red

Each geographic area is assigned to a designated trauma center to provide a consistent destination process for patients meeting the Trauma Field Triage Criteria.



Catchment Decisions Influence the Entire Trauma System



Changes to catchment affect every component of the regional trauma system and therefore require careful evaluation of system-wide impacts.

How Do Other Trauma Systems Approach Catchment?

Trauma Systems Across the Country Use a Variety of Approaches to Trauma Destination Decisions

Region	Catchment Boundaries	How Destinations Decisions are Made
Southern Nevada	✓Yes	Geographic catchment assignment with protocol-defined exceptions
Denver/Metro	❌ No	Transport to most rapidly accessible Appropriate Trauma Center https://dmemsmd.org/wp-content/uploads/sites/51/2026/07/DMEMSMD-Protocols-July-2026-FINAL-2026-07-20.pdf
Phoenix / Maricopa County	❌ No	Transported to a trauma center, as available within the geographic constraints of the regional trauma system https://www.azdhs.gov/documents/preparedness/emergency-medical-services-trauma-system/t3g-approved-mdc-vad-tah-update.pdf?v=20260518
Los Angeles County	❌ No	Transported directly to the designated trauma center, if transport time does not exceed 30 minutes https://dhs.lacounty.gov/emergency-medical-services-agency/home/resources-ems/prehospital-care-manual/ref-500/
San Diego County	✓Yes	Geographic catchment assignment with protocol-defined exceptions https://www.sandiegocounty.gov/content/sdc/ems/trauma_system.html

Examples shown are intended to illustrate general destination models used by selected metropolitan trauma systems. Each regional trauma system operates under its own state laws, regulations, and local governance.

What Informs Catchment Review?

Objective Measures	Clinical & Operational Expertise	Regulatory Framework
TFTC volume/distribution	EMS	State regulations
EMS transport times	Trauma centers	Local regulations
Population/community growth	OEMSTS	Trauma System Plan
Trauma center capabilities	Office of Epidemiology	
Access to trauma care	Regional advisory committees	

These factors are considered collectively to understand the potential impact on the regional trauma system.

Key Takeaways

Trauma Catchment

1. It is a destination framework
2. It was established to support a coordinated regional trauma system and timely access to trauma care
3. It operates within an established regulatory framework
4. It is continuously monitored and can be reviewed and modified as the trauma system and community evolve
5. Its impact extends across the entire regional trauma system.

The goal remains the same: timely access to the appropriate level of trauma care for the residents and visitors of Southern Nevada.

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Epidemiology's Role in the Trauma Catchment Discussion

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Office of Epidemiology, Office of Informatics

August 27th, 2026

The Role of Epidemiology

- **Epi's Role**
  - The Office of Epidemiology analyzed Trauma Field Triage Criteria (TFTC) data and modeled what would change under proposed boundary changes.
- **Why Does This Matter:**
  - Boundary changes could shift patient volume, severity, and system balance across trauma centers.

How We Know What's Happening Today

1

Started with TFTC data

Pulled 5 years (2021–2025) of TFTC data. TFTC classifies patients by Red (critical) and Yellow (moderate) criteria and captures pickup location, injury mechanism, and decide where to transfer trauma patients.

2

Mapped today's system

Plotted each pickup location and mapped it to current catchment boundary by trauma center, showing current patient distribution by triage criteria and how the system works right now.

How We Test a Proposed Change

3

Modeled “what if” scenarios

Applied the same methodology for 10 proposed changes of catchment boundary. Each proposal redirects a specific catchment area’s patients (mostly Red-criteria) to a different trauma center while the rest of the system stays the same –a targeted, apples-to-apples comparison.

4

Measured the impact

Estimated shifts in patient volume and Red/Yellow triage mix/severity at each trauma center under each proposal.

5

Independently verified

SNHD Informatics team repeated the analysis with different method (Python) and confirmed the Epidemiology results using SAS and ArcGIS.

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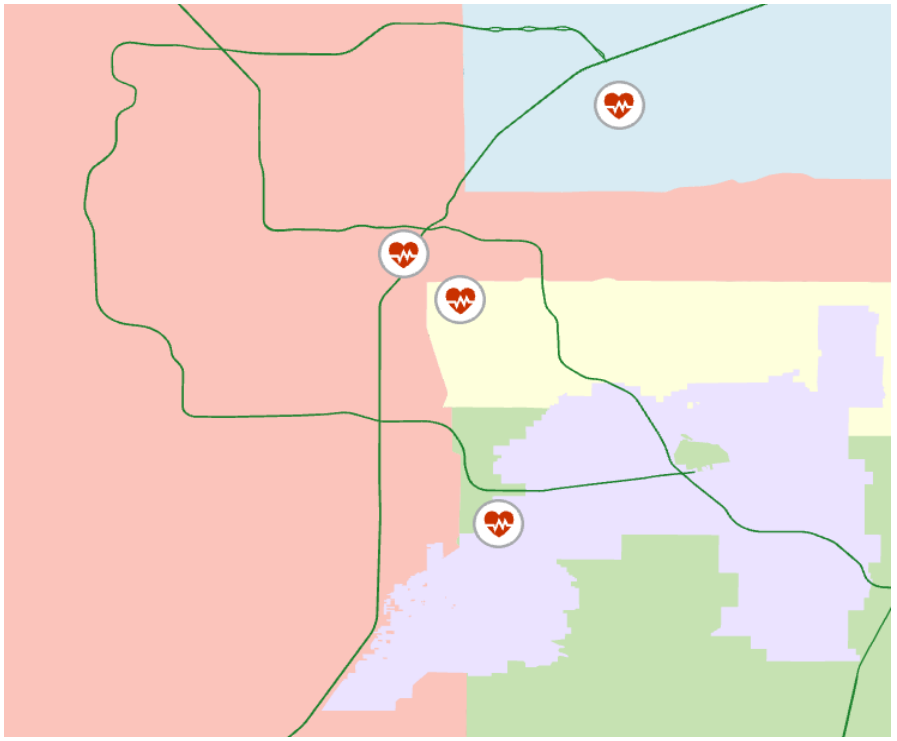
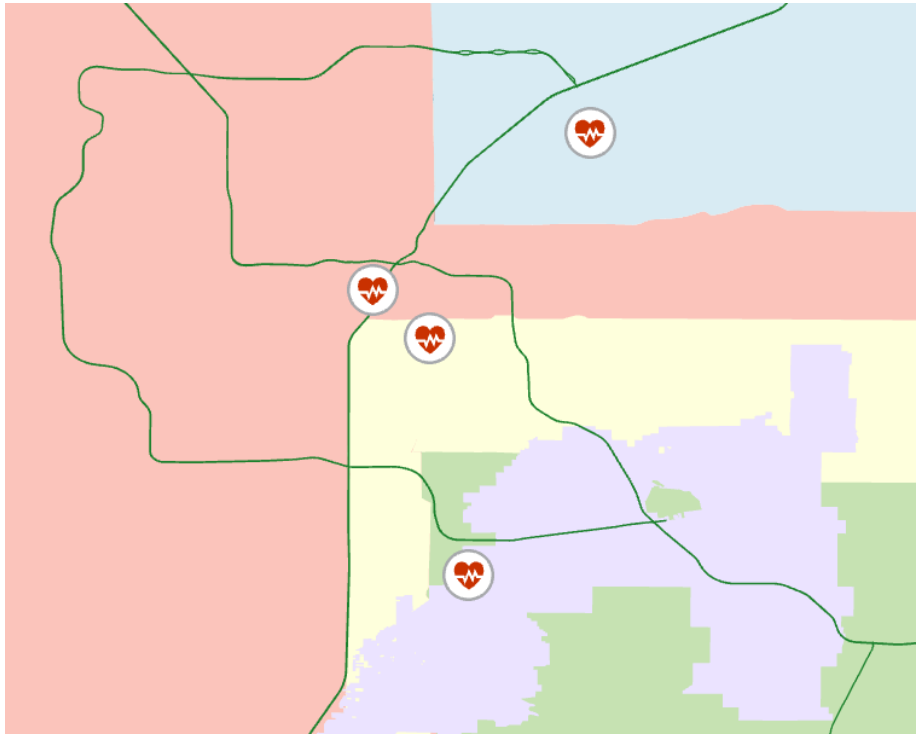
Example model only: current catchment (left) vs. Proposal 6

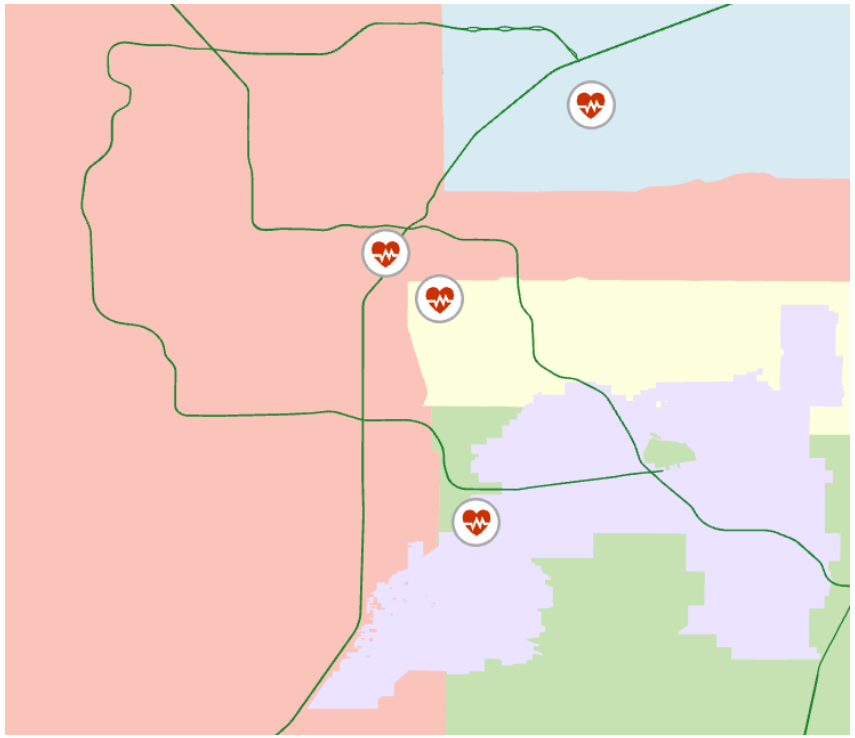


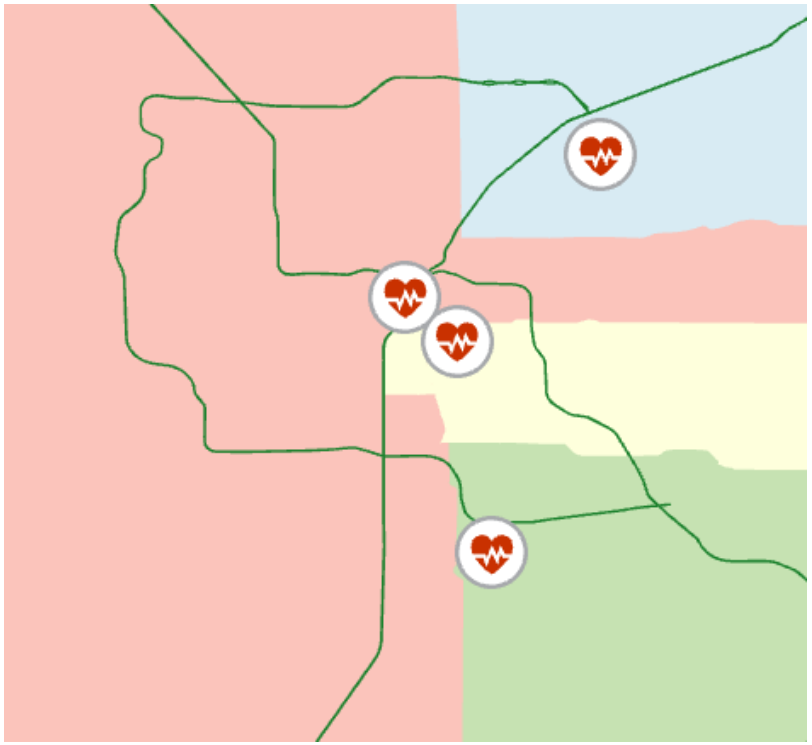


HYPOTHETICAL PROPOSAL #6

TFTC Incidents (Aggregated), 2021-2025								
Current_Destination				Hypothetical_Destination			Change	
Current Destination	NV Trauma Regustry (2023-2025)	TFTC Category/Color	Frequency	Hypothetical Destination	Trauma Color	Frequency	Change (Counts)	%Change
Facility A	300 (ISS<=15)	Yellow	5032	Facility A	Yellow	5032	**0**	**0**
Facility A	31 (ISS > 15)	Red	0	Facility A	Red	0	**0**	**0**
Facility B	3653 (ISS<=15)	Yellow	5952	Facility B	Yellow	4898	**-1054**	**-21.52**
Facility B	246 (ISS > 15)	Red	0	Facility B	Red	664	**664**	N/A
Facility C	10406 (ISS<=15)	Yellow	7183	Facility C	Yellow	13520	**6337**	**46.87**
Facility C	1923 (ISS > 15)	Red	2186	Facility C	Red	2336	**150**	**6.42**
Facility D	8686 (ISS<=15)	Yellow	39831	Facility D	Yellow	34537	**-5294**	**-15.33**
Facility D	2323 (ISS > 15)	Red	6857	Facility D	Red	6044	**-813**	**-13.45**

Example model only: current catchment (left) vs. Proposal 7A (right)





HYPOTHETICAL PROPOSAL #7A

TFTC Incidents (Aggregated), 2021-2025								
Current_Destination				Hypothetical_Destination			Change	
Current Destination	NV Trauma Regustry (2023-2025)	TFTC Category/Color	Frequency	Hypothetical Destination	Trauma Color	Frequency	Change (Counts)	%Change
Facility A	10406 (ISS<=15)	Yellow	7183	Facility A	Yellow	10771	3588	33.31
Facility A	1923 (ISS > 15)	Red	2186	Facility A	Red	2031	-155	-7.63
Facility B	300 (ISS<=15)	Yellow	5032	Facility B	Yellow	5032	0	0
Facility B	31 (ISS > 15)	Red	0	Facility B	Red	0	0	0
Facility C	3653 (ISS<=15)	Yellow	5952	Facility C	Yellow	5301	-651	-12.28
Facility C	246 (ISS > 15)	Red	0	Facility C	Red	700	700	N/A
Facility D	8686 (ISS<=15)	Yellow	39831	Facility D	Yellow	37304	-2527	-6.77
Facility D	2323 (ISS > 15)	Red	6857	Facility D	Red	5444	-1413	-25.96

Why This Matters

- **Evaluate impact before changes**
  - Shows whether a proposal would create big shifts in volume or triage mix at any trauma center.
- **Keeps the regional system balanced and efficient**
  - Assesses whether trauma patients would continue to be routed appropriately under different proposals and the regional trauma system is still efficient.
- **Independently verified**
  - Provides a reproducible, evidence-based comparison of tradeoffs before implementation. The analysis was cross verified by SNHD's Informatics team using the same data.

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