



9-1-1 Interoperability & Regionalized Trauma System Recommendations

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Compiled by IDHS, IDOH, the Statewide 9-1-1 Board, and the Integrated Public Safety Commission

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9-1-1 INTEROPERABILITY & REGIONALIZED TRAUMA CARE RECOMMENDATIONS

BACKGROUND

In 2022, the Indiana General Assembly enacted HEA 1314 and SEA 247. The legislation requires the Indiana Department of Homeland Security (IDHS), the Indiana Department of Health (IDOH), the Integrated Public Safety Commission and the Statewide 9-1-1 Board to make recommendations to the General Assembly regarding:

- (1) ways that the 9-1-1 system can increase interoperability to better facilitate an emergency medical service (EMS) response for the closest and most appropriate source; and
- (2) the effectiveness of regionalized trauma systems and the impact of regionalized trauma systems on patient care.

In response, the agencies formed a working group with representatives from each agency to conduct research, review operations in other states and meet with stakeholders. The Working Group's findings and recommendations are detailed below.

CURRENT EMS DISPATCH PROCESS

EMS DISPATCH

A Public Safety Answering Point (PSAP) is responsible for receiving 9-1-1 calls, processing the information and dispatching the appropriate public safety agencies, such as police, fire and EMS. In Indiana, a PSAP usually is controlled by one entity that is mutually agreed upon by the governmental shareholders within the county. Each county typically has one PSAP serving the entire county. PSAP funding comes from general funds, State-provided 9-1-1 funds and local taxes.

The backbone of a PSAP is its computer-aided dispatch (CAD) system. CAD systems:

- help the PSAP log information from 9-1-1 calls
- create run sheets
- track available EMS units
- determine the appropriate response and availability of EMS units
- dispatch the EMS units

Generally speaking, EMS dispatch is based on which EMS unit in the caller's jurisdiction can meet the needs of the 9-1-1 caller. For example, if a Hoosier located in Town A (in County 1) calls 9-1-1, County 1's PSAP will use its CAD system to dispatch Town A's closest EMS unit to the Hoosier.¹

¹ A jurisdiction may be served by a municipal, county, private, or hospital-based EMS provider.

The current practice does not account for the possibility that Town B (in County 1) may have an EMS unit closer to the Hoosier-in-need than Town A. Generally speaking, Town B's EMS unit will not be dispatched automatically to the caller in Town A. Rather, County 1's PSAP will use its CAD system to guide the public safety telecommunicator to dispatch Town A's EMS resources to the caller in Town A. As a result, the Hoosier-in-need will not receive emergency services from the closest EMS unit. Instead, the Hoosier-in-need will receive emergency services from the closest EMS unit that serves the caller's jurisdiction.

Additionally, current practice does not account for the possibility that the closest EMS unit may be in a different town *and* a different county than the Hoosier-in-need. For example, if a Hoosier-in-need located in Town A calls 9-1-1, the closest EMS unit to the Hoosier may be in Town C (in County 2). However, County 1's CAD system is not likely to know Town C has a closer EMS unit because County 1's CAD system cannot communicate with County 2's CAD system.

Moreover, if County 1 and County 2 use different CAD system vendors, the systems cannot be interoperable, as they do not speak the same "language". Using the above example, County 1's CAD system will not prompt the public safety telecommunicator to dispatch Town C's EMS unit because County 1's CAD system has no visibility into or dispatch capabilities for Town C's EMS unit. Only County 2's PSAP can locate and dispatch Town C's EMS units.

Due to the current EMS dispatch process and its lack of CAD system interoperability, a Hoosier-in-need may not receive care from the closest EMS unit. It is critical that traumatic and time-sensitive injuries receive timely access to emergency medical services. Current EMS dispatch processes and associated technology are inadvertently risking Hoosier lives by delaying EMS care.

OPTIONS TO ACHIEVE CAD SYSTEM INTEROPERABILITY

To achieve interoperability between PSAPs, CAD systems must be able to communicate with other CAD systems. To achieve CAD system interoperability, the working group recommends the Indiana General Assembly consider acting on one of the following options.

OPTION 1 – REQUIRE ALL PSAPS TO USE THE SAME CAD VENDOR

One way to ensure all CAD systems in Indiana can communicate would be to require all PSAPs use the same CAD vendor. This would require Indiana to conduct extensive outreach and data collection with PSAPs to learn the technical, operational, and financial needs of each PSAP. Using this data, the State could issue a request for proposal (RFP) to receive bids from CAD vendors and evaluate which bid best serves Indiana's PSAPs. If one CAD vendor could meet the needs of rural, urban, and suburban PSAPs, the State could contract with the CAD vendor to provide services to all Indiana PSAPs.

Option 1 achieves CAD system interoperability, removes the need to “translate” different CAD systems to allow them to “speak” to each other and eliminates the possibility that CAD vendors would resist allowing its product to be manipulated in order to operate with the “translation.”

Potential drawbacks to Option 1 include:

- PSAPs being resistant to change CAD providers
- The time necessary for all PSAPs to switch CAD providers as many PSAPs have multi-year contracts with current CAD providers
- The cost to switch CAD providers and transfer historical data from a PSAP to the new CAD system
- The ability of one CAD vendor to meet the varying needs of rural, urban, and suburban PSAPs

OPTION 2 – STATE FACILITATES A TECHNOLOGICAL SOLUTION THAT ALLOWS DIFFERENT CAD VENDORS TO COMMUNICATE

Instead of requiring all PSAPs to use the same CAD vendor to achieve interoperability, the State could facilitate a technological solution that allows the different CAD systems to communicate. Minnesota and California are pursuing this approach.

Option 2A – Intelligent Hub Model

Minnesota is taking a regional approach to achieve CAD interoperability. In 2018 and 2021, the Metropolitan Emergency Services Board (a group of 10 MN counties) and the Southeastern Minnesota Emergency Communications Board (a group of 11 MN counties) respectively hired a consulting firm to conduct a feasibility study regarding CAD interoperability within each region. In June 2019, the same consulting firm released a public white paper discussing interoperability of different CAD vendors.² The white paper states one way to achieve CAD interoperability is to use an “intelligent hub model,” which is when “two or more PSAPs with different CAD vendors contract with a third-party vendor to create an intelligent hub that acts as a transfer and translation agent to deliver complex and configurable CAD information between each participating CAD system.”³ The white paper further describes the “intelligent hub” model as “language translator, with each PSAP speaking their own language and the CAD-to-CAD system [third-party vendor] translating between them.”⁴

Option 2A achieves the goal of interoperable CAD systems, allows each PSAP to use the CAD vendor of its choosing, and “allows each PSAP to maintain their unique

² “Winbourne Consulting, LLC. (2019, June). *White Paper: CAD-to-CAD Interoperability*. W-llc.com. <https://www.w-llc.com/wp-content/uploads/2019/06/Winbourne-Consulting-CAD-to-CAD-White-Paper-Jun-2019.pdf>.

³ Page 4 of the source listed in Footnote 2.

⁴ Page 4 of the source listed in Footnote 2.

incident types, priorities, and resource-naming conventions.”⁵ A Potential drawback to Option 2A is CAD vendors not wanting to provide a translation table to the third-party vendor due to concerns about proprietary rights.

Option 2B – Common CAD Language Model

California is in the beginning phases of implementing a statewide CAD interoperability project that is similar to the “intelligent hub model.” Instead of a third-party vendor translating data from several different CAD vendor languages, California is having all the CAD systems in the state write to a common language developed by the National Emergency Numbers Association (NENA). The NENA standard language, called Emergency Incident Data Object (EIDO), is a “standardized, industry-neutral format for exchanging emergency incident information between disparate manufacturer’s systems located within one or more public safety agencies.”⁶ California has awarded a contract to a third-party entity to create a data portal that will allow a PSAP to access and interact with another PSAP’s EIDO incident data in accordance with predetermined permissions between the PSAPs.

Option 2B achieves the goal of interoperable CAD systems and allows each PSAP to use the CAD vendor of its choosing. A potential drawback to Option 2B is CAD vendors may not want their proprietary technology to be translated into the EIDO standard language.

RECOMMENDATION

The Working Group recommends the General Assembly pursue option 2B or a similar initiative that achieves CAD interoperability through use of a common CAD language and data portal.

OPTIONS TO FACILITATE CLOSEST MOST APPROPRIATE EMS DISPATCH

To facilitate EMS dispatch based on the closest most appropriate EMS unit to the Hoosier-in-need, CAD interoperability needs to be achieved.⁷ However, CAD interoperability alone will not produce the operational standard of closest most appropriate EMS dispatch. Additional actions, outlined in Option 3 and Option 4, could achieve the goal of having EMS dispatch be based on the closest most appropriate EMS unit, within varying timeframes.

⁵ Page 4 of the source listed in Footnote 2.

⁶National Emergency Numbers Association, “Agency Systems Committee,” Nena.org., <https://www.nena.org/page/AgencySystems>.

⁷ In this context, the term “closest most appropriate” means the EMS resource that is both the closest in proximity to the patient and can provide the level care (basic life support or advanced life support) needed.

OPTION 3 – REQUIRE PSAPS TO DISPATCH THE CLOSEST MOST APPROPRIATE EMS UNIT WITHIN THE PURVIEW OF THE PSAP

Currently, a PSAP's CAD system knows the availability status of the EMS units within the control of the PSAP. When a Hoosier-in-need calls 9-1-1, the PSAP telecommunicator will most likely dispatch an EMS unit to the patient from the EMS provider responsible for covering the area where the patient is located. This practice does not account for the possibility that a neighboring EMS provider may have an EMS unit closer to the patient. As a result, a Hoosier-in-need may be delayed in receiving life-saving care waiting for the jurisdiction-specific EMS unit to arrive.

To alleviate this problem, the General Assembly could require PSAPs to dispatch EMS units based on which EMS unit in the PSAP's control is the closest most appropriate unit to respond to the Hoosier-in-need. For example, if County 1's PSAP receives a 9-1-1 call from Town A, County 1's PSAP would dispatch Town B's EMS unit if it was closer to the 9-1-1 caller than Town A's EMS unit. This will facilitate Hoosiers receiving emergency care as soon as possible.

Option 3 achieves the goal of closest most appropriate EMS dispatch. Additionally, Option 3 is not dependent upon CAD interoperability, as the PSAP's CAD system can dispatch EMS units in the PSAP's jurisdiction.

A potential drawback to Option 3 is that one jurisdiction's EMS units may be routinely dispatched to other jurisdictions. If so, concerns regarding EMS funding and response times may arise. For example, if Town A's EMS units are regularly dispatched to Town B or Town C, to what extent are the constituents in Town A, who fund Town A's EMS, being served by Town A's EMS? Moreover, if Town B or Town C have insufficient EMS coverage, to what extent would Town A end up subsidizing that need? Such concerns need to be addressed and remedied before Option 3 can be operational.

OPTION 4 – REQUIRE PSAPS TO DISPATCH THE CLOSEST MOST APPROPRIATE EMS UNIT

Once CAD interoperability is achieved, PSAPs could identify the location of the closest, most appropriate EMS unit in relation to the Hoosier-in-need. With that knowledge, a PSAP should have the ability, in accordance with predetermined agreements and permission, to dispatch the closest, most appropriate EMS unit to the patient, regardless of the EMS providers' jurisdiction or the PSAPs' jurisdiction. To ensure closest, most appropriate EMS dispatch standard is achieved, the General Assembly could require PSAPs to dispatch EMS based on this practice.

Option 4 is a step beyond Option 3 as it would require a PSAP to dispatch another PSAP's EMS units, when appropriate. For example, if County 1's PSAP receives a 9-1-1 call from a Hoosier in Town A, County 1's PSAP would dispatch Town B or Town C's EMS unit if those units were closer to the patient than Town A's EMS unit.

Option 4 harnesses the full potential of CAD interoperability as it equips PSAPs with both situational awareness and the ability to act upon that awareness by dispatching another PSAP's EMS units. Option 4 shares the same challenges as Option 3 regarding how to equitably serve Hoosiers both inside and outside of an EMS provider's

jurisdiction. Similarly, such concerns need to be addressed and remedied before Option 4 can be operational.

RECOMMENDATION

The Working Group recommends the General Assembly pursue Option 3 and Option 4. Option 3 is an interim solution until Option 4 is operational, as Option 4 cannot operate until CAD interoperability is achieved.

TRAUMATIC AND TIME-SENSITIVE INJURIES

Traumatic injury is the leading cause of death for individuals between the ages of 1-44 years in the United States. Traumatic injury results in more years of potential life lost than any other disease process, including cancer and heart disease. Injury is America's most expensive disease process, costing nearly \$180 million per year. Problems caused by injury are most acute in rural areas - 60% of all trauma deaths occur in areas of the U.S. where only 25% of the population lives. In Indiana, the leading causes of death for individuals aged 1-44 are preventable injuries.⁸

Some states have adopted a more comprehensive "time-sensitive" or "time-critical" diagnosis system, which includes trauma, stroke, and STEMI (ST-segment elevation myocardial infarction), the potentially fatal form of heart attack. For patients who experience trauma, stroke or STEMI, timely and appropriate emergency medical care is critical. These conditions require quick assessment, diagnosis and treatment by a facility that can provide the specialized, necessary and definitive care to minimize risk of preventable complications and death.

All time-sensitive diagnoses are impacted by standardization across the continuum of care, EMS transport availability, and the shared goal of ensuring the right patient is treated at the right place at the right time. This includes the collection and analysis of quality data utilizing a centralized trauma registry and standardizing metrics to help drive time-sensitive care quality improvement efforts. Developing a regional infrastructure to address all time-sensitive diagnoses may be more efficient and economical than building separate programs solely for trauma care.

⁸ Centers for Disease Control and Prevention, Injury Prevention and Control, "Leading Causes of Death Visualization Tool – Indiana 2020," CDC, <https://wisqars.cdc.gov/data/lcd/home>.

EFFECTIVENESS AND IMPACT OF REGIONALIZED TRAUMA SYSTEMS ON PATIENT CARE

A regionalized trauma system is an organized approach to facilitating and coordinating a multidisciplinary system response to severely injured patients. The trauma system continuum of care includes:

- injury prevention
- emergency medical services field intervention and transportation
- emergency department care
- surgical interventions
- intensive and general surgical in-hospital care
- rehabilitative services
- social services
- support groups to enable both patients and their families to return to society at the most productive level possible

Trauma injuries require rapid evaluation by skilled personnel and immediate transportation to a qualified care center. Multiple studies have shown that implementation of an organized trauma system results in a 50% to 80% reduction in preventable deaths, and there are significant reductions of chronic disabilities and overall community care costs.⁹

Access to a trauma center, a hospital that has been verified to be equipped and staffed to provide care for patients suffering from major traumatic injuries such as falls, motor vehicle collisions or gunshot wounds, is considered essential for trauma care.

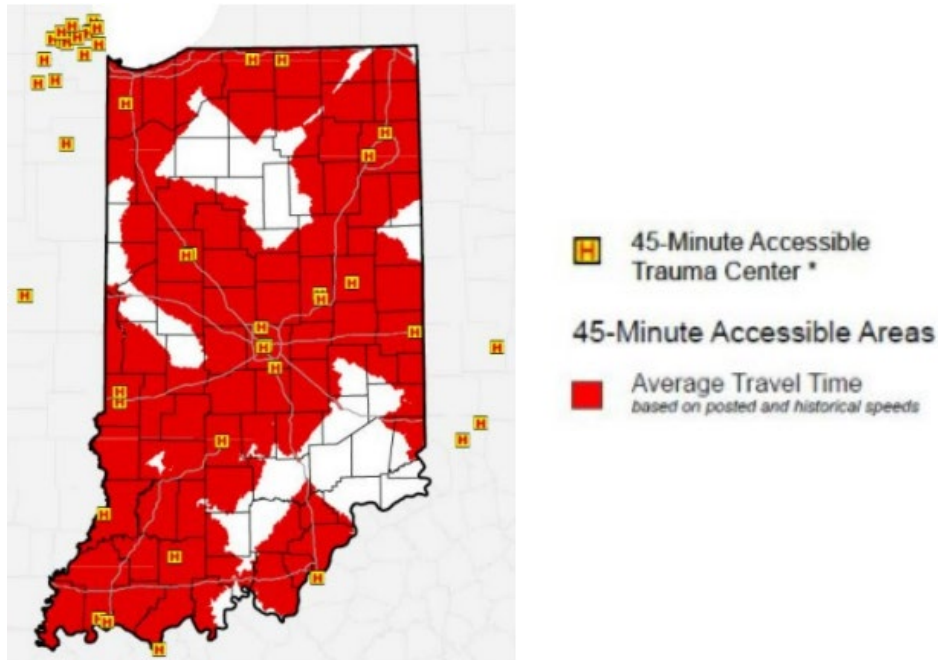
A review of Indiana's current designated trauma centers shows large areas of rural Indiana are more than 45 minutes away from a trauma center (Figure 1).¹⁰ Furthermore, wide variations in trauma outcomes exist across non-trauma hospitals. Efforts to improve trauma care quality should include engagement of non-trauma hospitals to reduce variations in outcomes of injured patients treated at those facilities.¹¹

⁹ Indiana Department of Health, "Governor's Public Health Commission Report," https://www.in.gov/health/files/GPHC-Report-FINAL-2022-08-01_corrected.pdf.

¹⁰ See footnote 9.

¹¹ Jenkins, Peter C et al. "Extending Trauma Quality Improvement Beyond Trauma Centers: Hospital Variation in Outcomes Among Nontrauma Hospitals." *Annals of surgery* vol. 275,2 (2022): 406-413.

Figure 1:



Coordination and participation in regional trauma care varies across the state. All hospitals, both designated trauma centers and non-trauma centers, need to be trained in trauma care. However, it is essential that critical trauma patients are taken to a facility with specific trauma resources no more than two hours after arrival to the lower level of care facility. In 2021, less than half of the patients from Non-Trauma Centers (NTCs) were transferred in less than two hours. Furthermore, according to Indiana trauma registry data, NTCs (mostly in rural areas) experienced 91% of the reported delays in transfer. “EMS issue” was the number one reason given for the delay, and 50% of those were further defined as “EMS shortage.”¹² Hospitals rely on the availability local EMS providers to transfer patients to higher level of care facilities.

The American College of Surgeons (ACS) highlights the importance of regionalization of care, health care system development and disaster preparedness for trauma system enhancement and efficiency. To decrease the burden of injury in a state or region, a trauma system needs to develop a network of acute facilities, personnel and organizational entities that function in an organized and coordinated manner in the defined geographic area.¹³ Focusing on regional trauma system development allows entities to address the allocation of resources at a local level, which aligns with the development of the statewide trauma system. Health care delivery has had, and will continue to have, a major impact on both the health and the lives of Hoosiers.¹⁴

¹² See footnote 9.

¹³ American College of Surgeons – Committee on Trauma (2014, Jan 1). Resources for Optimal Care of the Injured Patient. <https://www.facs.org/media/yu0laogz/resources-for-optimal-care.pdf>

¹⁴ Indiana Department of Health – Division of Trauma and Injury Prevention (2017, July 1) <https://www.in.gov/health/trauma-system/files/Statewide-Trauma-System-Road-Map-Final-Version.pdf>

Regionalized trauma systems are designed to ensure that if a person suffers a life-threatening injury or other emergency anywhere on the map, they will quickly move through a system of care that provides them with standardized and optimal care services, regardless of location. Evidence further supports regional design of systems, including coordinated EMS and referral, to meet the needs of all trauma patients and not run the risk of pushing all trauma cases into a limited number of facilities.¹⁵ Enhanced regional emergency preparedness coordination would allow Indiana to address cross-county and cross-state-line planning and variation in district proximity, training and communication needs.

A 2015 University of Michigan study highlighted the impact of regional collaborative quality improvement for trauma care. The regional approach improved patient outcomes and reduced costs for trauma patients, which represented an effective investment to achieve healthcare value. Average episode payments decreased by \$2,720 (from \$36,043 to \$33,323) among patients treated in collaborative centers, whereas patients treated at non-collaborative institutions had a significant year-to-year increase in payments (from \$23,547 to \$28,446). A savings of \$6.5 million in total episode payments from 2010 to 2011 was achieved for payer-covered collaborative treated patients.¹⁶

Lastly, a study published in the World Journal of Emergency Surgery researching the effectiveness of trauma care systems identified significant reduction in mortality following the introduction of a trauma system, which is further enhanced as the system matures. The results provide evidence to support efforts to implement trauma systems and more importantly enhance existing systems by investing in system development and maturation.¹⁷

IDOH, IDHS, the Integrated Public Safety Commission, and the Statewide 9-1-1 Board are committed to working to improve patient care and coordination in Indiana.

RECOMMENDATIONS TO IMPROVE REGIONALIZED TRAUMA CARE

To achieve the positive health outcomes and financial savings associated with regionalized trauma care, the Working Group has the following recommendations:

¹⁵ Institute of Medicine (US). Regionalizing Emergency Care: Workshop Summary. Washington (DC): National Academies Press (US); 2010. 1, Regionalized Trauma Care: Past, Present, and Future. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK220321/>.

¹⁶ Hemmila, Mark Richard et al. "The Michigan Trauma Quality Improvement Program: Results from a collaborative quality initiative." *The journal of trauma and acute care surgery* vol. 82,5 (2017): 867-876.

¹⁷ Alharbi, R.J., Shrestha, S., Lewis, V. et al. The effectiveness of trauma care systems at different stages of development in reducing mortality: a systematic review and meta-analysis. *World J Emerg Surg* 16, 38 (2021). <https://doi.org/10.1186/s13017-021-00381-0>.

STANDARDIZE STATE AND REGIONAL TRAUMA CARE EXPECTATIONS

Indiana needs to standardize trauma and time-sensitive care expectations by supporting regional coordination. While regional trauma coordination is needed statewide, special focus should be placed on geographically remote areas that are more than 45-minutes away from a trauma center. The regional trauma and time-sensitive plans should include policies, education, and training regarding patient safety, care, coordination, and transportation.

A formal regionalized trauma and time-sensitive care system could be developed that enables IDOH, IDHS, public health preparedness districts, hospitals, and EMS providers to develop, implement, and support regional trauma and time-sensitive plans. The structure for regionalized trauma and time-sensitive care systems could:

- Develop and provide support for regional patient care councils
- Assist with the development of regional trauma plans, including a focus on:
 - Patient Safety – policy and education
 - Patient Care – training and education
 - Patient Coordination – interfacility transfers, communication
- Improve and utilize trauma and EMS registry data to drive quality of care and patient outcomes
- Support regional quality improvement projects – traffic safety, appropriate level of care, ATV accidents, etc.
- Provide technical assistance and education for injury prevention
- Identify gaps in regional trauma center coverage and accessibility with particular focus on geographically remote areas
- Funding would be necessary to support regional trauma systems

Increase access and coordination to appropriate trauma care facilities

Indiana is close to fulfilling the goal of having comprehensive trauma center coverage. Currently, if a hospital wants to become an ACS-verified trauma center, it does so with its own financial and personnel resources. For smaller hospitals, the time and personnel required to become an ACS-verified trauma center are cost prohibitive.

Additionally, the IDOH coordinates trauma system development in collaboration with the Indiana State Trauma Care Committee (ISTCC). Through Executive Order, the ISTCC is a multidisciplinary advisory group, consisting of stakeholders representing the full spectrum of trauma care. The role of the ISTCC is to assist and guide IDOH regarding trauma system development and operations. The continued involvement of the ISTCC will be critical for trauma and time-sensitive care system development.

The General Assembly could reduce the barriers smaller hospitals face in becoming a trauma center by supporting hospitals during the process. State support could include financial and personnel resources to assist the hospital during the verification process. To achieve this the State could:

- Identify gaps in statewide trauma center coverage and access with particular focus with geographically remote areas

- Engage hospitals in areas without a 45-minute accessible trauma-center
- Recommend legislation including funding for state designation process and trauma center personnel support as supplement to ACS verification
- Assess development and implementation of Level IV trauma center designation process to expand hospitals engaged in trauma readiness and injury prevention
- Conduct an American College of Surgeons Trauma System consultation
- Statutorily establish the State Trauma Committee with defined roles and responsibilities
- Engage the Indiana State Trauma Care Committee to redefine trauma system planning and development
- Assess regions for efficient coordination of trauma care
- Develop a statewide scorecard for time-sensitive conditions with targeted benchmarks
- Improve health outcomes related to preventable injuries and other trauma through enhanced trauma care analysis and educational initiatives
- Establish regular trauma education and registry courses for providers at non-trauma hospitals
- Develop hospital triage and transfer rules for non-trauma hospitals

Enhance and make better use of trauma and EMS registry data

The Indiana trauma registry is the state's primary data repository and exists to collect, measure and analyze all aspects of the trauma system to ensure high quality care and improve patient outcomes. IDOH manages the registry and is responsible for instituting processes to evaluate the performance of all aspects of the continuum of care, from EMS provider to trauma center/acute care hospital to rehabilitation facility. Registry participation varies widely due to limited hospital prioritization and awareness, a lack of personnel support, and the cumbersome nature of data entry. This variation presents barriers to ongoing trauma system quality improvement, specifically data accuracy and validation during the analysis and evaluation periods. However, increasing statewide data submission, ensuring quality data validation practices, and establishing targeted metrics to drive performance will better support ongoing quality improvement efforts. To achieve this goal, the State could:

- Assess existing Trauma and EMS registry systems data quality
- Develop a strategic roadmap for the collection of data elements for organizations involved in the continuum of time-sensitive care
- Increase utilization of Trauma and EMS registry by reducing burden of data collection through automation and alternative submission options
- Include Trauma and EMS registry participation as a condition of receiving future funding opportunities
- Utilize trauma and EMS registry data to establish state metrics and incentivize regional quality improvement initiatives
- Develop a data transparency tool to ensure data validity between IDOH and hospitals

Improve and sustain regional trauma, emergency medical services, and 911 workforce capacity

The recruitment and retention of the EMS workforce has been a noted challenge over the years. Indiana EMS runs have almost doubled between 2018 to 2021, but the number of ambulances and EMS providers has decreased in that same time.¹⁸ Developing strategies to address healthcare workforce shortages is important to improve Hoosier health, both at the population and individual level. Training opportunities for healthcare professionals in public health are also critical to ensuring a sufficiently skilled workforce.

To improve and sustain workforce capacity, the General Assembly could

- Provide support to conduct a needs assessment of specific EMS gaps in local jurisdictions
- “Ensure funding for prioritized recruitment to address EMS workforce shortages and provide mechanisms for cost-sharing related to equipment purchases, particularly in underserved and geographically remote areas of the State
- Establish long-term promotional and retention plans for EMS personnel
- Enhance ongoing higher-level trauma and EMS training and expansion of community paramedicine programs.”¹⁹

CONCLUSION

The Working Group intends for these recommendations to serve as a starting point for the General Assembly to consider how to improve the EMS dispatch process and the trauma and time-sensitive care system to better serve Hoosiers. The Working Group acknowledges that significant changes to either system will require continued work and extensive stakeholder input to create processes that improve Hoosier health and are financially and operationally feasible.

¹⁸ Governor’s Public Health Commission, “Report to the Governor in fulfillment of Executive Order 21-21,” (2022, Aug. 1). <https://www.in.gov/health/about-the-agency/boards-and-commissions/gphc/>.

¹⁹ Governor’s Public Health Commission, “Report to the Governor in fulfillment of Executive Order 21-21,” (2022, Aug. 1). <https://www.in.gov/health/about-the-agency/boards-and-commissions/gphc/>. Page 87.

APPENDIX 1

LIST OF INDIANA PSAPS AND CAD SYSTEMS

County	PSAP	CAD Vendor
Adams	Adams County Sheriff's Officer	Central Square
Allen	City of New Haven, IN Dispatch Center	Spillman
Allen	Fort Wayne Allen County Consolidated Communications Partnership	Spillman
Allen	Indiana State Police RDC Region 2 Fort Wayne	Caliber
Bartholomew	Bartholomew County 911 Center	Central Square
Benton	Benton County Communications Center	Motorola
Blackford	Blackford County Sheriff's Office	Emergitech
Boone	Boone County Communications Center	Caliber
Brown	Brown County Sheriff	Caliber
Carroll	Carroll County E911	ID Network
Cass	Cass County Central Dispatch	Cushing
Clark	Clark County 911	New World
Clay	Clay County Sheriff's Department	Caliber
Clinton	Clinton County Central Dispatch	Motorola
Crawford	Dispatch Workstation Version 2.7	Cushing
Daviess	Washington PD	Spillman
Daviess	Daviess County Sheriff's Department	Spillman
Dearborn	Dearborn County Communications	Motorola
Decatur	Decatur County Communications	Spillman
DeKalb	DeKalb County Central Communications	Spillman
Delaware	Delaware County Emergency Communications Center	New World
Dubois	Dubois County Communications Center	Caliber
Dubois	Jasper Police Department	Caliber
Elkhart	Elkhart City Communications	Central Square

Elkhart	Indiana State Police RDCVI	Caliber
Elkhart	Elkhart County Public Safety Communications Center (Elkhart County 9-1-1)	Visionaire
Fayette	Fayette Co 911	Spillman
Floyd	Floyd County Sheriff's Department	Spillman
Fountain/Warren	Fountain Warren Regional Dispatch Center	Cushing
Franklin	Franklin County	Spillman
Fulton	Fulton County 911	Motorola
Gibson	Gibson County Sheriff's Office	Central Square
Grant	Grant County Central Dispatch	Cushing
Greene	Greene County Sheriff's Department	Spillman
Greene	Linton Police Department	Spillman
Hamilton	Hamilton County Public Safety Communications	New World
Hancock	Hancock County 911	Caliber
Harrison	Harrison County Central Dispatch	Spillman
Hendricks	Hendricks County Communications Center	Motorola
Henry	Henry County Emergency Services 911	Spillman
Howard	Howard County Sheriff's Office	Caliber
Huntington	Huntington County Public Safety Dispatch	Spillman
Jackson	Jackson County Sheriff Department	Motorola
Jackson	Seymour Police Dispatch	Motorola
Jasper	Jasper County Sheriff	Motorola
Jay	Jay County Sheriff's Department 911	Spillman
Jefferson	Jefferson County Central Dispatch	Central Square
Jennings	Jennings County 911	Spillman
Johnson	Johnson County Public Safety Communications	Spillman
Knox	Knox County Central Dispatch	Caliber
Kosciusko	Kosciusko County 911 Communications	Central Square
LaGrange	LaGrange County Communications	Spillman
Lake	Indiana State Police - Lowell Regional Dispatch Center	Caliber

Lake	Lake County Emergency Communications	Motorola
Lake	Southcom	Spillman
LaPorte	LaPorte County 911 RDC	Caliber
Lawrence	Bedford Police Dept	Spillman
Lawrence	Lawrence County Central Dispatch	Spillman
Madison	Madison County	New World
Marion	Indianapolis Airport Authority	Motorola
Marion	Indianapolis Fire Department Communications	Motorola
Marion	Lawrence Public Safety Communications	Motorola
Marion	Marion County Sheriff's 911 Center	Motorola
Marion	Speedway Police and Fire Communications	Motorola
Marion	Indiana State Police, Region 5	Caliber
Marion	Speedway Police and Fire Communications	Motorola
Marshall	Marshall County Sheriff's Office	Central Square
Martin	Martin County Sheriff's Office	Other
Miami	Miami County RDC	Spillman
Monroe	Indiana State Police RDC3	Caliber
Monroe	Indiana University Police Department	Other
Monroe	Monroe County Central Emergency Dispatch Center	Spillman
Montgomery	Montgomery County Central Communications Center	Caliber
Morgan	Mooresville Police Department	Spillman
Morgan	Morgan County Public Safety Dispatch	Spillman
Newton	Newton County Communications Center	Cushing
Noble	Noble County Communications	Spillman
Ohio	Ohio County Communications	Spillman
Orange	Orange County	Cushing
Owen	Owen County Communications Center	Zuercher
Parke	Parke County Dispatch	Cushing
Perry	Perry County 911 Communications	Caliber
Pike	Pike County E911	Cushing

Porter	Duneland Regional Dispatch Center	Other
Porter	Porter County Central Communications	Central Square
Posey	Posey County Regional Dispatch	Spillman
Pulaski	Pulaski County Communications Center	Caliber
Putnam	Putnam County 911	Caliber
Randolph	Randolph County 911 Emergency Communications Center	Spillman
Ripley	Batesville Police Department	Spillman
Ripley	Indiana State Police Region 4 Versailles	Caliber
Ripley	Ripley County Communications	Motorola
Rush	Rush County Sheriff's Department	Spillman
Scott	Scott County Emergency Communications	Cushing
Shelby	Shelby County Emergency Communication Center	Caliber
Spencer	Spencer County Dispatch	Cushing
St. Joseph	St. Joseph County 911 Center	Motorola
Starke	Starke County 911	Caliber
Steuben	Steuben County Communications	Spillman
Sullivan	Sullivan County E911	Caliber
Switzerland	Switzerland County 911	Emergitech
Tippecanoe	Lafayette Police Department	Central Square
Tippecanoe	Tippecanoe County Sheriff	Caliber
Tippecanoe	West Lafayette Police Department	Caliber
Tippecanoe	Purdue University PD	Caliber
Tipton	Tipton County Communications	Central Square
Union	Union County 911	Central Square
Vanderburgh	Evansville Vanderburgh Central Dispatch	Central Square
Vermillion	Vermillion County Sheriff	Cushing
Vigo	Vigo County E911	Caliber
Wabash	Wabash Co Central Dispatch	Cushing
Warrick	Warrick County Sheriff's Office	Central Square

Washington	Washington Co 911	Caliber
Wayne	Wayne County Emergency Communications	Zuercher
Wells	Bluffton Dispatch Center	Motorola
White	White County Communications/E911	Cushing
Whitley	Columbia City Police Department	Spillman
Whitley	Whitley County Sheriff's Department	Spillman