Indiana State Trauma Care Committee

December 14, 2018

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Introductions & approval of meeting minutes

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Legislative updates

Amy Kent, *Legislative Affairs Director,* ISDH

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Updates

Katie Hokanson, *Director of Trauma and Injury Prevention*

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Congratulations!

- Memorial Hospital & Health Care Center received the Malcolm Baldridge National Quality Award

Indiana State Department of Health

Division staffing updates

- Jeremy Funk
  - Transitioned to Epidemiologist Resource Center
- Andzelika Rzucidlo
  - Injury Epidemiologist
- Veronica Daye
  - Records Consultant
- Brandon Moore
  - Administrative Assistant
- Tyler Gannon
  - No longer with ISDH
- Madeline Tatum
  - Records Consultant → PDO community outreach coordinator

Indiana State Department of Health

Stroke center list

- IC 16-31-2-9.5
  - Compile & maintain a list of Indiana hospitals that are stroke certified.
  - https://www.in.gov/isdh/27849.htm

Indiana State Department of Health

ISDH - CME Accredited

- ISDH is now able to host CME trainings and meetings starting December 31!
- Two year accreditation, efforts led by the division of trauma and injury prevention – thank you Tanya Barrett!

Indiana State Department of Health

MIPA

Midwest Injury Prevention Alliance

Cutting Edge of Prevention: Sharing Best Practices

November 29-30, 2018

Sheraton Indianapolis Hotel at Keystone Crossing
8787 Keystone Crossing
Indianapolis, IN 46240

Target Audience: Injury prevention coordinators, trauma coordinators, academic, violence prevention, youth & adolescent professionals, NGO's and State government officials

To view the Registration Fee, Agenda and Room Block information:

REGISTER NOW

Indiana State Department of Health
Trauma and Injury Prevention

EMS Medical Director's Conference

- Tentatively scheduled: April 16
- Venue: TBD

Indiana State Department of Health

Safety Shower Toolkit

Educating Parents to
Prevent Infant Mortality Toolkit

Evidence based falls prevention

Stepping On

Population – Older adults who want to reduce falls and increase confidence

Sessions – Seven 2 hour sessions and home visit. Booster session after 3 months

Program - home safety, fall risks, medication, etc. Exercises are emphasized.

Group size – 10 to 12

Leader – Health professional including guest lecturers.

Materials – Handouts, binder, information poster board, weights

Cost – Leader plus guest speakers, materials

Outcomes – Falls decreased by 31%

Wisconsin Institute of Healthy Aging. Originated in Australia

Upcoming classes

- Stepping On Leader training course
- 3 sessions offered in 3 different regions
- For more information please contact
  - Pravy Nijjar

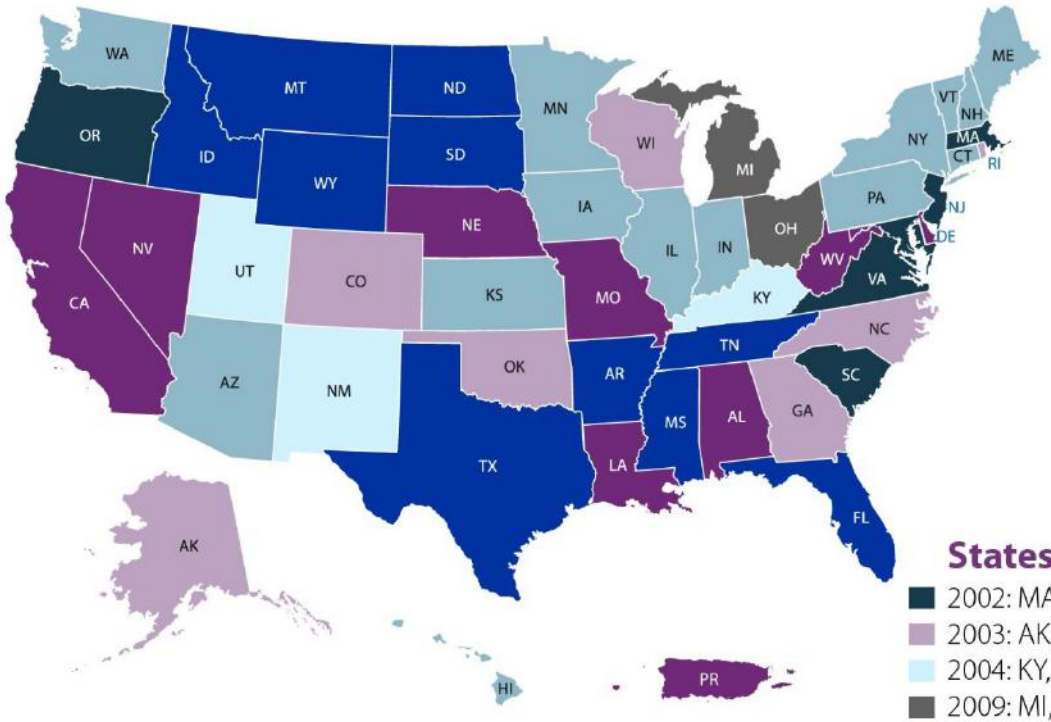
  pnijjar@isdh.in.gov

  317-234-1304

Injury Prevention visits

- Pravy will be reaching out to all trauma centers to schedule meetings to discuss statewide and local injury prevention initiatives

CDC Updates: Fully-funded NVDRS States



States added by year:

- 2002: MA, MD, NJ, OR, SC, VA
- 2003: AK, CO, GA, NC, OK, RI, WI
- 2004: KY, NM, UT
- 2009: MI, OH
- 2014: AZ, CT, HI, IA, IL, IN, KS, ME, MN, NH, NY, PA, VT, WA
- 2016: AL, CA, DE, DC, LA, MO, NE, NV, Puerto Rico, WV
- 2018: AR, FL, ID, MS, MT, ND, SD, TN, TX, WY

CDC Updates: NVDRS factsheets

- Victims of Homicide: **19,000**
  - Estimated Cost: $30 billion
- Victims of Suicide: **45,000**
  - Estimated Cost: $57 billion
- What makes NVDRS unique?
  - Gather and link investigations using death certificates, medical examinations, coroner reports, and toxicology reports
  - Help identify emerging issues (i.e. veteran suicides)
  - Collect information on suspects and relationship to victim

INSPECT Integration with EMRs

INSPECT Integration Initiative - Integration Request Form

INSPECT STATEWIDE INTEGRATION ANNOUNCEMENT

Effective August 24, 2017 Indiana will begin steps to implement a statewide, comprehensive platform for healthcare professionals to review patients' controlled-substance prescription history more quickly and efficiently. This platform supports Indiana's Prescription Drug Monitoring Program (INSPECT) and transfers data into electronic health records (EHR) and pharmacy management systems. Statewide integration of the INSPECT platform is a key component of Indiana's ongoing efforts to address the opioid crisis.

Integration Process:

1. Follow the instructions and complete ALL of the following ***(only authorized decision makers at the healthcare entity should fill out these forms)***:
   - Integration Request Form (located on the right of this page)
   - End User License Agreement (will be emailed to you within 24 hours)
   - PMP Gateway Licensee Questionnaire (will open in a new window)

Primary Point of Contact

* indicates required field

First Name*

Last Name*

Primary Point of Contact Email Address*

Job Title

Phone Number*

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"In the Process" of ACS Verification Trauma Centers

Facility Name	City	Level	Adult / Pediatric	"In the Process" Date*	1 Year Review Date**	ACS Consultation Visit Date	ACS Verification Visit Date
Elkhart General Hospital	Elkhart	III	Adult	03/15/2018	April 2019	N/A	May 2019

*Date the EMS Commission granted the facility "In the process" status

**Date the Indiana State Trauma Care Committee (ISTCC) reviewed/reviews the 1 year review documents. This date is based on the first ISTCC meeting after the 1 year date.

Facility is past the two year mark for their "In the Process" status.

Indiana State Department of Health

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Regional Updates

Indiana State Department of Health

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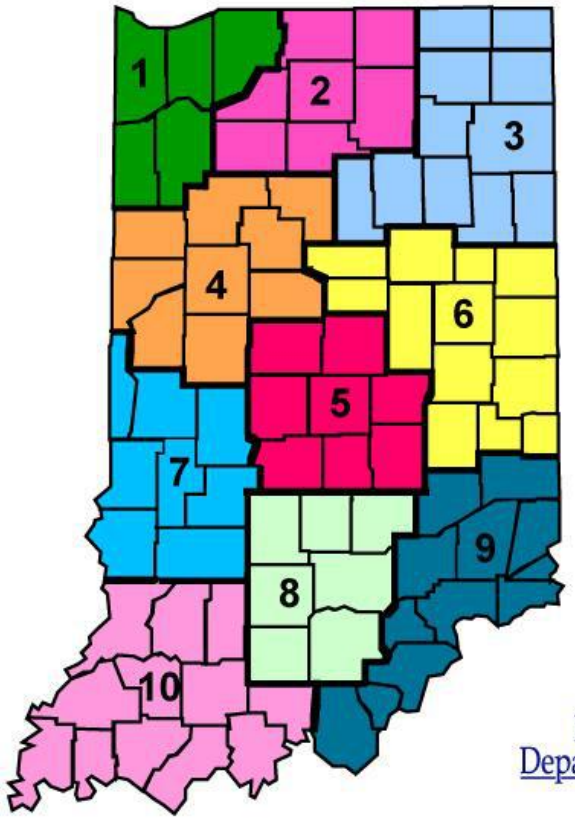
Regional updates

- District 2
- District 4
- District 1
- District 3
- District 5
- District 6
- District 7
- District 8
- District 10



Indiana State Department of Health

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Progress Update: Risk factors for inter-facility transfer patients

Dr. Peter Jenkins, *General Surgery*
IU Health Methodist Hospital

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

The Association Between Comorbidities and Mortality Following Traumatic Injury

Peter C. Jenkins MD, MSc

IU Department of Surgery
K12 Emergency Care Research Scholar
National Heart, Lung, and Blood Institute

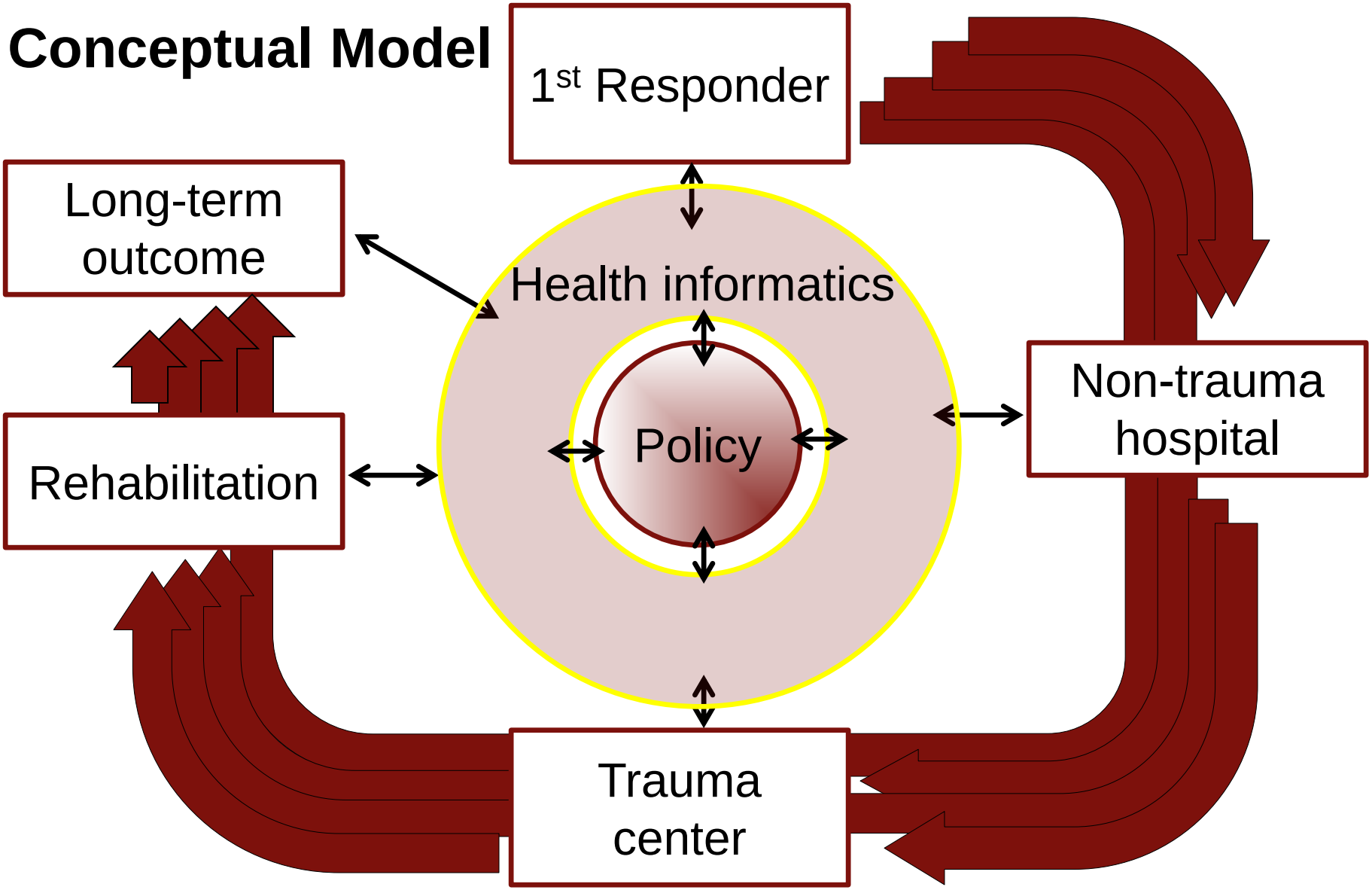
SCHOOL OF MEDICINE

INDIANA UNIVERSITY

Outline

1. Review project
2. Identify barriers and opportunities associated with current analysis
3. Future directions

Conceptual Model



Review Project: Goals

1. Critically examine existing measures of comorbidities
2. Develop new measure using Indiana trauma registry data
3. Compare new measure with other existing measures

Background

- Comorbidities influence outcomes of trauma patients
- U.S. population is aging, so influence will grow.
- Existing measures:
  1. Charlson Comorbidity Index
  2. Elixhauser Comorbidity Index
  3. Comorbidities Included Separately

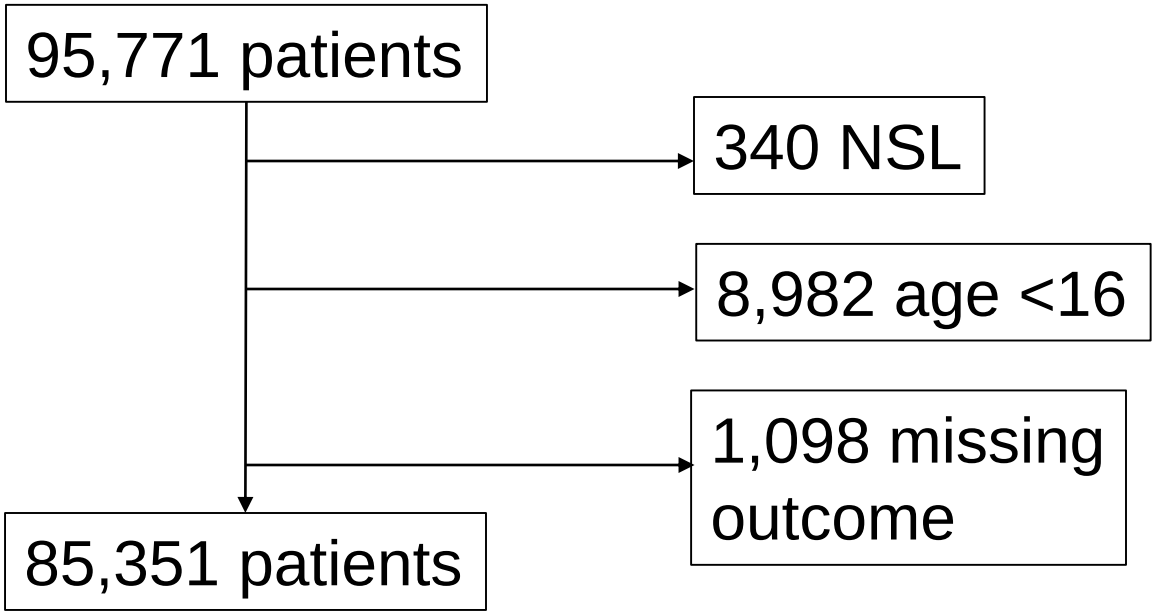
Existing comorbidity measures:

1. Charleston Comorbidity Index (1987)
   - Non-trauma patient data
   - 16 comorbidities
2. Elixhauser Comorbidity Index (1998)
   - Administrative data
   - 30 comorbidities
3. Comorbidities Included Separately (TQIP)
   - Trauma registry data
   - Forward stepwise regression

Study design

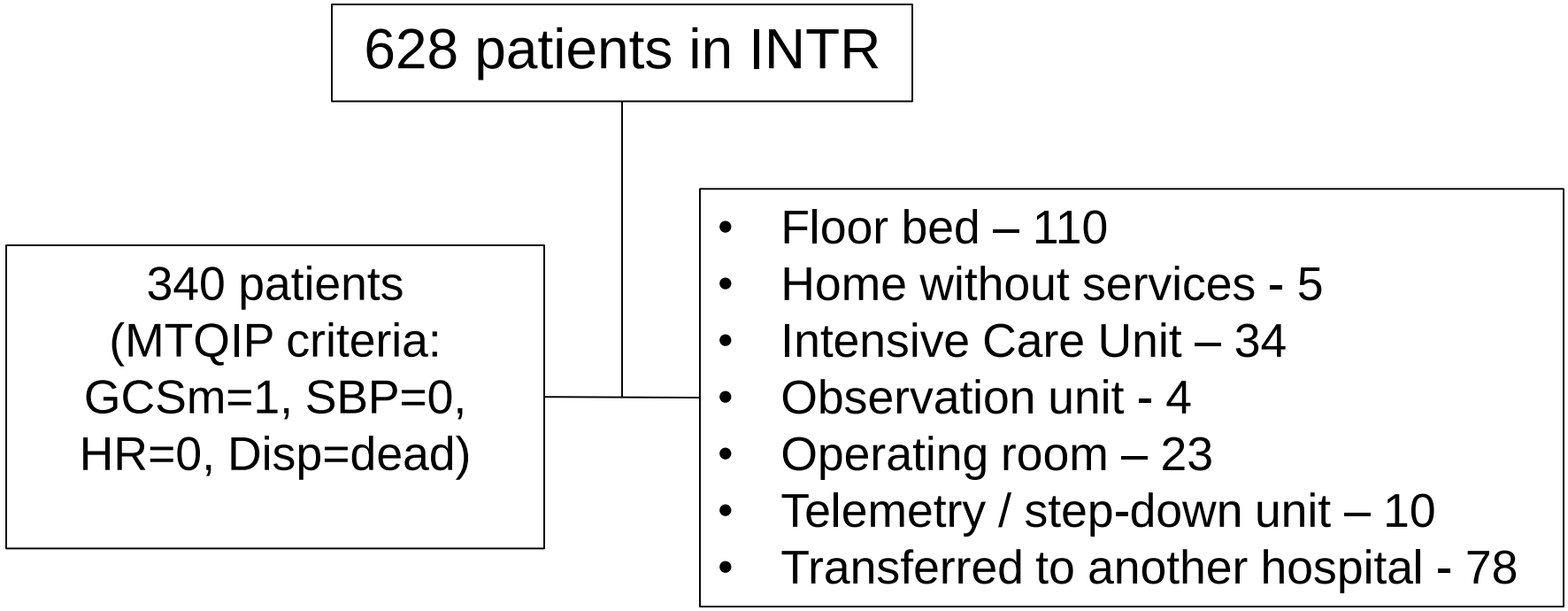
- Retrospective cohort study
- ISTR (2013-2015)
- Exposure variable of interest: comorbidities
- Outcome of interest: in-hospital mortality

Study design



Phase I. Develop & validate TRCI: training & testing cohort
Phase II. Compare TRCI with other comorbidity measures: full cohort

No signs of life



Trauma Registry Comorbidity Index

1. **Identified** significant comorbidities (P value < 0.25, unadjusted model)
2. **Weighted** each according to mortality-risk (risk-adjusted model)
3. **Calculated** TRSI for each patient

Table 1. Patient characteristics

	All patients (n=85,351)	Training Cohort (n=42,665)	Testing Cohort (n=42,686)	P-value*
Age, years (%)				0.96
16-24	11.01	10.87	11.14	
25-34	10.38	10.46	9.31	
35-44	9.14	9.14	9.13	
45-54	11.27	11.31	11.23	
55-64	13.11	13.12	13.10	
65-74	12.95	12.94	12.96	
>=75	31.99	32.01	31.97	
Missing	0.15	0.15	0.16	
Race (%)				0.34
White	84.83	84.89	84.77	
Black	8.97	8.85	9.09	
Other	1.98	2.05	1.92	
NA/not known/missing	4.21	4.20	4.22	
Female (%)	47.06	47.03	46.15	0.70
Payer type (%)				0.42
Private/commercial	25.27	25.01	26.54	
Medicaid	6.87	6.90	6.84	
Medicare	39.44	39.55	39.33	
Other	20.06	20.22	19.90	
NA/not known/missing	8.36	8.33	8.38	

	All patients (n=85,351)	Training Cohort (n=42,665)	Testing Cohort (n=42,686)	P-value*
Mechanism (%)				0.62
Motor vehicle accident	21.40	21.28	21.52	
Firearm	2.97	2.95	3.00	
Cut/pierce	2.89	2.94	2.83	
Assault	3.00	2.97	3.03	
Burn/electrocution	1.95	1.89	2.01	
Hanging/asphyxiation/drowning	0.15	0.15	0.14	
Fall	53.61	53.85	53.38	
Overdose/poisoning/adverse reaction	0.41	0.43	0.40	
Struck by/against	3.80	3.78	3.83	
Pedestrian struck	1.67	1.73	1.62	
Other/not known/missing	8.14	8.03	8.24	
Injury Severity Score, mean (SD)	8 (7)	8 (7)	8 (7)	0.67
Initial Systolic Blood Pressure, mean (SD)	142 (27)	142 (27)	142 (27)	0.61
Initial Heart Rate, mean (SD)	86 (19)	86 (19)	86 (19)	0.97
Glasgow coma scale, mean (SD)	13 (6)	13 (6)	13 (6)	0.25
Inter-hospital transfer (%)	19.09	19.06	19.21	0.79
American College of Surgeons trauma verification level (%)				0.27
I	16.65	16.69	16.60	
II	30.32	30.11	30.54	
III	16.25	16.47	16.03	
Non-trauma center	36.78	36.74	36.82	

Table 2. Patient comorbidities used to develop trauma registry comorbidity index, %

	All patients (n=85,351)	Training Cohort (n=42,665)	Testing Cohort (n=42,686)	P-value*
Advanced directive	1.22	1.30	1.15	0.05
Ascites within 30 days	0.03	0.02	0.03	0.67
Bleeding disorder	6.92	6.98	6.86	0.51
Cerebrovascular accident	2.69	2.66	2.71	0.62
Chemotherapy	0.36	0.38	0.34	0.33
Chronic obstructive pulmonary disease	0.08	0.07	0.10	0.24
Chronic renal failure	2.07	2.03	2.12	0.34
Cirrhosis	0.62	0.61	0.63	0.80
Congestive heart disease	5.67	5.87	5.47	0.01
Current smoker	20.11	20.18	20.03	0.59
Dementia	5.72	5.69	5.76	0.66
Diabetes Mellitus	15.77	15.91	15.62	0.25
Disseminated cancer	0.89	0.89	0.88	0.85
Drug abuse	0.56	0.52	0.59	0.16
Drug abuse disorder	2.53	2.52	2.54	0.85

Table 2. Patient comorbidities used to develop trauma registry comorbidity index, %

	All patients (n=85,351)	Training Cohort (n=42,665)	Testing Cohort (n=42,686)	P-value*
Functionally dependent	3.72	3.79	3.65	0.25
History of myocardial infarct within last six months	0.85	0.86	0.84	0.82
History of peripheral vascular disease	0.62	0.64	0.60	0.41
History of prematurity	0.02	0.01	0.02	0.32
Hypertension	24.68	24.69	24.67	0.94
Not known	4.76	4.81	4.70	0.47
Obesity	5.93	5.92	5.95	0.89
Other	16.94	16.98	16.90	0.76
Prehospital cardiac arrest	0.07	0.08	0.07	0.53
Respiratory disease	7.99	8.05	7.93	0.51
Steroid use	0.61	0.60	0.62	0.63

Table 3. Coefficients of comorbidities in trauma registry, Charleston and Elixhauser comorbidity indexes (TRCI, CCI, and ECI)

	TRCI	CCI	ECI
Advanced directive	1.55	--	--
Ascites within 30 days	0.96	3	1
Bleeding disorder	0.53	--	1
Cerebrovascular accident	0.30	1	--
Chemotherapy	0.33	--	--
Chronic obstructive pulmonary disease	1.14	1	1
Chronic renal failure	0.60	2	1
Cirrhosis	0.86	3	1
Congestive heart disease	0.85	1	1
Current smoker	-0.69	--	--
Dementia	0.30	1	--
Diabetes Mellitus	0.16	1	1
Disseminated cancer	0.39	6	1
Drug abuse	0.05	--	1
Drug abuse disorder	-1.18	--	--

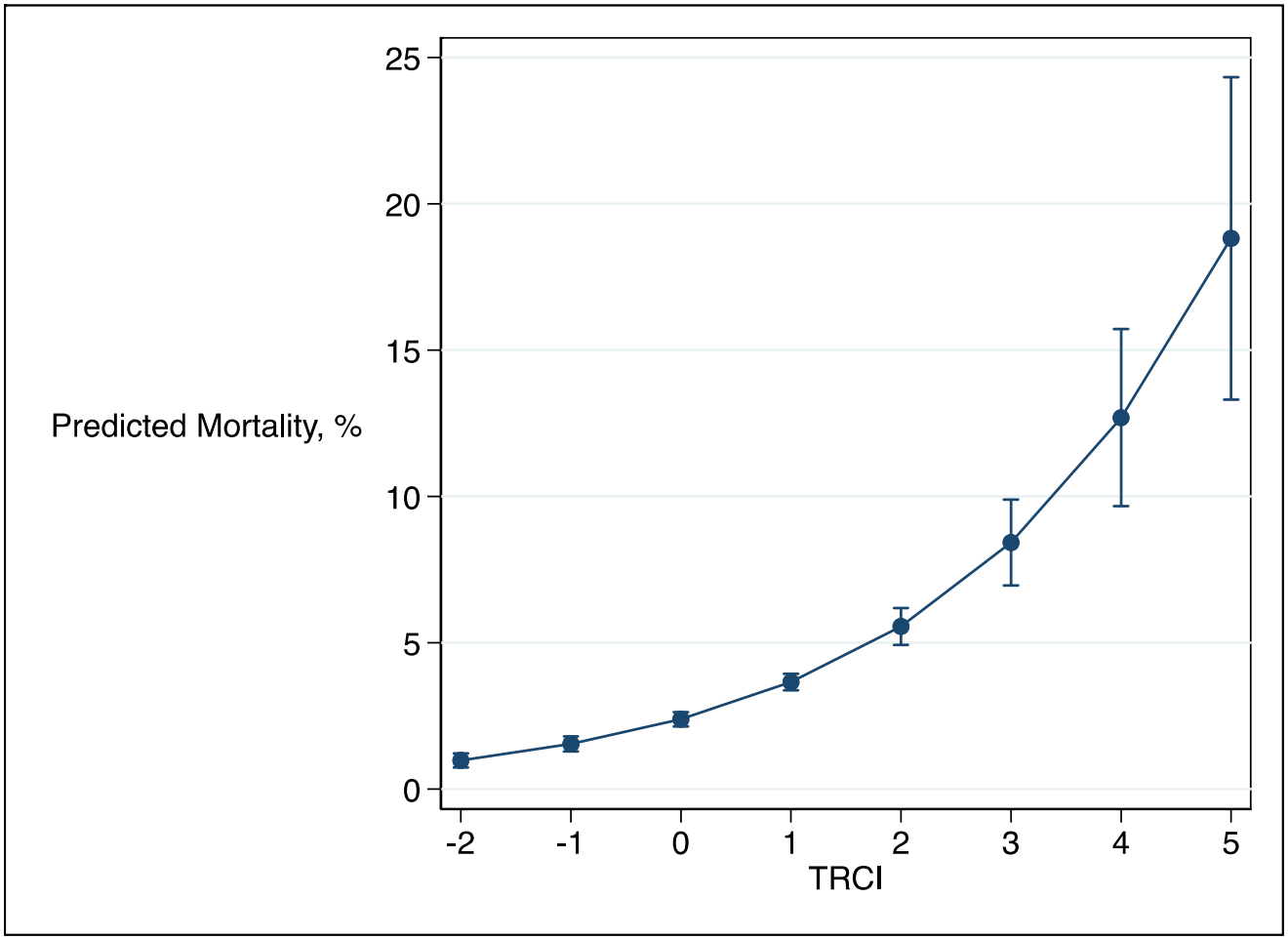
"--" not included in comorbidity index

Table 3. Coefficients of comorbidities in trauma registry, Charleston and Elixhauser comorbidity indexes (TRCI, CCI, and ECI)

	TRCI	CCI	ECI
Functionally dependent	0.27	--	--
History of myocardial infarct within last six months	0.70	1	--
History of peripheral vascular disease	0.77	1	1
History of prematurity	2.68	--	--
Hypertension	0.10	--	1
Not known	0.98	--	--
Obesity	0.22	--	1
Other	-0.09	--	--
Prehospital cardiac arrest	3.98	--	--
Respiratory disease	0.21	--	--
Steroid use	0.59	--	--

"--" not included in comorbidity index

Figure 1. Predicted mortality by trauma registry comorbidity index (TRCI) score in testing cohort (n=47,167)



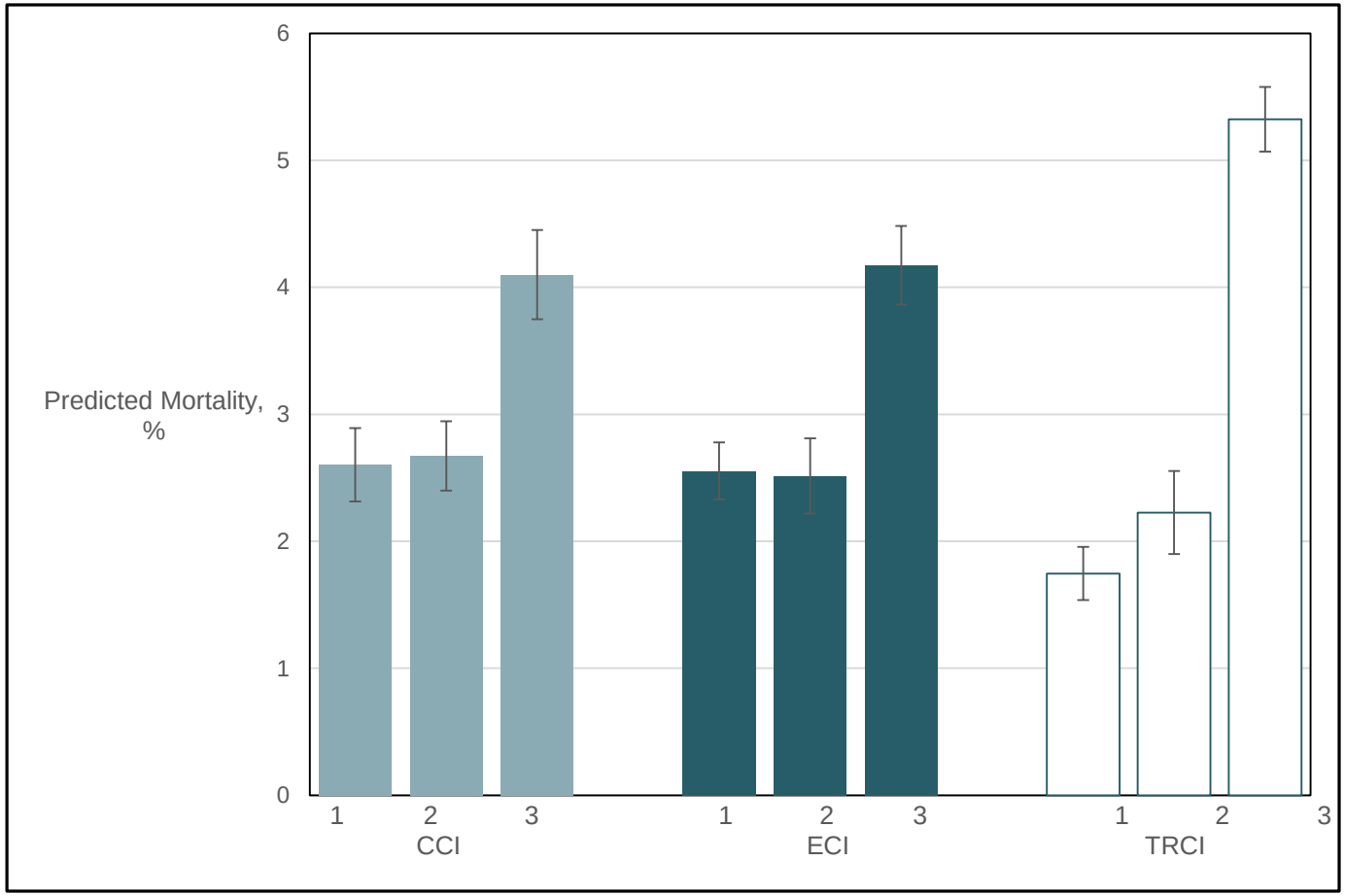
TRCI – Trauma registry comorbidity index

Table 4. Comparison of area under the receiver operator curves (AUC) of multivariable mortality models using different measures of comorbidities, p-value

Measure of Comorbidities, AUC	NCI, 0.915	CCI, 0.919	ECI, 0.919	TCC, 0.920	TRCI, 0.924	CIS, 0.924
NCI, 0.915	--					
CCI, 0.919	<0.001	--				
ECI, 0.919	<0.001	0.438	--			
TCC, 0.920	<0.001	0.005	0.018	--		
TRCI, 0.924	<0.001	<0.001	<0.001	<0.001	--	
CIS, 0.924	<0.001	<0.001	<0.001	<0.001	0.592	--

NCI – No comorbidities included
CCI – Charlson comorbidity index
ECI – Elixhauser comorbidity index
TCC – Count of comorbidities in trauma registry
TRCI – Trauma registry comorbidity index
CIS – Comorbidities included separately

Figure 2. Comparison of predicted mortality by tertile



CCI – Charlson comorbidity index
ECI – Elixhauser comorbidity index
TRCI – Trauma registry comorbidity index

Limitations

1. Retrospective
2. Data lacks validation
3. TRCI lacks validation
4. Assumes cumulative effect

Summary

1. Comorbidities are prevalent and affect outcomes
2. Trauma Registry Comorbidity Index offers greater model discrimination/parsimony
3. Indiana State Trauma Registry (and QI efforts) would continue to benefit from robust data validation

Thank you team!

- Brian E. Dixon, PhD
- Stephanie A. Savage, MD, MPH
- Aaron E. Carroll, MD, MPH
- Craig D. Newgard, MD, MPH
- Christopher J. Tignanelli, MD
- Mark R. Hemmila, MD
- Lava Timsina, PhD
- ISDH – Katie, Camry, and Ramzi

Preparedness updates

Lee Christenson, *Division of Emergency Preparedness Director,* ISDH

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Indiana Crash Trends and INDOT's Traffic Safety Program

Michael Holowaty, *P.E.*
INDOT, Traffic Engineering Division

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Indiana State Trauma Care Committee

Michael Holowaty
Manager, Office of Traffic Safety
INDOT, Traffic Engineering Division
December 14, 2018

10 Leading Causes of Injury Deaths by Age Group Highlighting Unintentional Injury Deaths, United States – 2016

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Unintentional Suffocation 1,023	Unintentional Drowning 425	Unintentional MV Traffic 384	Unintentional MV Traffic 455	Unintentional MV Traffic 7,037	Unintentional Poisoning 14,631	Unintentional Poisoning 13,278	Unintentional Poisoning 13,439	Unintentional Poisoning 9,438	Unintentional Fall 29,668	Unintentional Poisoning 58,335
2	Homicide Unspecified 132	Unintentional MV Traffic 334	Unintentional Drowning 147	Suicide Suffocation 247	Unintentional Poisoning 4,997	Unintentional MV Traffic 7,010	Unintentional MV Traffic 5,075	Unintentional MV Traffic 5,536	Unintentional MV Traffic 5,397	Unintentional MV Traffic 7,429	Unintentional MV Traffic 38,748
3	Unintentional MV Traffic 88	Unintentional Suffocation 118	Unintentional Fire/Burn 78	Suicide Firearm 160	Homicide Firearm 4,553	Homicide Firearm 4,510	Suicide Firearm 3,099	Suicide Firearm 3,873	Suicide Firearm 4,067	Suicide Firearm 5,756	Unintentional Fall 34,673
4	Homicide Other Spec., Classifiable 63	Homicide Unspecified 114	Homicide Firearm 68	Unintentional Drowning 103	Suicide Firearm 2,683	Suicide Firearm 3,298	Homicide Firearm 2,555	Suicide Suffocation 2,112	Unintentional Fall 2,679	Unintentional Unspecified 5,021	Suicide Firearm 22,938
5	Undetermined Suffocation 60	Unintentional Fire/Burn 107	Unintentional Suffocation 35	Homicide Firearm 95	Suicide Suffocation 2,100	Suicide Suffocation 2,643	Suicide Suffocation 2,199	Suicide Poisoning 1,736	Suicide Poisoning 1,538	Unintentional Suffocation 3,631	Homicide Firearm 14,415
6	Undetermined Unspecified 38	Unintentional Pedestrian, Other 82	Unintentional Other Land Transport 24	Unintentional Other Land Transport 64	Unintentional Drowning 530	Undetermined Poisoning 855	Suicide Poisoning 1,144	Homicide Firearm 1,420	Suicide Suffocation 1,474	Unintentional Poisoning 2,458	Suicide Suffocation 11,642
7	Unintentional Drowning 38	Homicide Firearm 64	Unintentional Pedestrian, Other 18	Unintentional Fire/Burn 52	Suicide Poisoning 426	Suicide Poisoning 767	Undetermined Poisoning 788	Unintentional Fall 1,238	Unintentional Suffocation 792	Adverse Effects 2,028	Suicide Poisoning 6,698
8	Homicide Suffocation 19	Homicide Other Spec., Classifiable 64	Unintentional Firearm 16	Unintentional Suffocation 39	Homicide Cut/Pierce 340	Unintentional Drowning 463	Unintentional Fall 515	Undetermined Poisoning 929	Homicide Firearm 738	Unintentional Fire/Burn 1,150	Unintentional Suffocation 6,610
9	Adverse Effects 18	Unintentional Firearm 34	Unintentional Struck by or Against 15	Unintentional Poisoning 28	Undetermined Poisoning 289	Homicide Cut/Pierce 420	Unintentional Drowning 396	Unintentional Drowning 478	Undetermined Poisoning 707	Suicide Poisoning 1,070	Unintentional Unspecified 6,507
10	Unintentional Natural/ Environment 18	Unintentional Poisoning 34	Unintentional Other Transport 14	Unintentional Firearm 23	Unintentional Fall 199	Unintentional Fall 326	Homicide Cut/Pierce 350	Unintentional Suffocation 419	Unintentional Unspecified 625	Suicide Suffocation 859	Undetermined Poisoning 3,827

Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System.
Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

NextLevel INDIANA

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3	Unintentional MV Traffic 88	Unintentional Suffocation 118	Unintentional Fire/Burn 78	Suicide Firearm 160	Homicide Firearm 4,553	Homicide Firearm 4,510	Suicide Firearm 3,099	Suicide Firearm 3,873	Suicide Firearm 4,067	Suicide Firearm 5,756	Unintentional Fall 34,673
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Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

NextLevel INDIANA

• Federal Definition of Serious Injury (Class A Injury)

1. Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood
2. Broken or distorted extremity (arm or leg)
3. Crush injuries
4. Suspected skull, chest or abdominal injury other than bruises or minor lacerations
5. Significant burns (second and third degree burns over 10% or more of the body)
6. Unconsciousness when taken from the crash scene
7. Paralysis

STRATEGIC HIGHWAY SAFETY PLAN

2016 Revision

As required by 23 U.S.C. § 148 (c)(1), the Indiana Strategic Highway Safety Plan (SHSP) identifies significant highway safety problems and opportunities for saving lives, reducing suffering, and limiting economic losses resulting from traffic crashes. It guides the types of roadway infrastructure countermeasures that are preferred for use of federal Highway Safety Improvement Program funding to reduce the risks associated with the physical environment. It is coordinated with the traffic safety activities of state agencies, municipal entities, and other highway safety interests.

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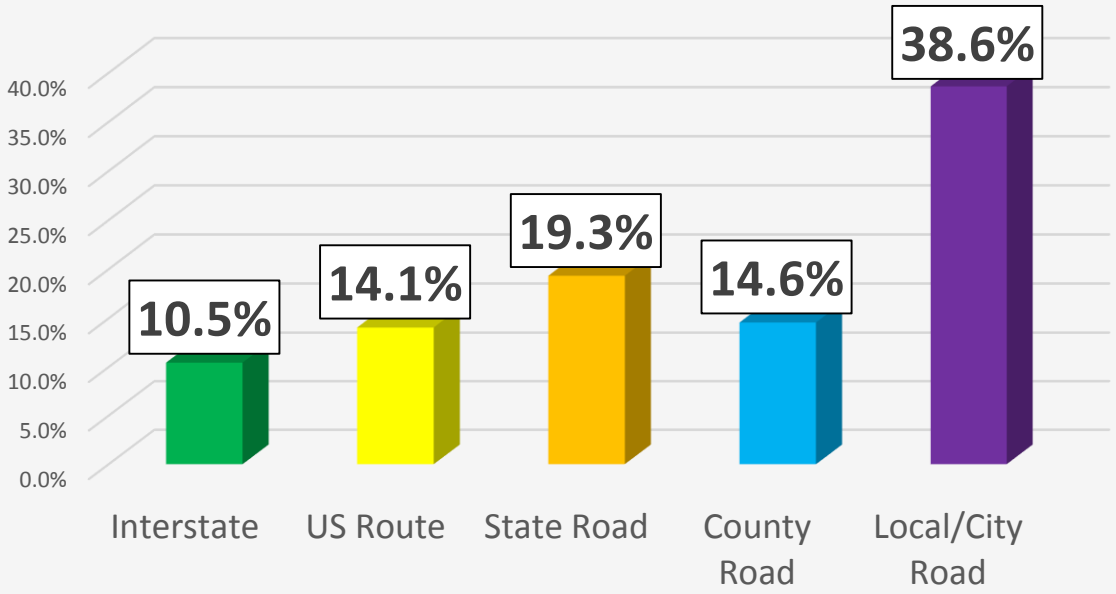
- What are the most frequent crash types that have severe outcomes?

SHSP Emphasis Areas

% Severe Crashes by Road Class



% Contribution to Severe Crashes

Type of Crash	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Run off Road	28.2%	26.2%	24.7%	24.9%	24.8%	26.7%	24.4%	28.2%	28.2%	27.7%	28.0%
Head On & Sideswipes w/another MV	21.4%	23.3%	22.5%	23.2%	22.3%	23.1%	24.1%	18.6%	11.5%	11.4%	11.4%
Intersections	30.3%	31.1%	33.2%	31.3%	32.1%	32.3%	31.8%	32.1%	33.2%	33.9%	34.0%
HS Multi-Lane Rear-End	2.2%	1.5%	1.9%	2.4%	1.8%	2.0%	2.5%	2.4%	2.1%	1.6%	0.9%
Work Zones	1.3%	1.8%	1.3%	2.2%	1.6%	1.6%	1.8%	1.6%	2.2%	2.5%	3.0%
Motorcycle/Mopeds	16.6%	16.2%	16.3%	16.6%	17.7%	18.4%	17.8%	12.6%	8.8%	8.2%	8.6%
Pedestrians	7.1%	7.8%	7.9%	8.4%	8.3%	7.1%	7.5%	7.3%	4.8%	4.8%	4.5%
Bicycle	2.5%	2.3%	2.1%	2.6%	2.6%	2.9%	2.8%	2.0%	1.8%	1.8%	1.7%
Large Truck	7.7%	7.5%	7.1%	7.5%	8.5%	7.3%	8.0%	8.7%	7.7%	7.5%	7.3%
Driver/Pedestrian 65+	13.9%	13.9%	15.1%	15.2%	16.9%	15.0%	15.8%	16.7%	17.4%	18.8%	18.9%

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Lane Departure % Total of Severe Crashes

Type of Crash	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Run off Road	28.2%	26.2%	24.7%	24.9%	24.8%	26.7%	24.4%	28.2%	28.2%	27.7%	28.0%
Head On & Sideswipes w/another MV	21.4%	23.3%	22.5%	23.2%	22.3%	23.1%	24.1%	18.6%	11.5%	11.4%	11.4%
Intersections	30.3%	31.1%	33.2%	31.3%	32.1%	32.3%	31.8%	32.1%	33.2%	33.9%	34.0%
HS Multi-Lane Rear-End	2.2%	1.5%	1.9%	2.4%	1.8%	2.0%	2.5%	2.4%	2.1%	1.6%	0.9%
Work Zones	1.3%	1.8%	1.3%	2.2%	1.6%	1.6%	1.8%	1.6%	2.2%	2.5%	3.0%
Motorcycle/Mopeds	16.6%	16.2%	16.3%	16.6%	17.7%	18.4%	17.8%	12.6%	8.8%	8.2%	8.6%
Pedestrians	7.1%	7.8%	7.9%	8.4%	8.3%	7.1%	7.5%	7.3%	4.8%	4.8%	4.5%
Bicycle	2.5%	2.3%	2.1%	2.6%	2.6%	2.9%	2.8%	2.0%	1.8%	1.8%	1.7%
Large Truck	7.7%	7.5%	7.1%	7.5%	8.5%	7.3%	8.0%	8.7%	7.7%	7.5%	7.3%
Driver/Pedestrian 65+	13.9%	13.9%	15.1%	15.2%	16.9%	15.0%	15.8%	16.7%	17.4%	18.8%	18.9%

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NOT PASS
"Safety-Edge"

“Edge-line Rumble Stripes”


"Center-line Rumble Stripes"


SWIFT
R3670
CHEVROLET
"Cable Barrier"
04/14/2006

Intersection % Total of Severe Crashes

Type of Crash	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Run off Road	28.2%	26.2%	24.7%	24.9%	24.8%	26.7%	24.4%	28.2%	28.2%	27.7%	28.0%
Head On & Sideswipes w/another MV	21.4%	23.3%	22.5%	23.2%	22.3%	23.1%	24.1%	18.6%	11.5%	11.4%	11.4%
Intersections	30.3%	31.1%	33.2%	31.3%	32.1%	32.3%	31.8%	32.1%	33.2%	33.9%	34.0%
HS Multi-Lane Rear-End	2.2%	1.5%	1.9%	2.4%	1.8%	2.0%	2.5%	2.4%	2.1%	1.6%	0.9%
Work Zones	1.3%	1.8%	1.3%	2.2%	1.6%	1.6%	1.8%	1.6%	2.2%	2.5%	3.0%
Motorcycle/Mopeds	16.6%	16.2%	16.3%	16.6%	17.7%	18.4%	17.8%	12.6%	8.8%	8.2%	8.6%
Pedestrians	7.1%	7.8%	7.9%	8.4%	8.3%	7.1%	7.5%	7.3%	4.8%	4.8%	4.5%
Bicycle	2.5%	2.3%	2.1%	2.6%	2.6%	2.9%	2.8%	2.0%	1.8%	1.8%	1.7%
Large Truck	7.7%	7.5%	7.1%	7.5%	8.5%	7.3%	8.0%	8.7%	7.7%	7.5%	7.3%
Driver/Pedestrian 65+	13.9%	13.9%	15.1%	15.2%	16.9%	15.0%	15.8%	16.7%	17.4%	18.8%	18.9%

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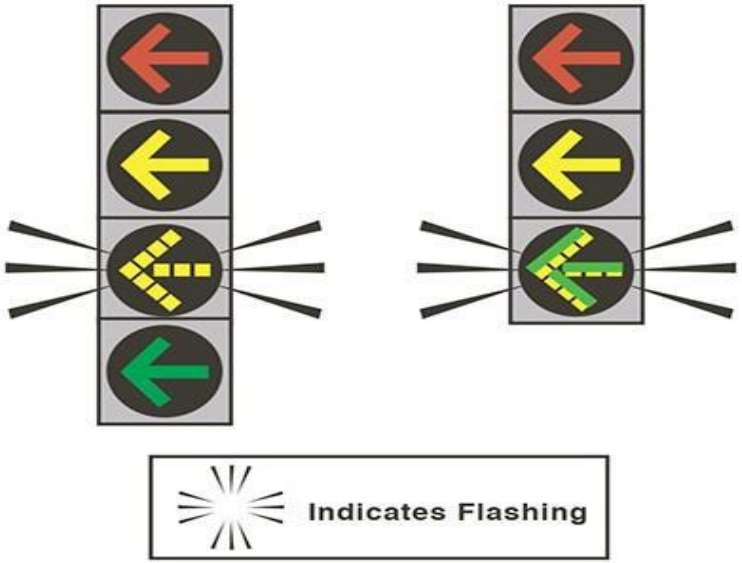
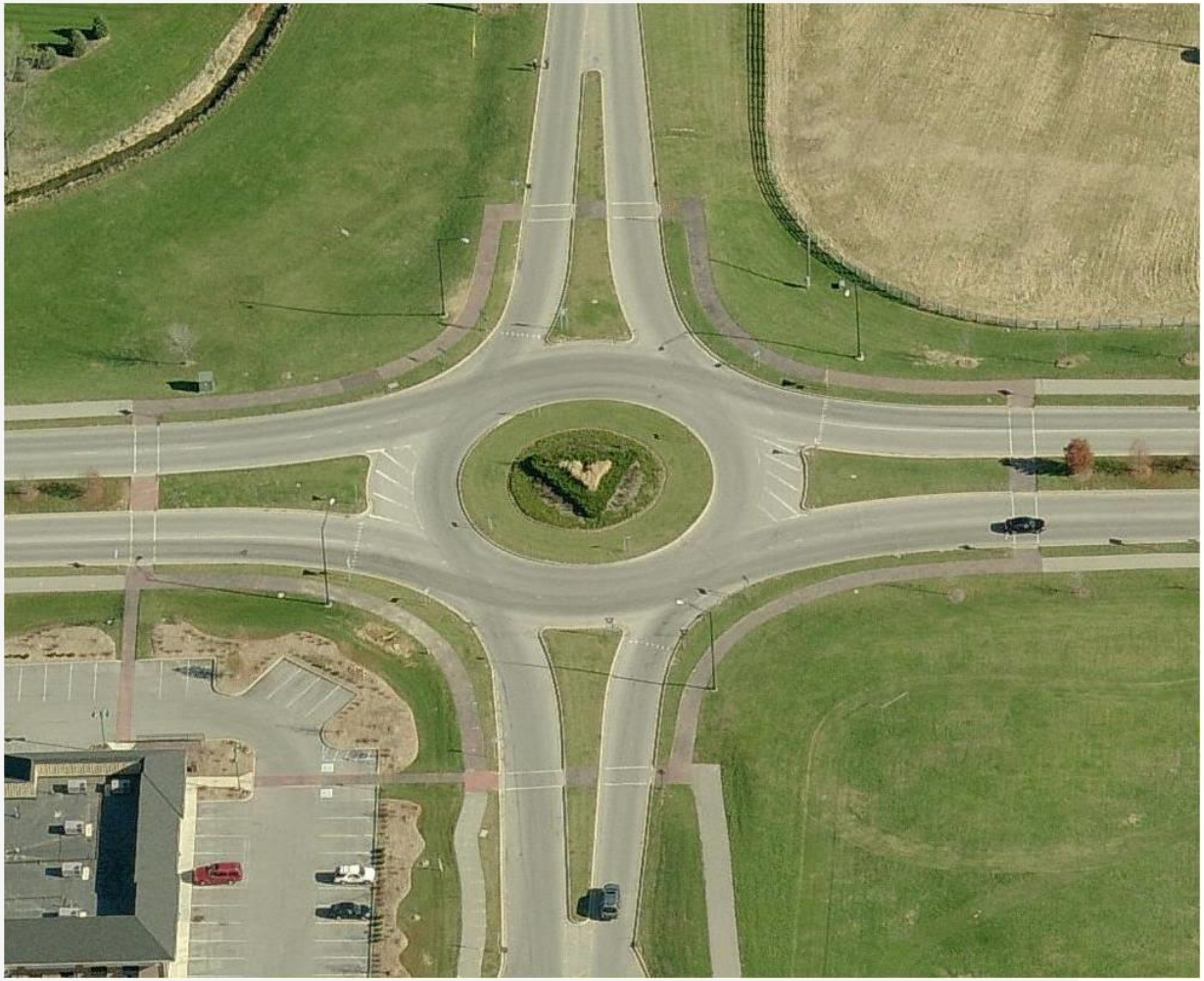
Example of a signal backplate framed with a retroreflective border.

High Contrast Signal Heads And Flashing Yellow Arrows





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Pedestrian % Total of Severe Crashes

Type of Crash	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Run off Road	28.2%	26.2%	24.7%	24.9%	24.8%	26.7%	24.4%	28.2%	28.2%	27.7%	28.0%
Head On & Sideswipes w/another MV	21.4%	23.3%	22.5%	23.2%	22.3%	23.1%	24.1%	18.6%	11.5%	11.4%	11.4%
Intersections	30.3%	31.1%	33.2%	31.3%	32.1%	32.3%	31.8%	32.1%	33.2%	33.9%	34.0%
HS Multi-Lane Rear-End	2.2%	1.5%	1.9%	2.4%	1.8%	2.0%	2.5%	2.4%	2.1%	1.6%	0.9%
Work Zones	1.3%	1.8%	1.3%	2.2%	1.6%	1.6%	1.8%	1.6%	2.2%	2.5%	3.0%
Motorcycle/Mopeds	16.6%	16.2%	16.3%	16.6%	17.7%	18.4%	17.8%	12.6%	8.8%	8.2%	8.6%
Pedestrians	7.1%	7.8%	7.9%	8.4%	8.3%	7.1%	7.5%	7.3%	4.8%	4.8%	4.5%
Bicycle	2.5%	2.3%	2.1%	2.6%	2.6%	2.9%	2.8%	2.0%	1.8%	1.8%	1.7%
Large Truck	7.7%	7.5%	7.1%	7.5%	8.5%	7.3%	8.0%	8.7%	7.7%	7.5%	7.3%
Driver/Pedestrian 65+	13.9%	13.9%	15.1%	15.2%	16.9%	15.0%	15.8%	16.7%	17.4%	18.8%	18.9%

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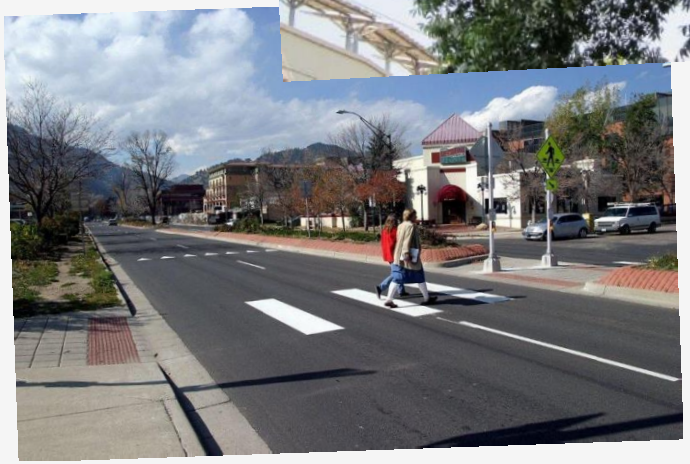

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65 and Over % Total of Severe Crashes

Type of Crash	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Run off Road	28.2%	26.2%	24.7%	24.9%	24.8%	26.7%	24.4%	28.2%	28.2%	27.7%	28.0%
Head On & Sideswipes w/another MV	21.4%	23.3%	22.5%	23.2%	22.3%	23.1%	24.1%	18.6%	11.5%	11.4%	11.4%
Intersections	30.3%	31.1%	33.2%	31.3%	32.1%	32.3%	31.8%	32.1%	33.2%	33.9%	34.0%
HS Multi-Lane Rear-End	2.2%	1.5%	1.9%	2.4%	1.8%	2.0%	2.5%	2.4%	2.1%	1.6%	0.9%
Work Zones	1.3%	1.8%	1.3%	2.2%	1.6%	1.6%	1.8%	1.6%	2.2%	2.5%	3.0%
Motorcycle/Mopeds	16.6%	16.2%	16.3%	16.6%	17.7%	18.4%	17.8%	12.6%	8.8%	8.2%	8.6%
Pedestrians	7.1%	7.8%	7.9%	8.4%	8.3%	7.1%	7.5%	7.3%	4.8%	4.8%	4.5%
Bicycle	2.5%	2.3%	2.1%	2.6%	2.6%	2.9%	2.8%	2.0%	1.8%	1.8%	1.7%
Large Truck	7.7%	7.5%	7.1%	7.5%	8.5%	7.3%	8.0%	8.7%	7.7%	7.5%	7.3%
Driver/Pedestrian 65+	13.9%	13.9%	15.1%	15.2%	16.9%	15.0%	15.8%	16.7%	17.4%	18.8%	18.9%

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Construction Work Zone % Total of Severe Crashes

Type of Crash	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Run off Road	28.2%	26.2%	24.7%	24.9%	24.8%	26.7%	24.4%	28.2%	28.2%	27.7%	28.0%
Head On & Sideswipes w/another MV	21.4%	23.3%	22.5%	23.2%	22.3%	23.1%	24.1%	18.6%	11.5%	11.4%	11.4%
Intersections	30.3%	31.1%	33.2%	31.3%	32.1%	32.3%	31.8%	32.1%	33.2%	33.9%	34.0%
HS Multi-Lane Rear-End	2.2%	1.5%	1.9%	2.4%	1.8%	2.0%	2.5%	2.4%	2.1%	1.6%	0.9%
Work Zones	1.3%	1.8%	1.3%	2.2%	1.6%	1.6%	1.8%	1.6%	2.2%	2.5%	3.0%
Motorcycle/Mopeds	16.6%	16.2%	16.3%	16.6%	17.7%	18.4%	17.8%	12.6%	8.8%	8.2%	8.6%
Pedestrians	7.1%	7.8%	7.9%	8.4%	8.3%	7.1%	7.5%	7.3%	4.8%	4.8%	4.5%
Bicycle	2.5%	2.3%	2.1%	2.6%	2.6%	2.9%	2.8%	2.0%	1.8%	1.8%	1.7%
Large Truck	7.7%	7.5%	7.1%	7.5%	8.5%	7.3%	8.0%	8.7%	7.7%	7.5%	7.3%
Driver/Pedestrian 65+	13.9%	13.9%	15.1%	15.2%	16.9%	15.0%	15.8%	16.7%	17.4%	18.8%	18.9%

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WORK ZONE SAFETY

Proper Placement of Warning Devices

Reduced Speed Limits in Work Zones

Guiding the Driver Through the Work Zone

Enforcing Traffic Laws

And Timely Incident Response

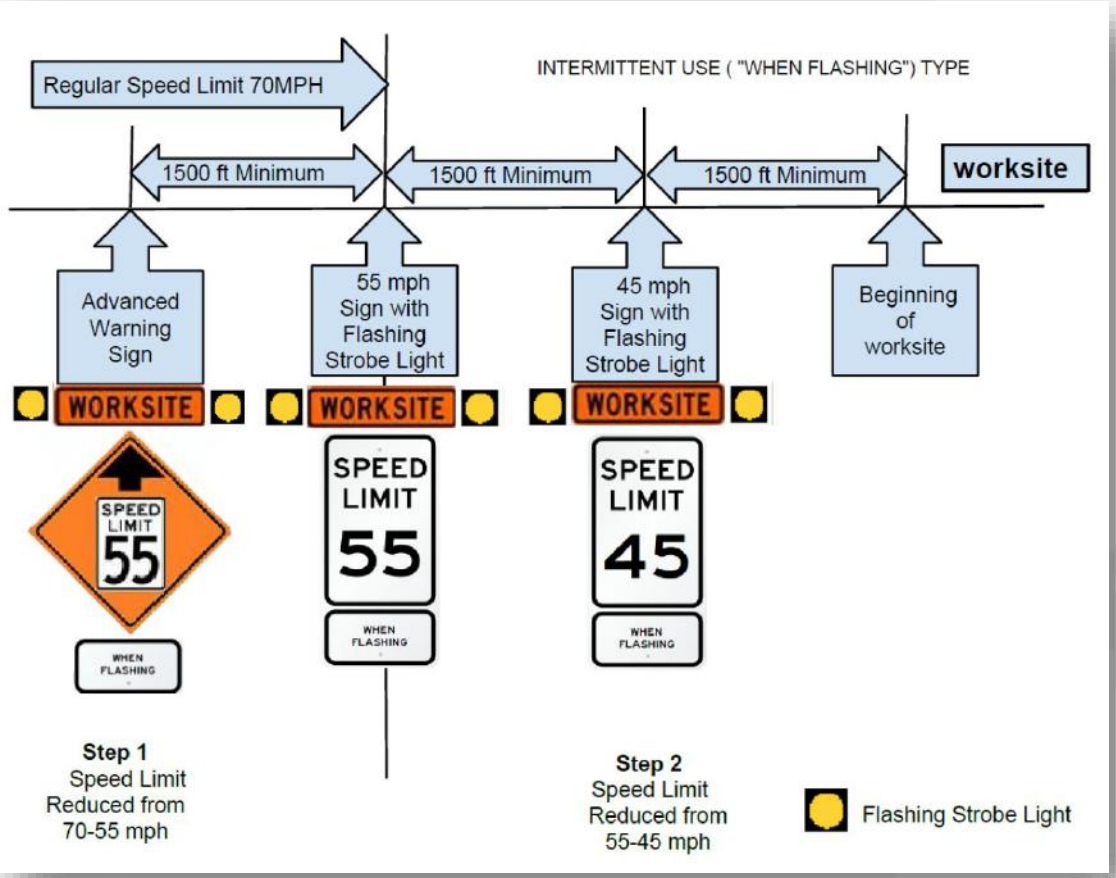
Implementing Worksite Speed Limits

- Proper Documentation Required for Enforceability
  - Authorization for Temporary Work Site Speed Limit Form
  - Temporary Work Site Speed Limit Activation Summary
- Speed Limit Reduction Requirements
  - **Speed Limit MUST be reduced by at least 10 MPH [IC 9-21-5-11(b)]**
  - Speed Limit reductions greater than 15 MPH MUST be done in 2 increments
- Types of Worksite Speed Limits
  - Continuous (24/7)
  - Intermittent (When Flashing)
  - Combination

Intermittent Worksite Speed Limits

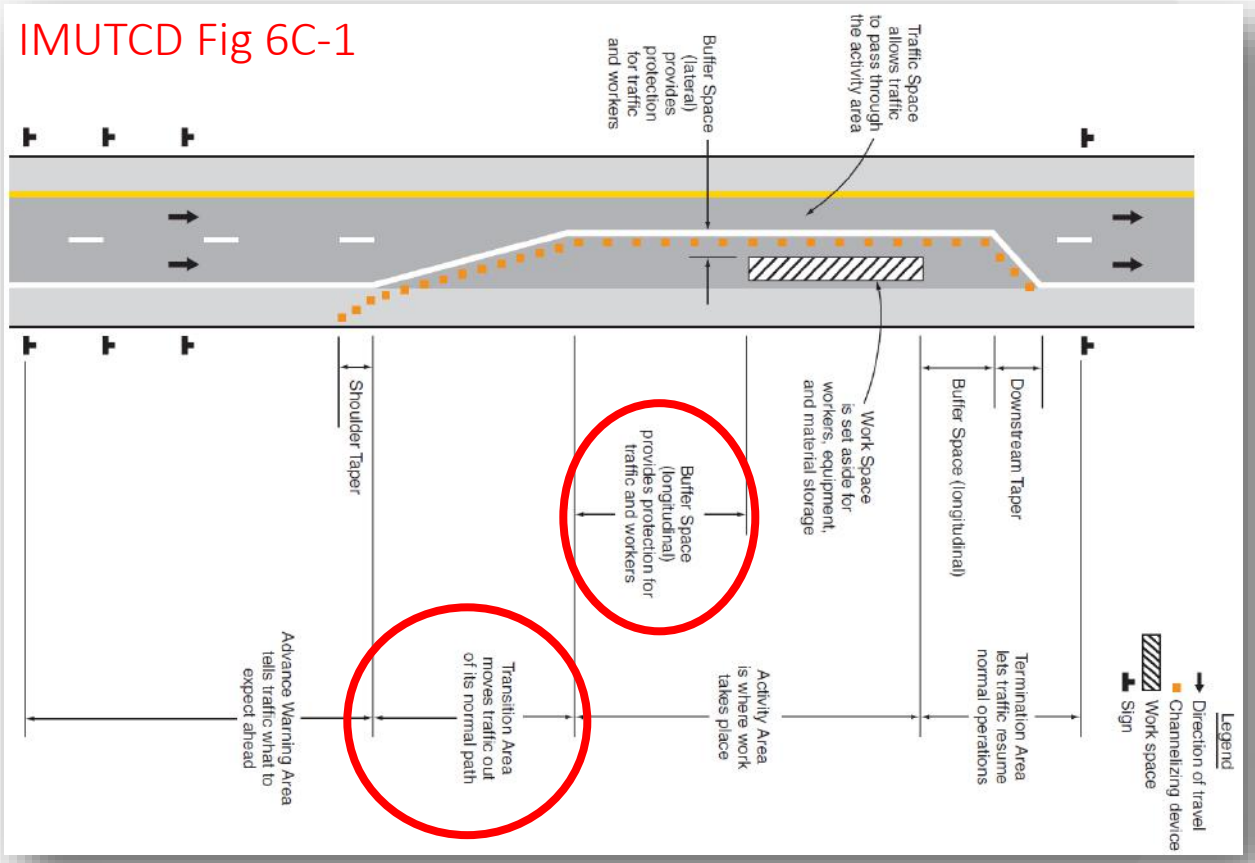
CM14-06

- Note 2 Steps
- Note same Spacing
- Must have WORKSITE Plaque, Flashing Strobes, and WHEN FLASHING Plaque
- Intermittent TWSLA's should be placed by any uncovered existing Speed Limit signs or cover them.



Merging and Shifting Lanes of Traffic

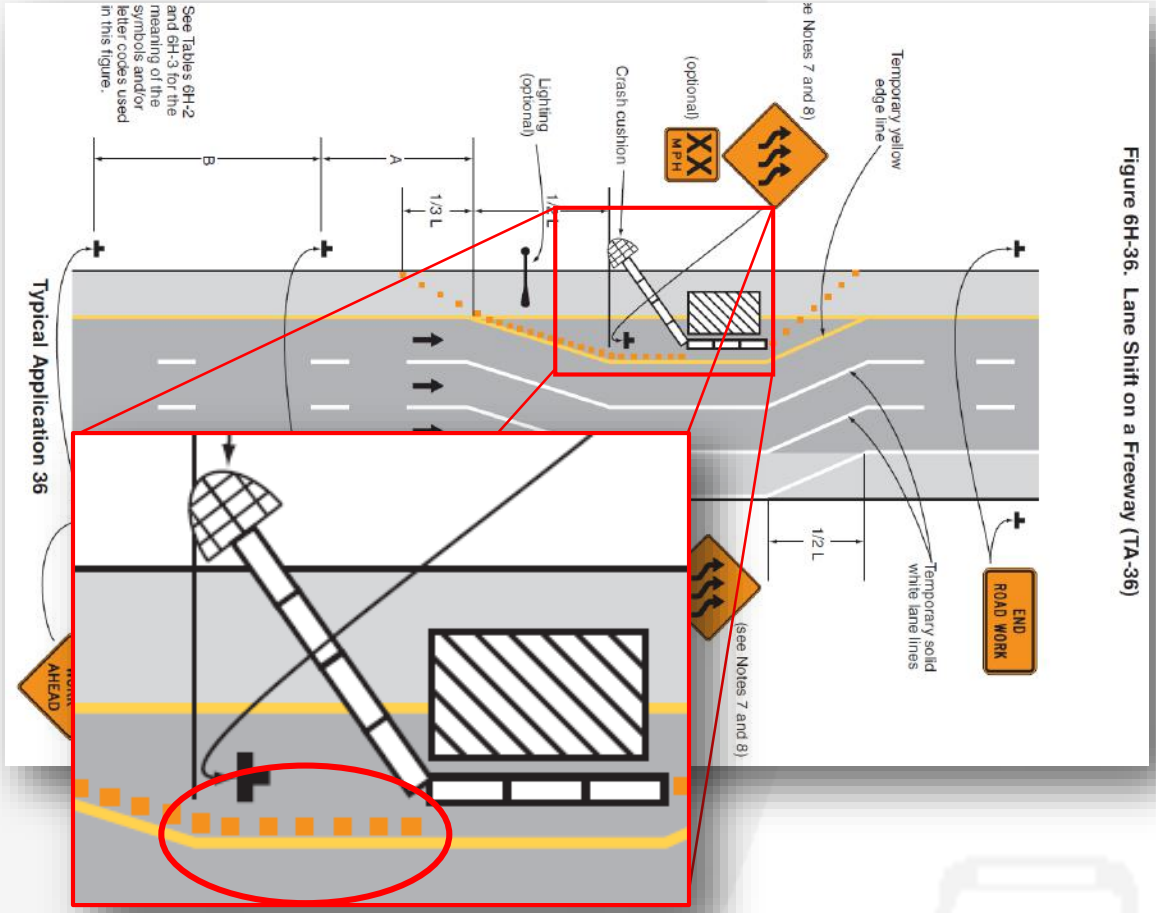
IMUTCD Fig 6C-1



Lane Shifts

IMUTCD Fig. 6H-36, TA 36

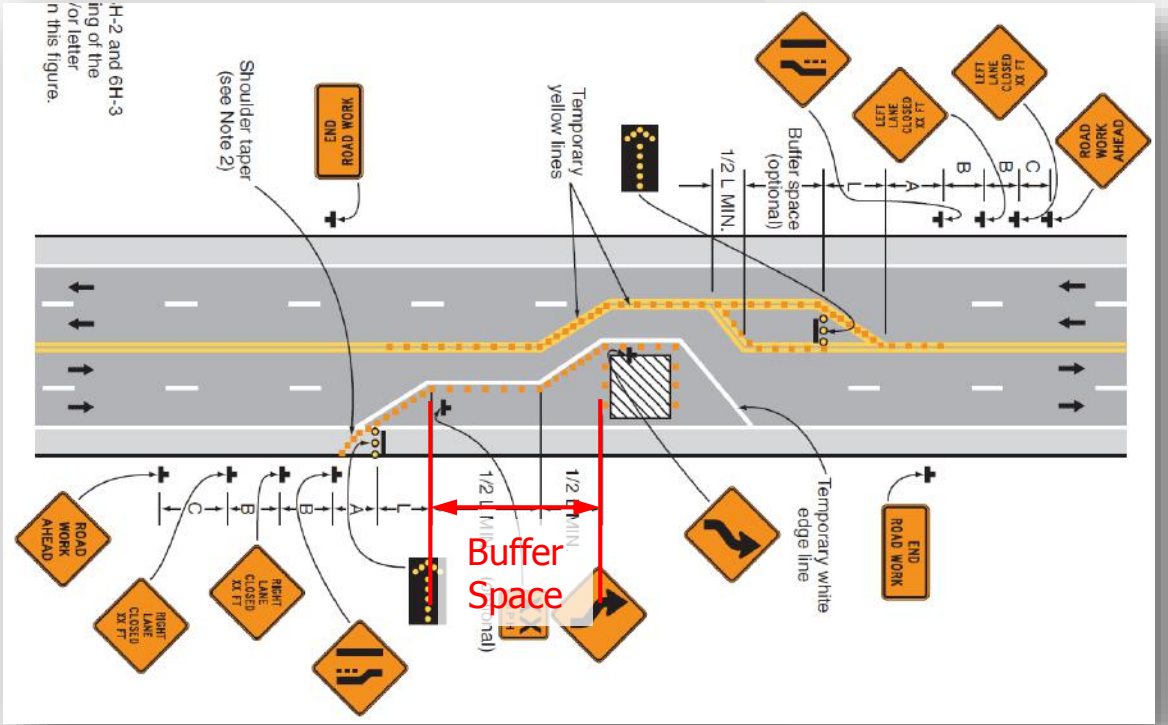
- Multi-lane lane shifts require pavement markings!
- Provide proper advance warning signs for lane shift tapers: reverse curve signs
- Provide the tangent distance from the downstream end of the lane shift taper to the point where the TTB flare ends.



Lane Merges

IMUTCD Fig. 6H-32, TA 32

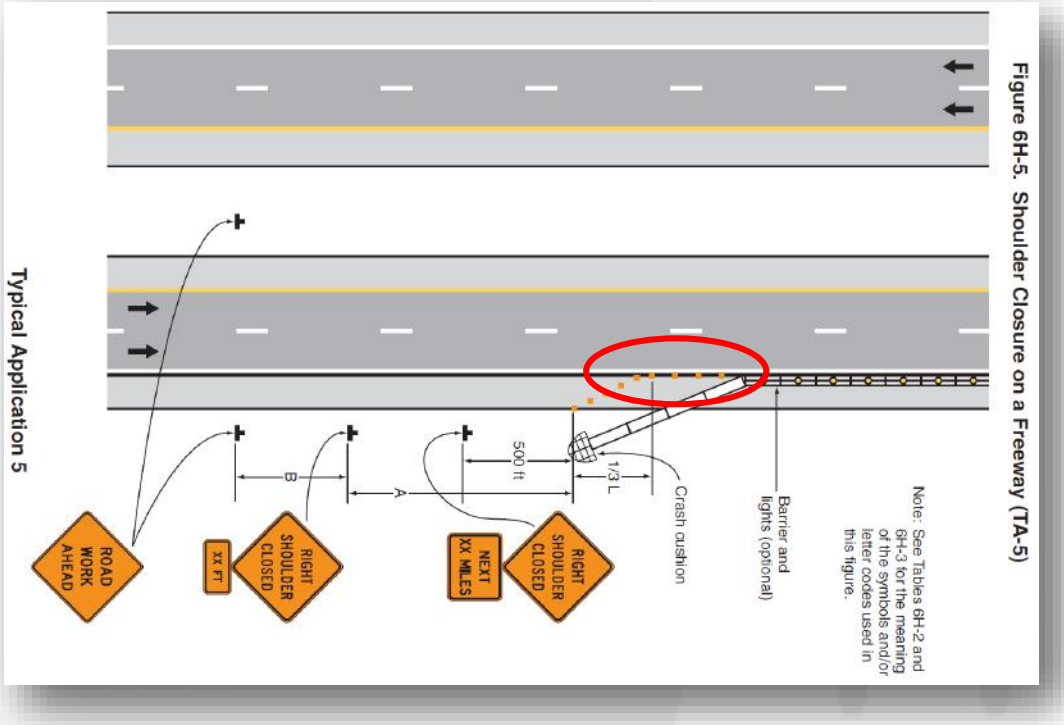
- Keep lane shift maneuvers and merge maneuvers separate
- Provide tangent distance between tapers
- Provide buffer space after a merge taper
- Expand tangent distance between tapers, to fit buffer space
- Provide proper advance warning signs for merge tapers



Shoulder Closure with TTB

IMUTCD Fig. 6H-5, TA 5

- Provide tangent length from end of shoulder closure taper to point where TTB flare ends.



Other Work Zone Safety Issues

- Coordination with adjacent or bundled projects during design
  - Coordinate construction phasing, lane closures, detours and signage
  - Prevent misaligned lane closures, overlapping detours, and overlapping advance signage
- Interstate entrance ramps within work zones
  - Yield sign locations on entrance ramps are critical to the safety of merging traffic
  - If short or no merge area provided, provide NO MERGE AREA plaque or close the ramp
- Design Exceptions
  - Provide some kind of mitigation for any substandard MOT Element.
  - Warning Signage, Messaging via CMS, Temporary Rumble (Buzz) Strips, etc.
- Address pedestrian facilities in work zones
  - Protect drop offs
  - Don’t just close off; sign sidewalk closure; provide detour
- Construction Drums: width including ballast is 3 ft

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Speeding Is Always Dangerous

Questions?

Performance Improvement subcommittee update from November

Dr. Stephanie Savage, *Trauma Medical Director*

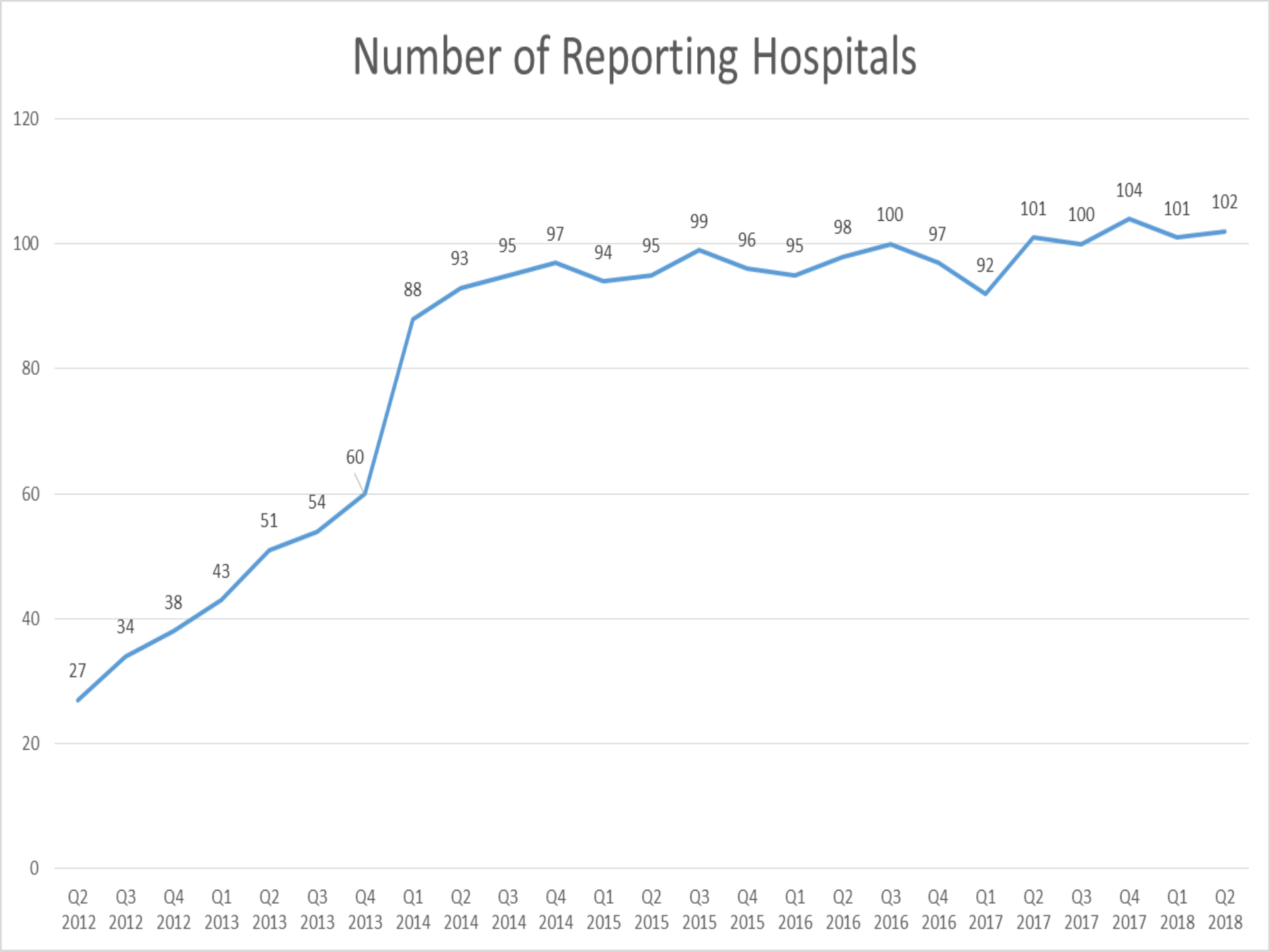
IU Health Methodist Hospital

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

ISDH Performance Improvement Subcommittee update

December 2018


Number of Reporting Hospitals
120
100
80
60
40
20
0
27
34
38
43
51
54
60
88
93
95
97
94
95
99
96
95
98
100
97
92
101
100
104
101
102
Q2 2012
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Q2 2013
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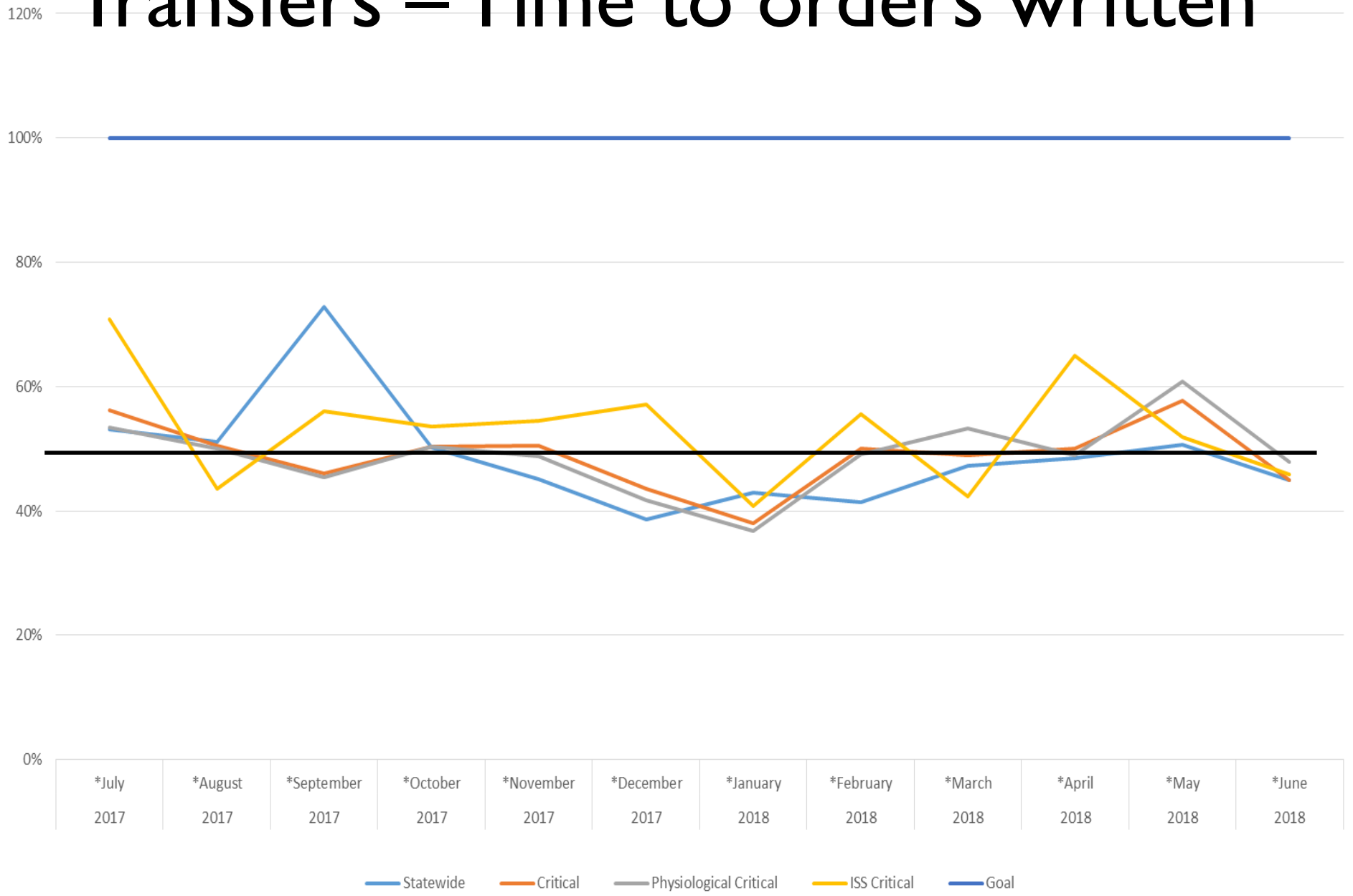
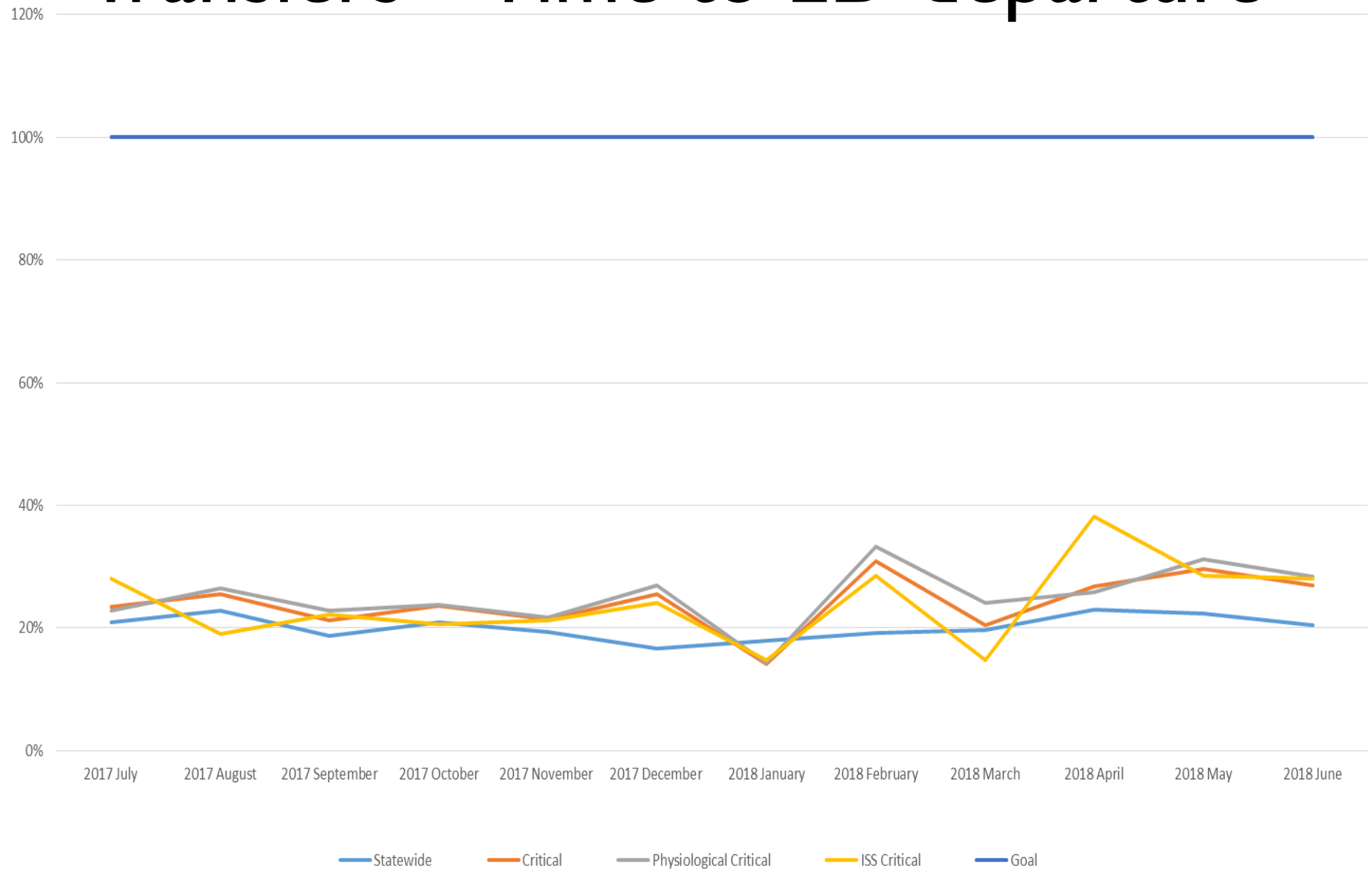
Q1 2017
Q2 2017
Q3 2017
Q4 2017
Q1 2018
Q2 2018

Transfers – Time to orders written



*ED LOS was calculated using ED/Acute Care Discharge (Orders Written) for July 2016 and later.

Transfers – Time to ED departure



*ED LOS was calculated using ED/Acute Care Discharge (Physical Exit) for July 2016 and later.

Action Items : PI Subcommittee

1. PI subcommittee discussed whether to make delay reporting mandatory for non-trauma centers

2. Discussed adding hospital level variables in an annual collection for further analysis

3. Difficulties obtaining cloud-based run sheets for bedside care

New Initiatives

Ongoing discussion regarding 2019 committee goals

Initiating a statewide TQIP initiative

Ongoing PI Projects

Registry quiz (new format started)

-69% participation (down from 80%)

Data quality validation project

-starting with limited variables (signs of life and missing data)

Trauma system planning subcommittee update

Dr. Scott Thomas, *Trauma Medical Director*
Memorial Hospital of South Bend
Dr. Matt Vassy, *Trauma Medical Director*
Deaconess Hospital

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Trauma System Planning Subcommittee

- Approved division strategic plan.
- Approved ISTCC meeting attendance requirements.
- Discussed TQIP collaborative.
- Discussed starting to draft guidelines on how to talk with families about gun safety.

American College of Surgeons – Committee on Trauma

Dr. Scott Thomas

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Opioid overdoses leading to ICU admissions and deaths

Camry Hess, *Data Analyst*
ISDH

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

"So when we think of overdoses, we need not to just think about whether people died or survived, but also about the tremendous personal and societal costs of the serious medical problems that can come from overdoses for people who didn't die, or didn't die immediately."

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Our questions:

-How many cases per dataset?

-# of opioid overdoses

-Monetary charges

-% with mechanical ventilation

-# of days on vent

-% aspiration pneumonia

-% rhabdomyolysis

-% with brain injuries

-% with septic shock

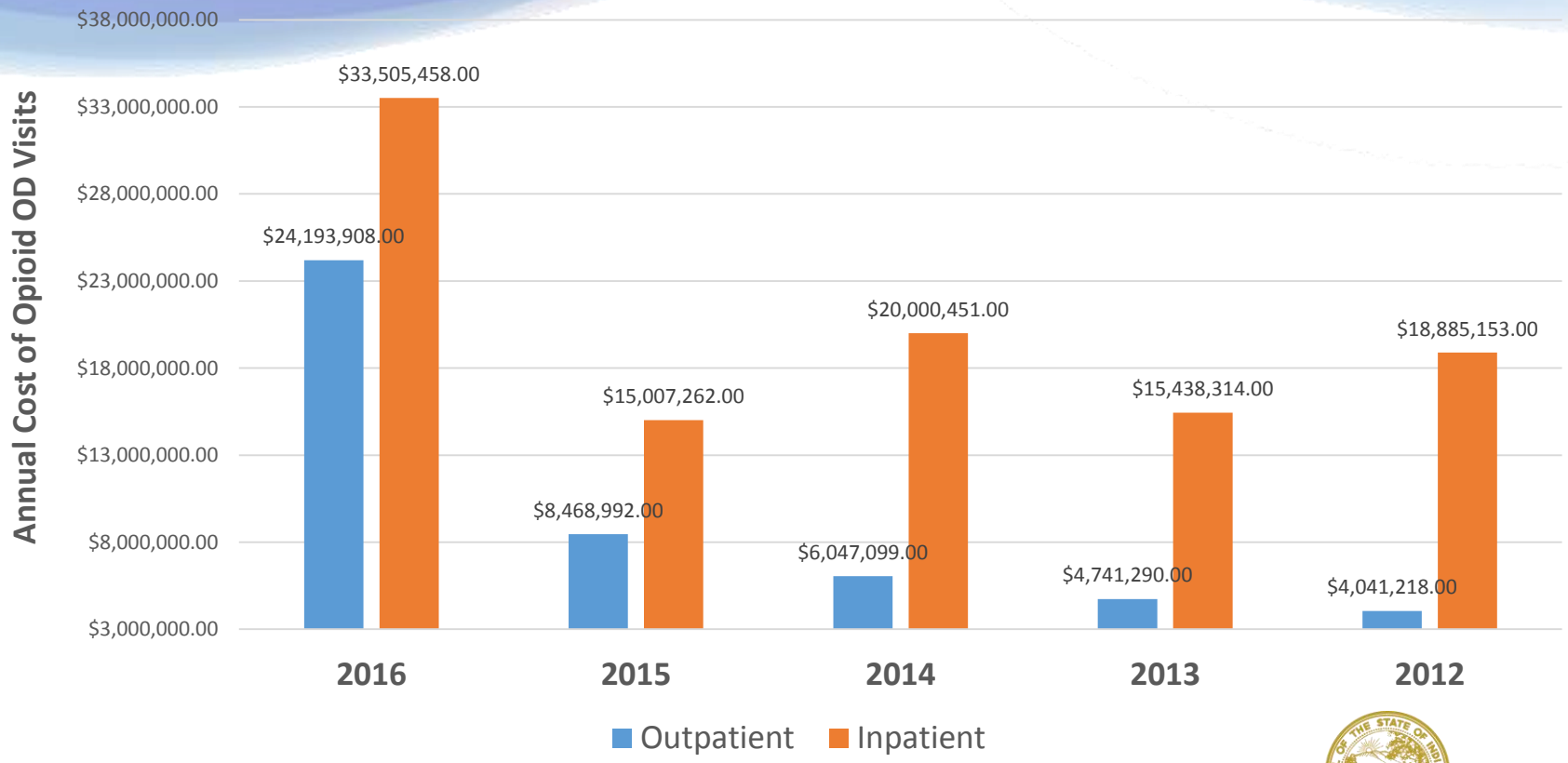
Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Results – Questions 1 and 2

Year		Outpatient	Inpatient	Mortality
2016	Total Cases	9,842,394	772,227	63,492
	Opioid Cases	8,507	2,426	785
2015	Total Cases	9,210,166	781,303	62,666
	Opioid Cases	2,977	1,430	529
2014	Total Cases	8,710,831	773,846	60,798
	Opioid Cases	2,822	913	452
2013	Total Cases	4,133,023	786,208	60,445
	Opioid Cases	2,157	849	350
2012	Total Cases	4,060,944	807,257	59,168
	Opioid Cases	1,969	893	361

Results – Question 3



Indiana State Department of Health

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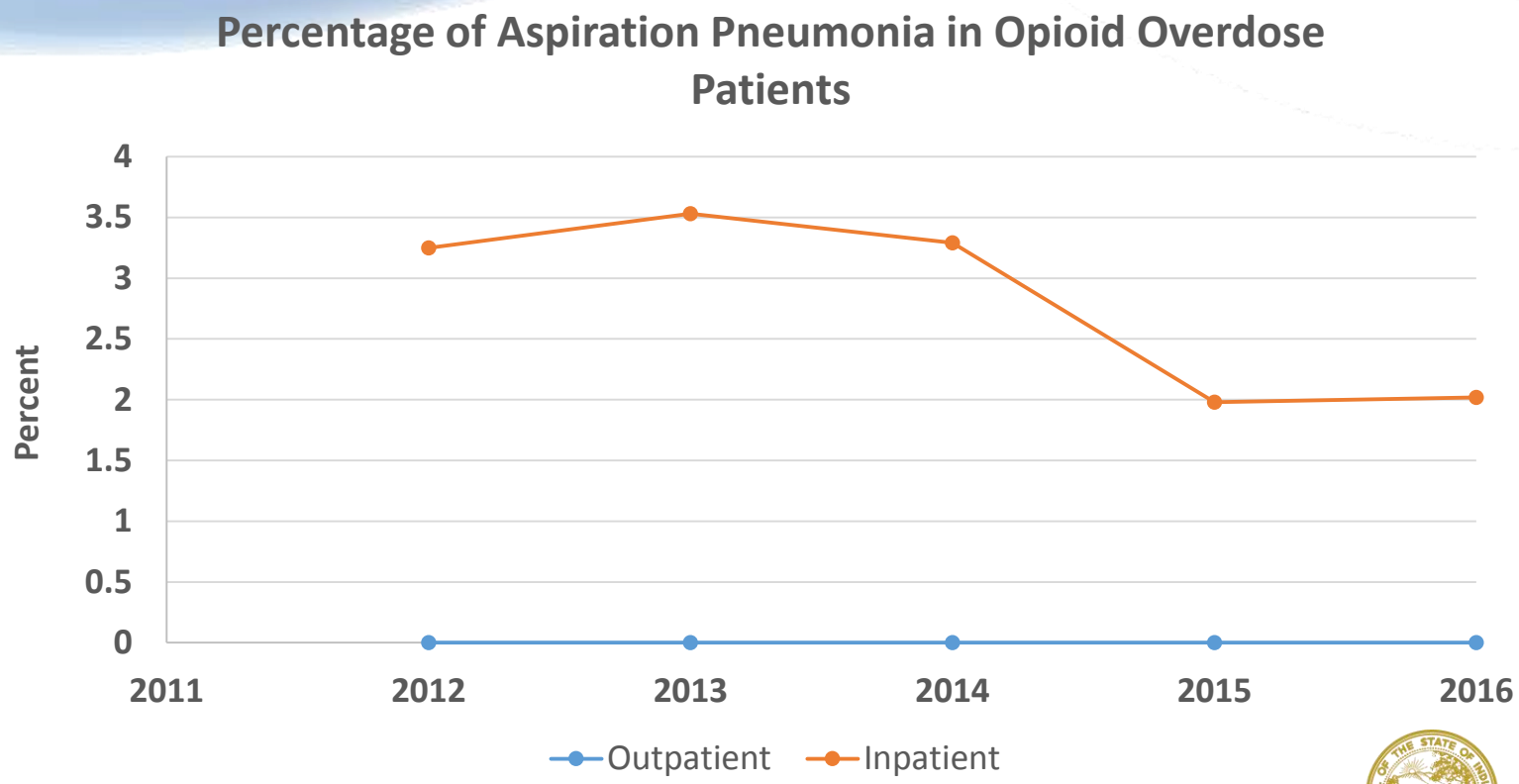
Results – Questions 4 and 5

From 2012 to 2016, < 1% of presenting opioid overdoses required mechanical ventilation within **BOTH** Inpatient and Outpatient settings

Indiana State Department of Health

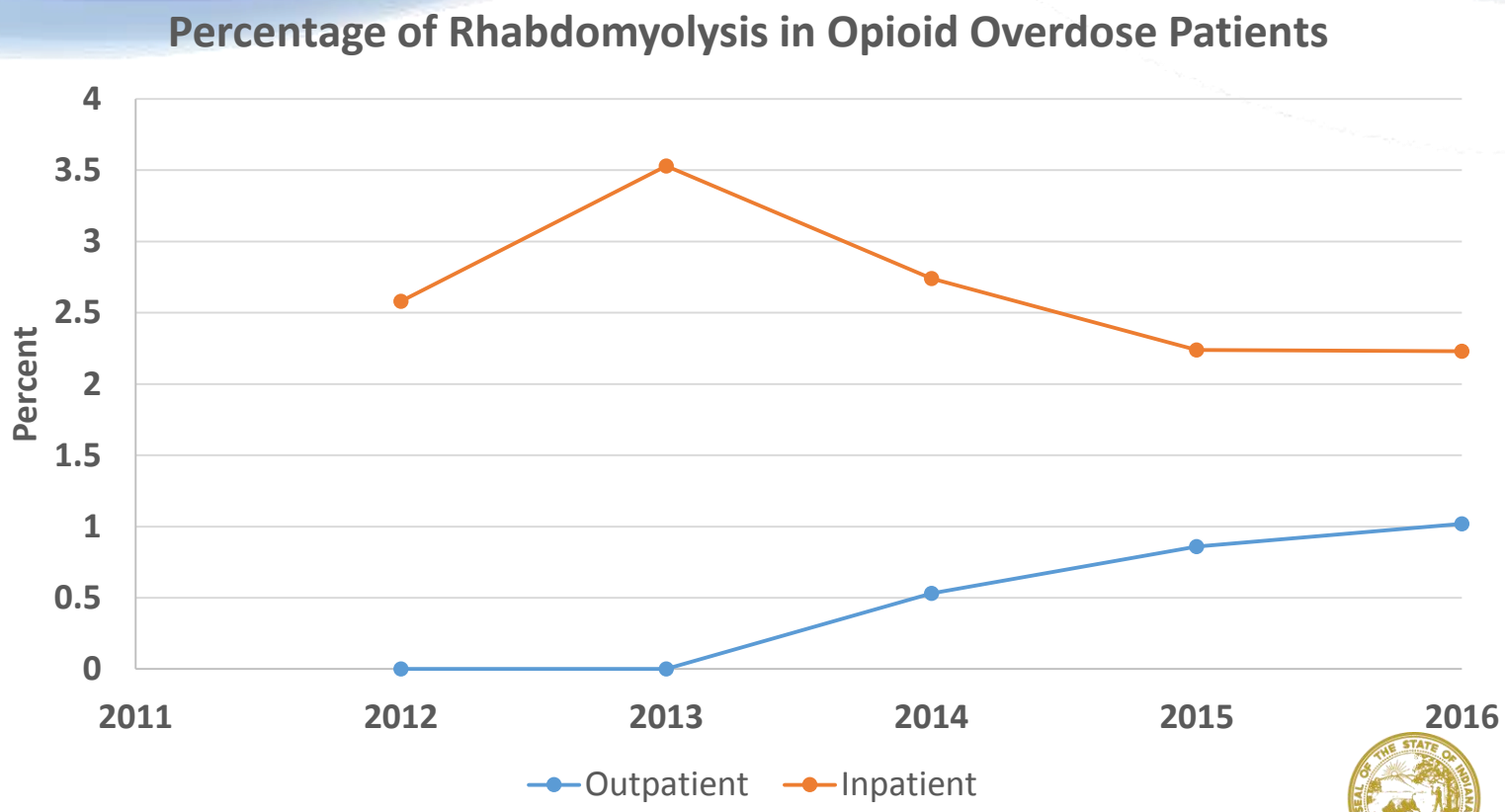
Results – Question 6



Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Results – Question 7

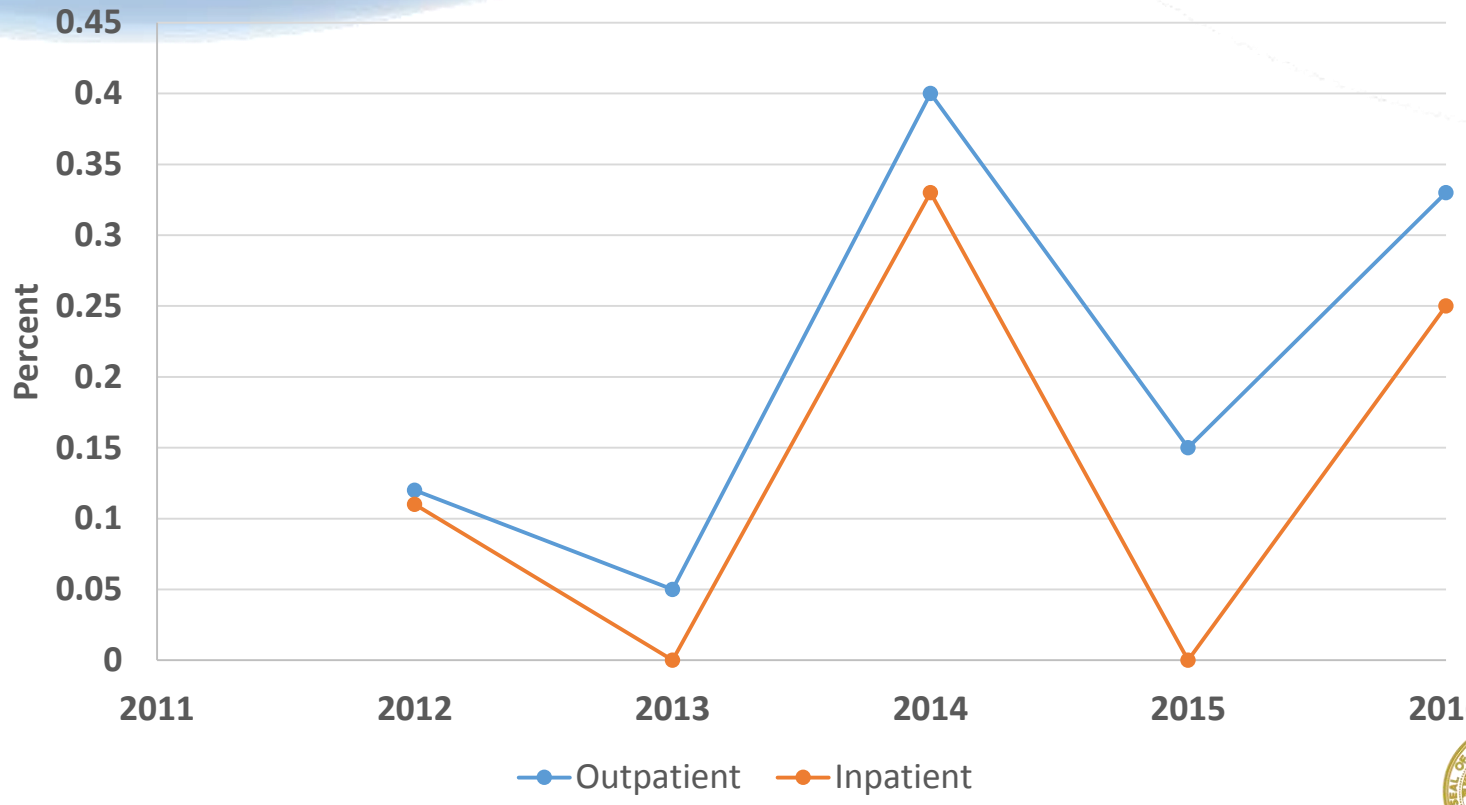


Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Results – Question 8

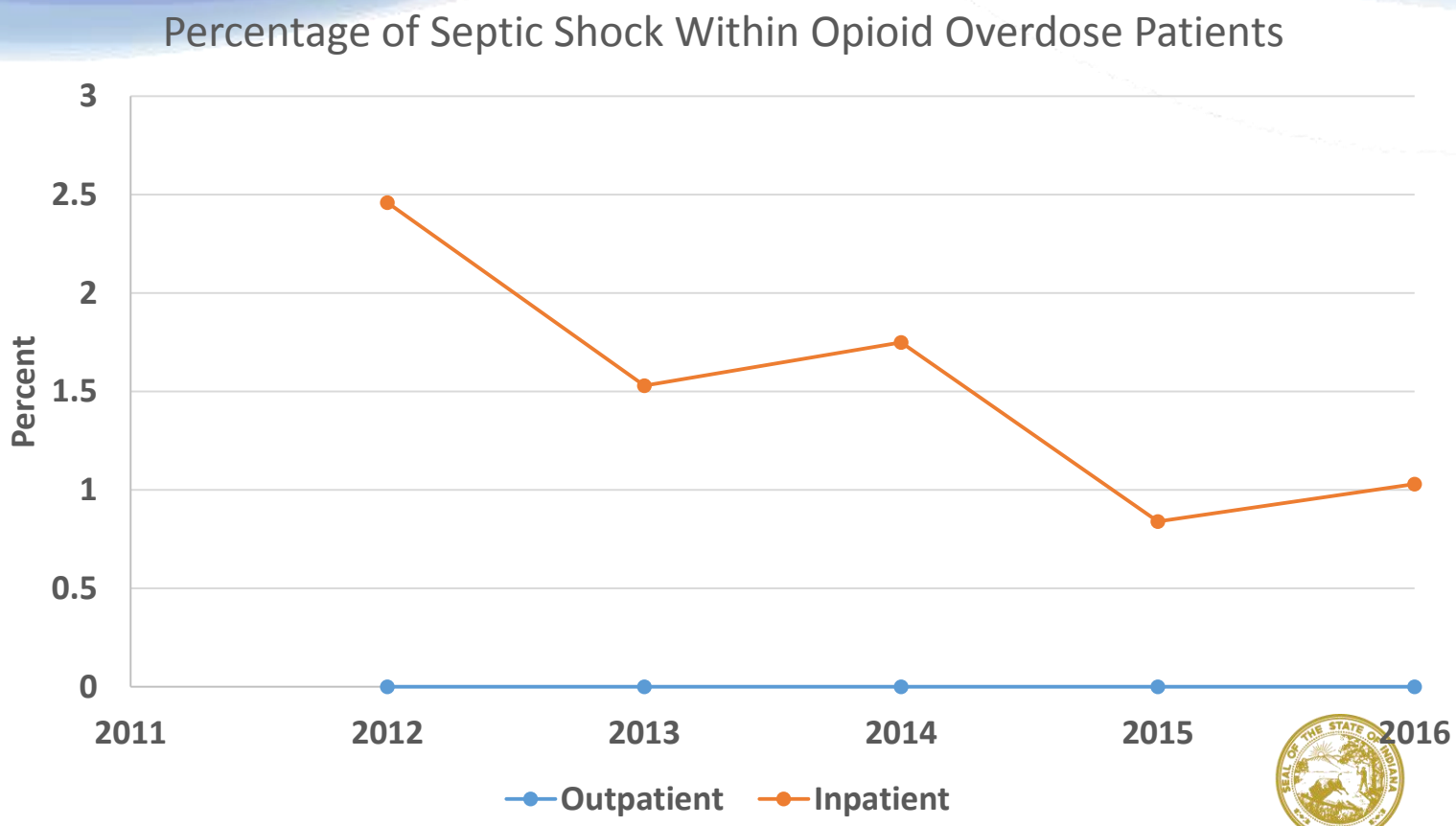
Percentage of Brain Injuries Within Opioid Overdose Patients



Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Results – Question 9



Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Conclusions and Questions

Due to the steady decreases found in this study, ISDH finds this to demonstrate the improvement in quality of care.

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

EMS Medical Director Updates

Dr. Michael Kaufmann, *EMS Medical Director*
Indiana Department of Homeland Security

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

State of the State: EMS/IDHS

Indiana State Trauma Care Committee Update
December 2018

Michael A. Kaufmann, MD, FACEP, FAEMS

EMS Medical Director
Indiana Department of Homeland Security

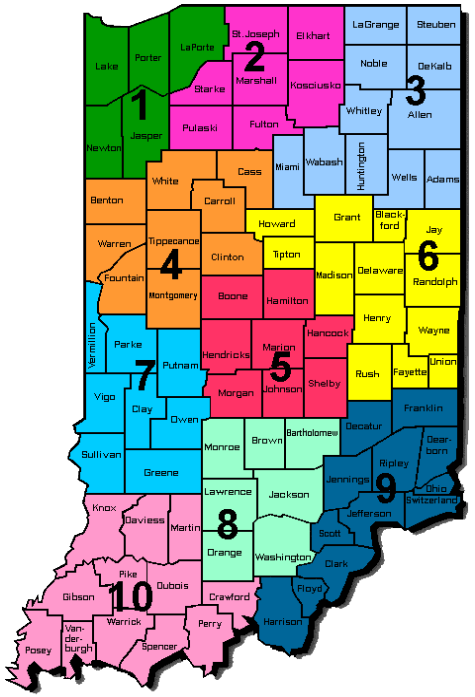
EMS Certifications/Licensure

• Training Institutions	117
• Supervising Hospitals	91
• Providers	833
• Vehicles	2,600
• Personnel	
• EMR	4,975
• EMT	14,133
• Advanced EMT	578
• EMT- Paramedic	4,408
• Primary Instructor	566

EMS System Metrics

333 Provider Agencies required to report into ImageTrend

- Total Ambulances in state 2,022
  - D1 – 363
  - D2 - 145
  - D3 - 111
  - D4 - 120
  - D5 - 492
  - D6 - 301
  - D7 - 84
  - D8 - 49
  - D9 - 245
  - D10 - 112
- Total ALS non-transport vehicles 584
- Total Rotocraft statewide 52

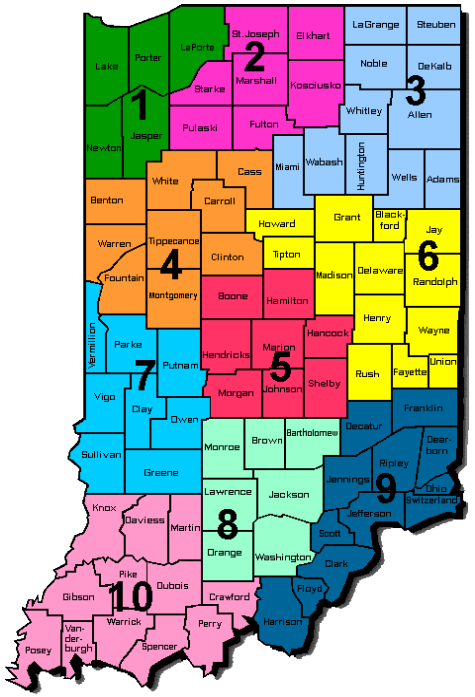


EMS System Metrics

333 Provider Agencies required to report into ImageTrend

- EMS provider agencies reporting as of 12/12/2018
- December 17th – Deadline for reporting data or at least making significant strides

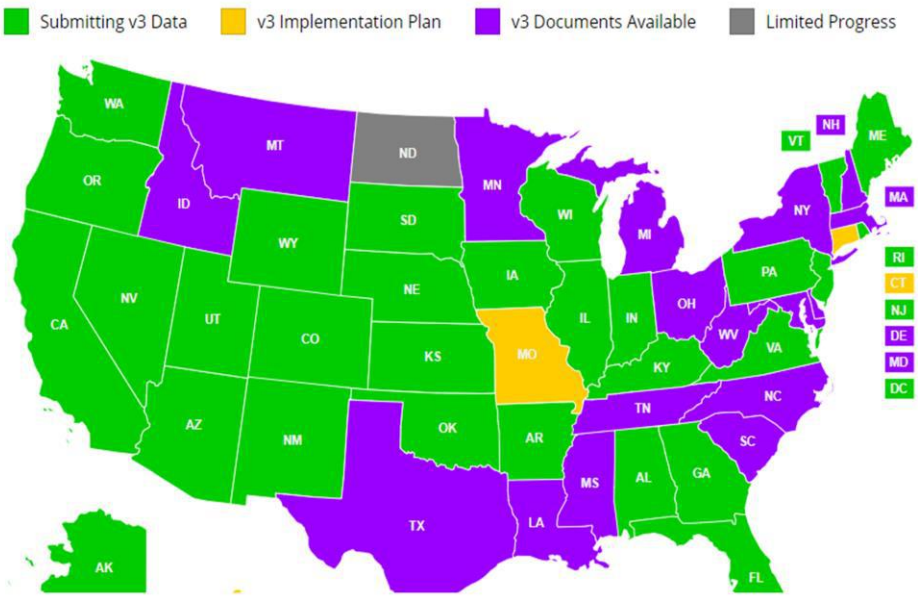
92.5%



NEMSIS

- Green for the first time!
- Submitting V3 Data

47%



IDHS Data Manager

Randall Eimerman

Indiana Authenticated Access Portal

- MPH Project
- Would set up a system of tiered access to EMS Registry
- Based on organization and intended use
- Allow more robust access to state data

Reminder:

State of Indiana EMS CQI Report

Available from IDHS

State of Indiana

EMS System Quality Improvement Report

July 2018

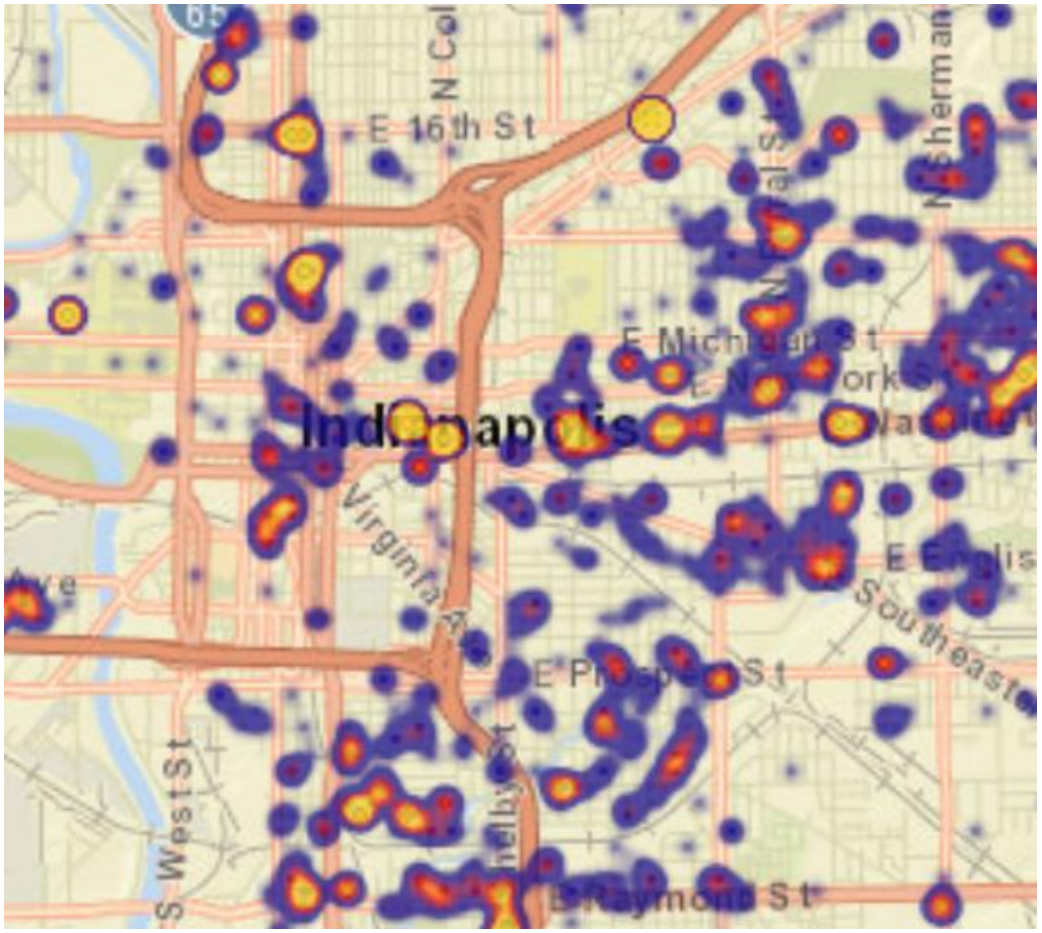
IDHS

Michael A. Kaufmann, MD, FACEP, FAEMS

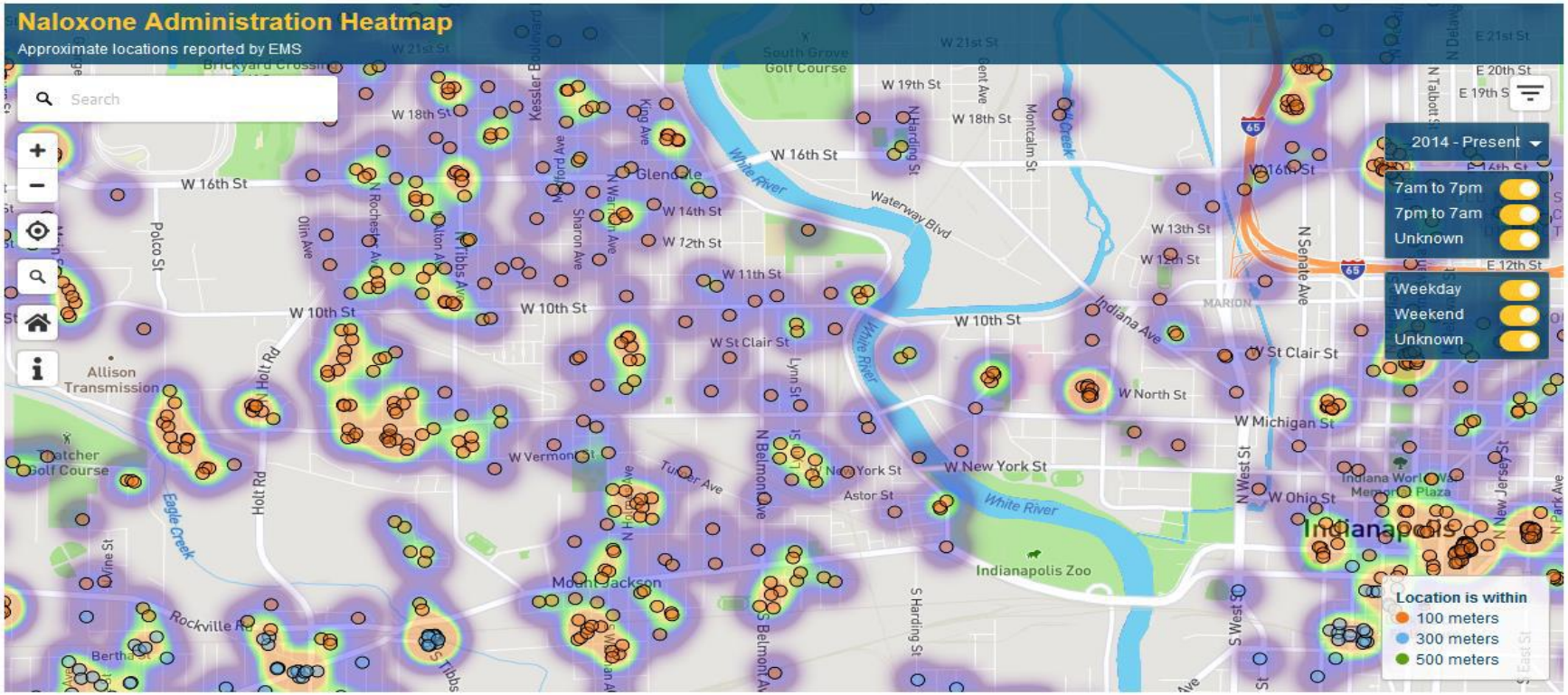
State EMS Medical Director

Dimitri Georgakopoulos

Naloxone Heat Mapping Project



Map Screenshots



Naloxone Dashboard

- Currently available to the Drug Data Workgroup
- Shows rates of naloxone events using county level data
- Goal to make this a public facing dashboard in Q1-2019

Naloxone Dashboard

Reported Naloxone Administrations

Last EMS Incident in Data: 10/31/2018

MANAGEMENT PERFORMANCEHUB

Year to Date

22 naloxone administrations
72.73% Decrease from Previous YTD

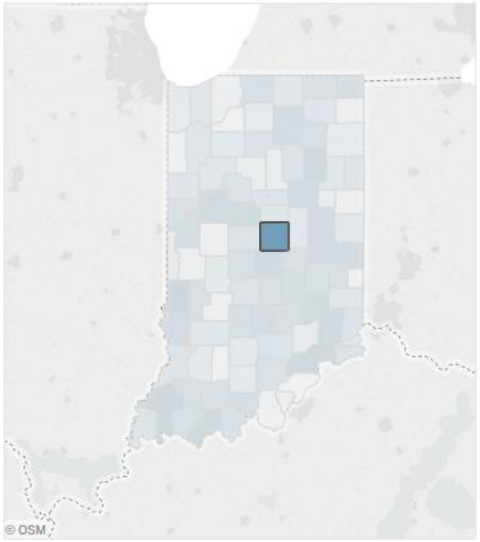
1,433 EMS Incidents
10.75% Increase from Previous YTD

1.54% of incidents included naloxone administration
Down from **2.97%** for the previous YTD

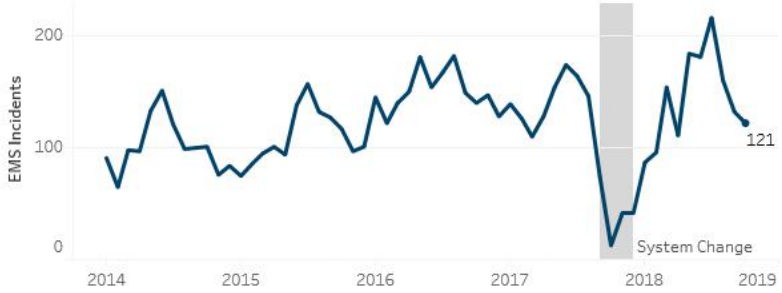
Show all reported EMS incidents or only those where naloxone was administered?
All Reported EMS Incidents

Year
(All)

All Reported EMS Incidents

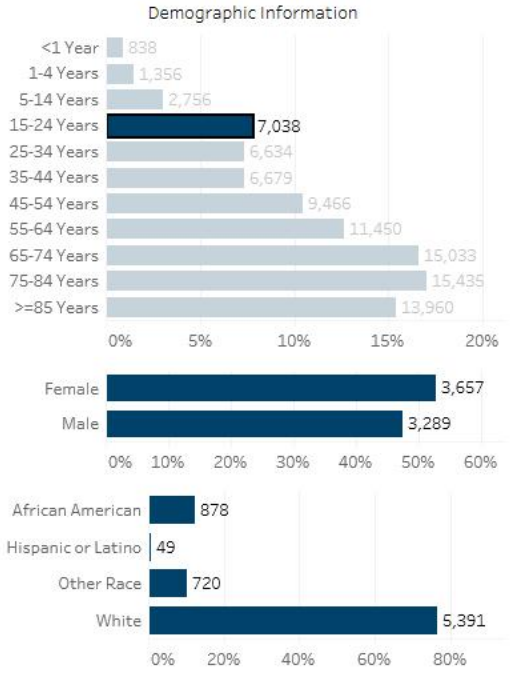


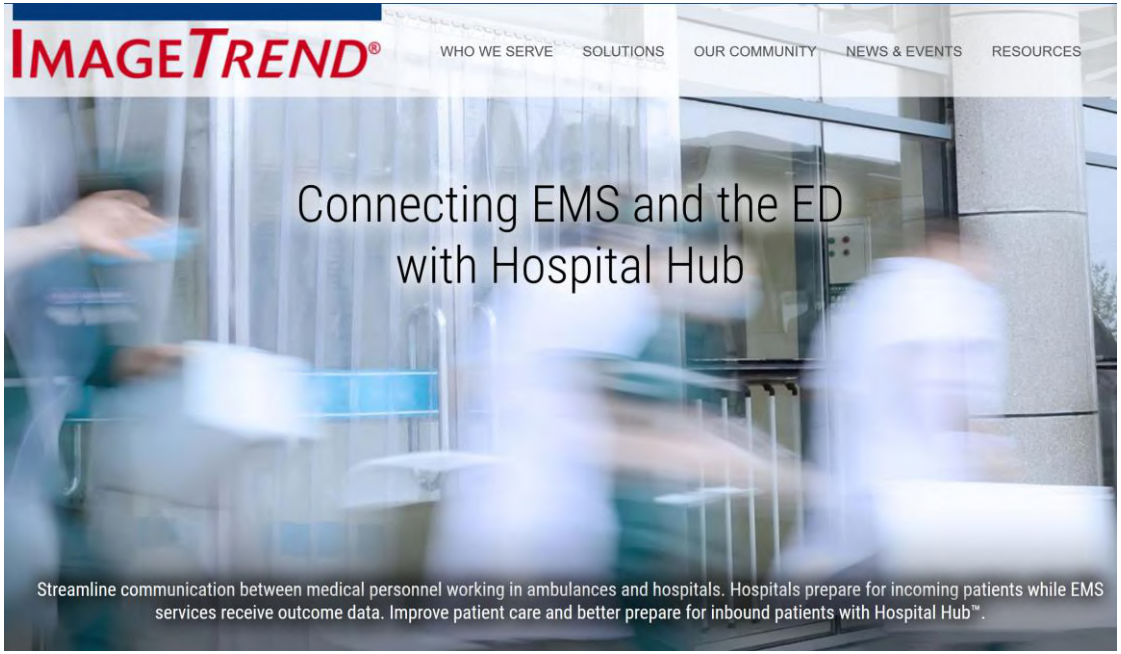
EMS Incident Rate per 10,000 County Residents
7 — 635



Filter Counties...
Hamilton

		Naloxone or All Incident Count	Naloxone or All Incident Rate per 10,000 County Residents	Percent of EMS Incidents Where Naloxone was Administered
Hamilton	2014	1,204	44	2.41%
	2015	1,308	48	2.14%
	2016	1,793	65	2.51%
	2017	1,300	47	2.92%
	2018	1,433	52	1.54%





ImageTrend Hospital Hub

- Working within IDHS to obtain funding for ImageTrend add on feature called “Hospital Hub”
- Would allow ePCR exchange between EMS and healthcare facilities
- “Fix” for lack of printed ePCR.
- More info at
  - https://www.imagetrend.com/solutions-trauma-and-hospital-registries/hospital-hub/#EMSAnchor

Naloxone Sustainability

Working with FSSA and the IHA to secure funding for EMS provider agencies who administer naloxone to Medicaid members.

Pilots in Ripley and Montgomery Counties

Designed to secure a sustainable supply of naloxone.

Rule Making Update

- **836 IAC Re-write currently underway**

- EMS rules las updated more than a decade ago.
  - ARTICLE 1. EMERGENCY MEDICAL SERVICES
  - ARTICLE 2. ADVANCED LIFE SUPPORT
  - ARTICLE 3. AIR AMBULANCES
  - ARTICLE 4. TRAINING AND CERTIFICATION
- Summary of proposed changes has been circulated by IDHS staff attorney Kraig Kinney
- First set of changes to be discussed with EMS Commission in January 2019.

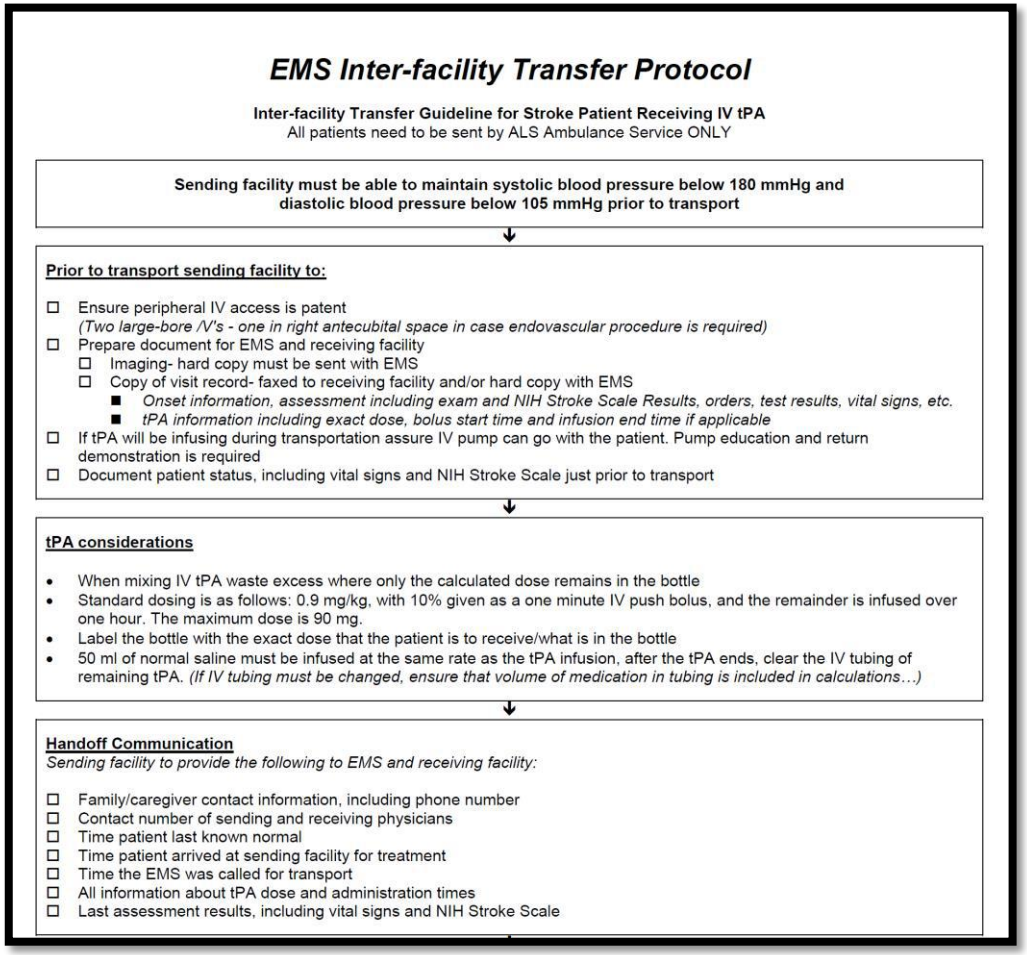
Model Guidelines

- **Developed by NASEMSO in November 2017**
- **Evidence Based**
- **EMS Compass Quality Indicators**
- **NEMSIS Database Referenced**
- **Complete Protocol Manual**

- **Available for use**
- **Suspected Overdose**
- **Stroke**
- **IFT Stroke**
- **Anaphylaxis/Allergic Reaction**
- **Chest Pain**

National Association of State EMS Officials

IFT Stroke Model Protocol



EMS Inter-facility Transfer Protocol

Inter-facility Transfer Guideline for Stroke Patient Receiving IV tPA
All patients need to be sent by ALS Ambulance Service ONLY

Sending facility must be able to maintain systolic blood pressure below 180 mmHg and diastolic blood pressure below 105 mmHg prior to transport

↓

Prior to transport sending facility to:

- ☐ Ensure peripheral IV access is patent
  (Two large-bore /V's - one in right antecubital space in case endovascular procedure is required)
- ☐ Prepare document for EMS and receiving facility
  - ☐ Imaging- hard copy must be sent with EMS
  - ☐ Copy of visit record- faxed to receiving facility and/or hard copy with EMS
    - ■ *Onset information, assessment including exam and NIH Stroke Scale Results, orders, test results, vital signs, etc.*
    - ■ *tPA information including exact dose, bolus start time and infusion end time if applicable*
- ☐ If tPA will be infusing during transportation assure IV pump can go with the patient. Pump education and return demonstration is required
- ☐ Document patient status, including vital signs and NIH Stroke Scale just prior to transport

↓

tPA considerations

- When mixing IV tPA waste excess where only the calculated dose remains in the bottle
- Standard dosing is as follows: 0.9 mg/kg, with 10% given as a one minute IV push bolus, and the remainder is infused over one hour. The maximum dose is 90 mg.
- Label the bottle with the exact dose that the patient is to receive/what is in the bottle
- 50 ml of normal saline must be infused at the same rate as the tPA infusion, after the tPA ends, clear the IV tubing of remaining tPA. *(If IV tubing must be changed, ensure that volume of medication in tubing is included in calculations…)*

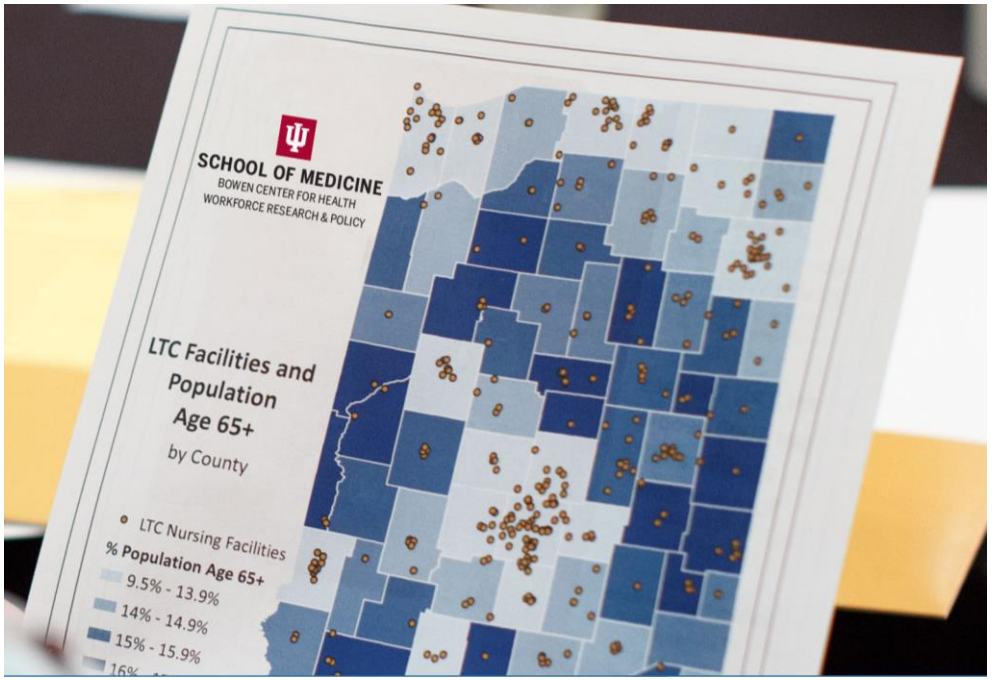
↓

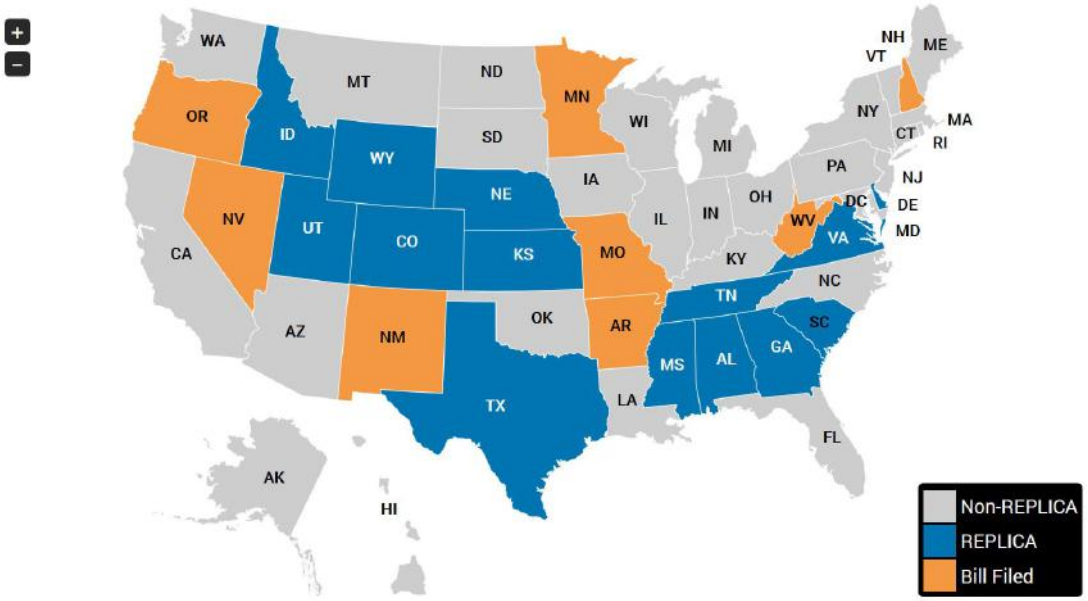
Handoff Communication
Sending facility to provide the following to EMS and receiving facility:

- ☐ Family/caregiver contact information, including phone number
- ☐ Contact number of sending and receiving physicians
- ☐ Time patient last known normal
- ☐ Time patient arrived at sending facility for treatment
- ☐ Time the EMS was called for transport
- ☐ All information about tPA dose and administration times
- ☐ Last assessment results, including vital signs and NIH Stroke Scale

Workforce Development

- Working to identify barriers restricting EMTs and Paramedics from entering the workforce in Indiana.
- Looking at licensing and certification process to remove obstacles.
- Looking for ways to align Indiana with other organizations such as NREMT to simply the continuing education and certification/licensure process.
- REPLICA





REPLICA

- The Recognition of EMS Personnel Licensure Interstate CompAct (REPLICA) is the nation's first and only multi-state compact for the Emergency Medical Services profession.
- REPLICA provides qualified EMS professionals licensed in a "Home State" a legal "Privilege To Practice" in "Remote States".
- Home States are simply a state where an EMT or Paramedic is licensed;
- Remote States are other states that have adopted the REPLICA legislation

REPLICA Next Steps

- Learning Lab took place on December 11th
  - National Governors Association
  - National Conference of State Legislatures
  - Council of State Governments
- Compacts discussed
  - REPLICA
    Nursing
  - Medical Licensing
- Education
- Consensus Building

Stop The Bleed

SAVE A LIFE

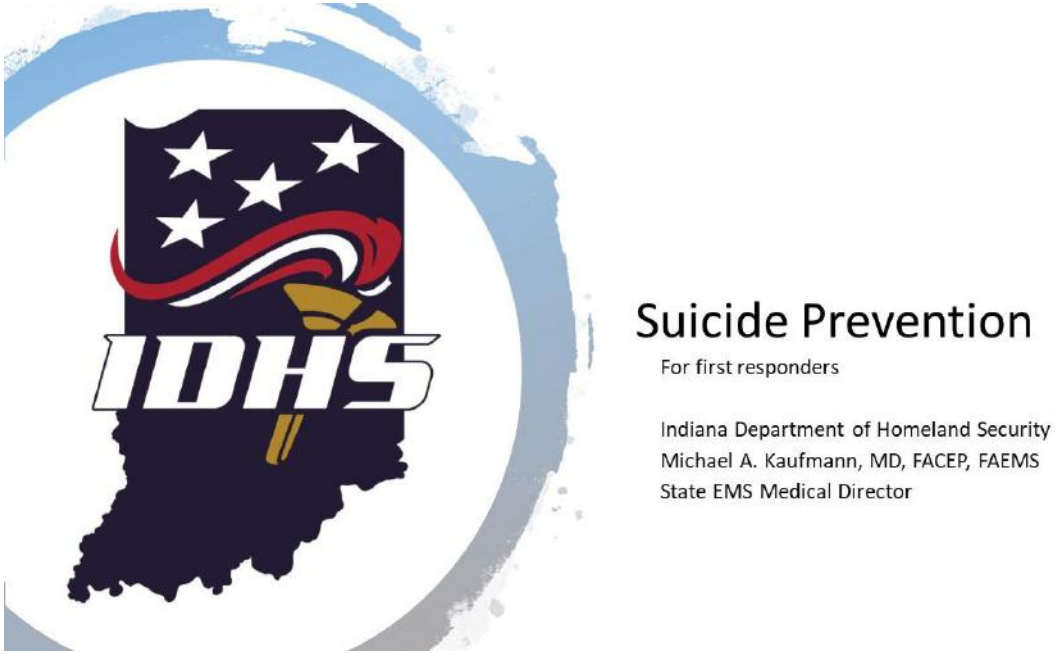
The Indiana Department of Homeland Security is proud to be a supporting partner of the Stop the Bleed Program.

Stop the Bleed is a national campaign with two main goals:

- Inform and empower the general public to become trained on basic trauma care.
- Increase bystander access to bleeding control kits.

Suicide Prevention Training

- SEA 230/ HEA 1430 - Requires emergency medical technicians to complete a research-based training program concerning suicide assessment, treatment, and management that is: (1) demonstrated to be an effective or promising program; and (2) recommended by the Indiana Suicide Prevention Network Advisory Council.
  - Collaborative Effort
  - Delivery method
    - Acadis
    - Required for recertification



Suicide Prevention Training

- Satisfies HEA 1430/SB 230
- Peer Reviewed
- Fully narrated
- Available via Acadis

- >6517 course completions

Know the facts.

UNDERSTANDING
OPIOID USE DISORDER

IDHS
INDIANA DEPARTMENT
OF HOMELAND SECURITY

First Responder Fact Card

Information course now available online via Acadis

Get help now.

Call 2-1-1 to connect with treatment.

Suicide Prevention: 1-800-273-8255

Know the facts.

Understanding
OPIOID USE DISORDER

KnowTheOFacts.org
#KnowTheOFacts

What just happened?

You may be getting this card because you, a friend or family member have had Naloxone (Narcan®) due to an overdose and have chosen not to be taken to the hospital.

Naloxone can stop an opioid overdose, but you still need to go to the hospital. More doses of Naloxone may be needed to save your life.

Get help now.

Call 2-1-1 to connect with treatment.
Suicide Prevention: 1-800-273-8255

What you need to know about opioid misuse and overdose

Know the facts.

Understanding
OPIOID USE DISORDER

KnowTheOFacts.org

9.00 x 5.00 in

1 FACT 1
It's a disease.

Opioids can cause serious changes to the brain and body.

- Opioids excite the parts of the brain that make you feel good.
- After you take them for a while, the feel-good parts of your brain get used to them.
- You may need more and more to get those same feelings.
- Soon, your brain and body must have them just to feel normal.
- You can't stop using the drug just because you want to.

2 FACT 2
There is treatment.

If you need help to stop using opioids, it is available. Different kinds of treatment work for different people.

Treatment types can be:

- **Outpatient**–treatment by a doctor, but you go home every day.
- **Inpatient**–treatment in hospitals or clinics where you could stay for days, weeks or months.
- **Medication-Assisted Treatment**–treatment that uses both medicines and counseling to help your body recover.

3 FACT 3
Recovery is possible.

Recovery is learning to live without opioids. And it is possible with help.

Getting better from addiction takes time. With treatment, you can stop using drugs and improve your health and wellness.

Setbacks may be part of recovery. It may take many tries to stop using opioids. Don't give up hope!

Visit **optIN.in.gov** or call your local pharmacy to find Naloxone.

For more information and resources, visit **www.IN.gov/recovery**.

Get help now.

Call 2-1-1 to connect with treatment.

Suicide Prevention: 1-800-273-8255

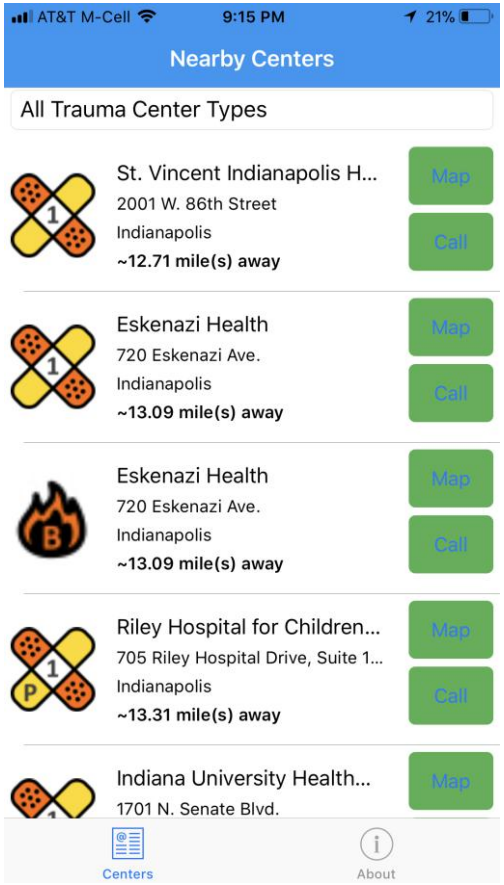
9.00 x 5.00 in

EMS Field Guide (App Version 1.0)

Beta version ready for distribution.

First year funded!

Need assistance with development

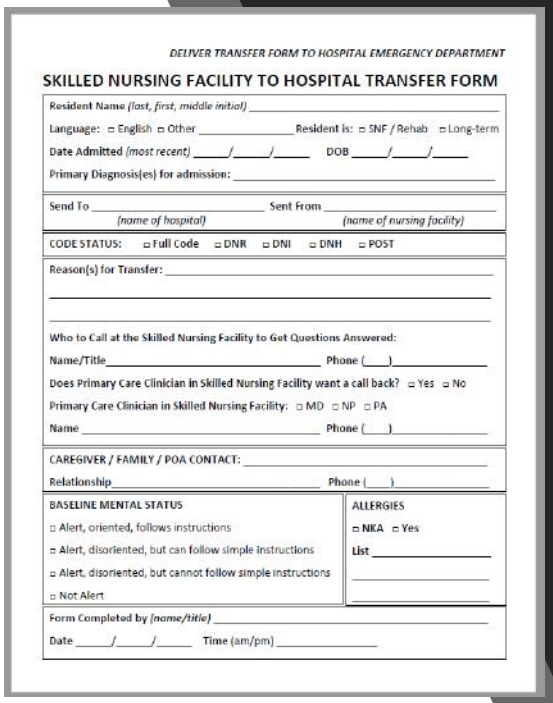


Community Paramedicine/MIH

- The time is now to plan and develop the infrastructure for Mobile Integrated Health/Community Paramedicine
  - 836 Rule re-write is under way
  - Alternate reimbursement models are being developed
  - EMS Registry is improving in quantity and quality
  - Local data has proven the benefits of this program
  - Increased medical director involvement
  - Community Health Worker status

  - I'll be focusing greater efforts in the coming days on working with ISDH, FSSA, CMS and our state legislators to further develop and advance the status of community paramedicine/mobile integrated health in our state!

Universal Transfer Form



DELIVER TRANSFER FORM TO HOSPITAL EMERGENCY DEPARTMENT

SKILLED NURSING FACILITY TO HOSPITAL TRANSFER FORM

Resident Name *(last, first, middle initial)* _____

Language: ☐ English ☐ Other _____ Resident is: ☐ SNF / Rehab ☐ Long-term

Date Admitted *(most recent)* ____/____/____ DOB ____/____/____

Primary Diagnosis(es) for admission: _____

Send To _____ Sent From _____
(name of hospital) *(name of nursing facility)*

CODE STATUS: ☐ Full Code ☐ DNR ☐ DNI ☐ DNH ☐ POST

Reason(s) for Transfer: _____

Who to Call at the Skilled Nursing Facility to Get Questions Answered:

Name/Title _____ Phone (___)_____

Does Primary Care Clinician in Skilled Nursing Facility want a call back? ☐ Yes ☐ No

Primary Care Clinician in Skilled Nursing Facility: ☐ MD ☐ NP ☐ PA

Name _____ Phone (___)_____

CAREGIVER / FAMILY / POA CONTACT: _____

Relationship _____ Phone (___)_____

BASELINE MENTAL STATUS
- ☐ Alert, oriented, follows instructions
- ☐ Alert, disoriented, but can follow simple instructions
- ☐ Alert, disoriented, but cannot follow simple instructions
- ☐ Not Alert

ALLERGIES
☐ NKA ☐ Yes
List _____

Form Completed by *(name/title)* _____

Date ____/____/____ Time (am/pm) _____

- Developed by collaborative committee made of up representation from Ascension St. Vincent, Franciscan, IU Health, SNFs, Emergency Department.
- Intended to improve communication when sending patients to hospitals.
- Garnering support and educating stakeholders

Biospatial

biospatial

- National Collaborative for Bio-preparedness
  - NCBP provides operational and clinical insight to state and local data owners to help improve operations and patient outcomes.
  - NCBP provides alerts to anomalous health events, visualization of syndromic events and trends, and clinical and operational dashboards.
  - The collaborative data network widens the context of events by enabling sharing of data and syndromic trends with neighboring jurisdictions.
  - NCBP also enables new health- and safety-related insights through multi-agency collaboration, such as linking motor vehicle crash records with injury severity derived from the EMS Revised Trauma Score.

AED Registry

National AED Registry

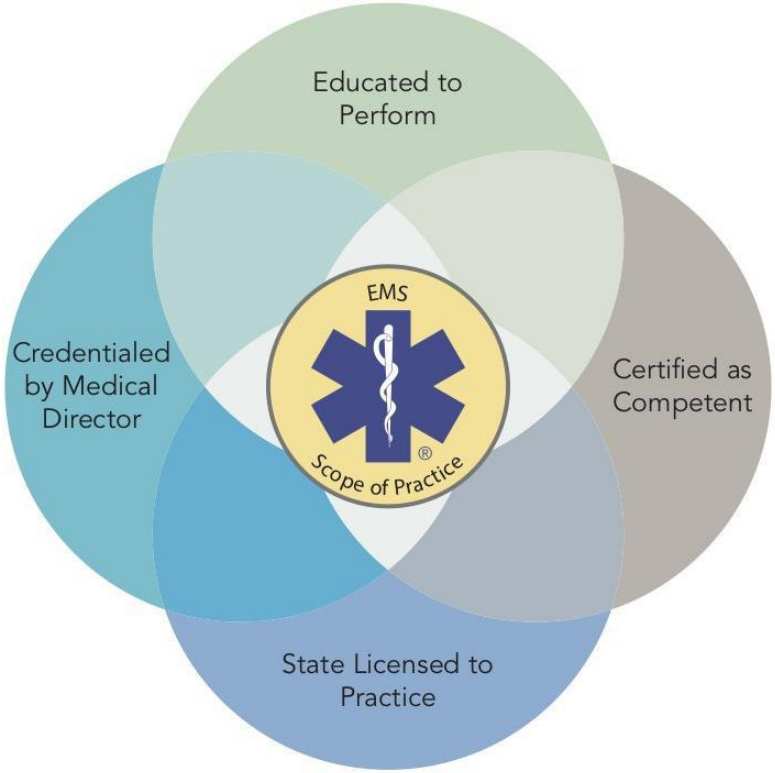
AED location information comes from the Atrus National AED Registry™.

Organizations with AEDs use this free online tool to comply with registration requirements, easily and efficiently manage AED location and maintenance information, and receive battery and electrode expiration reminders.

This registered AED data is available to 911 agencies that subscribe to the AED Link.

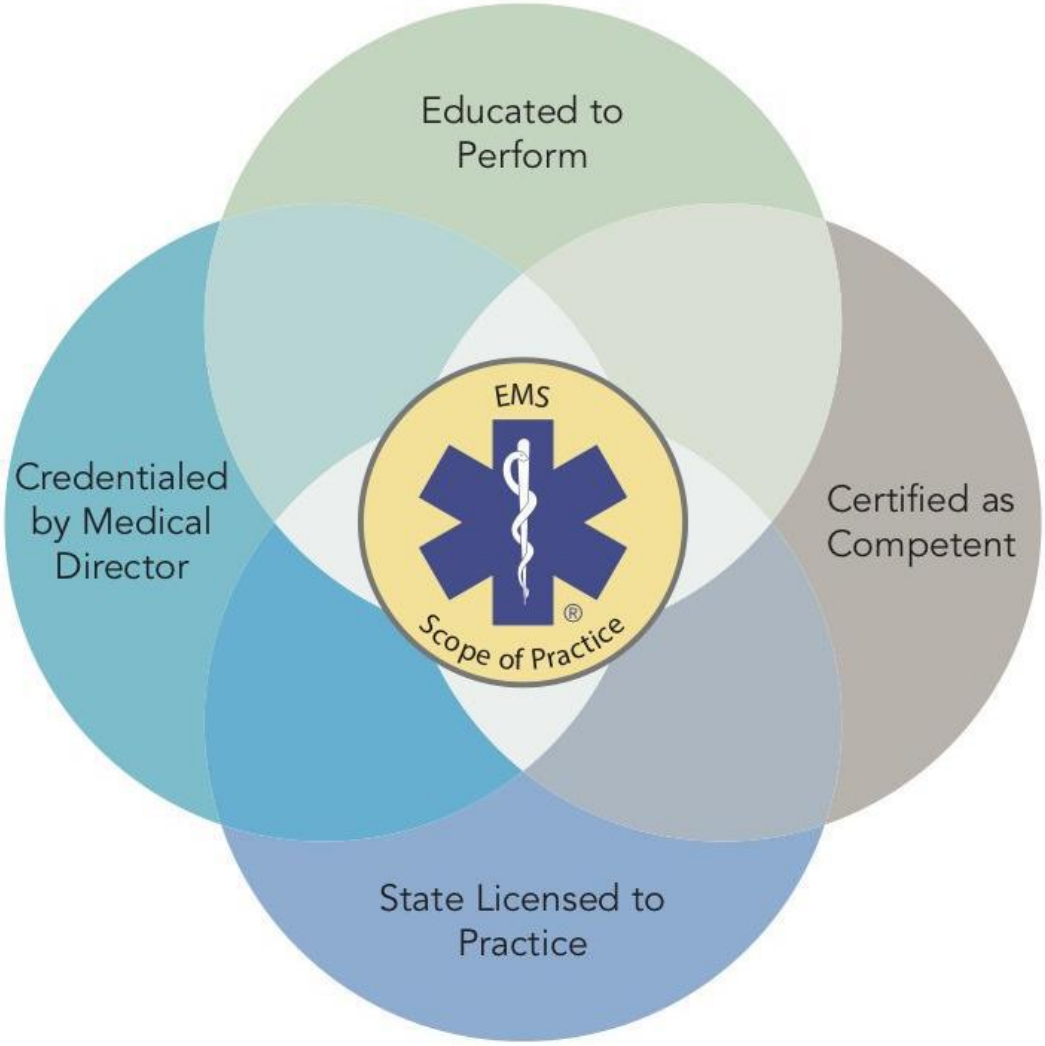
Changes to National Scope of Practice (not yet approved or adopted in Indiana!)

- Deletions
  - MAST/PASG
  - Term “immobilization”
  - Demand valves
  - Carotid massage
  - Automated transport ventilators at the EMT level
  - Modified jaw thrust for trauma
  - EMT “Assisting” patient with own Rx medications



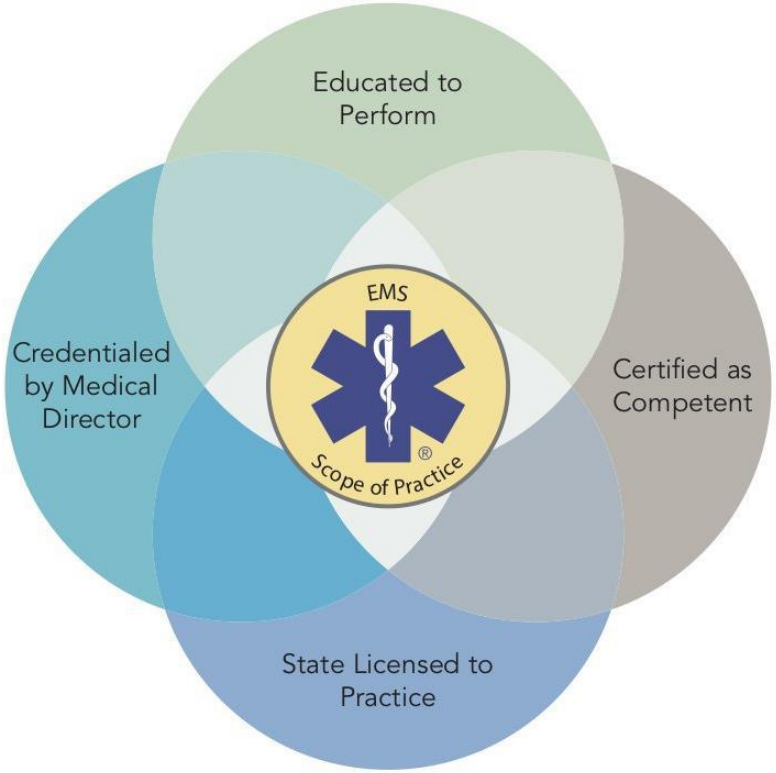
Additions-EMR

- Administration of narcotic antagonists (Naloxone)
- Hemorrhage control (tourniquets and wound packing)
- Spinal motion restriction using cervical collars and basic splinting for suspected extremity fractures.



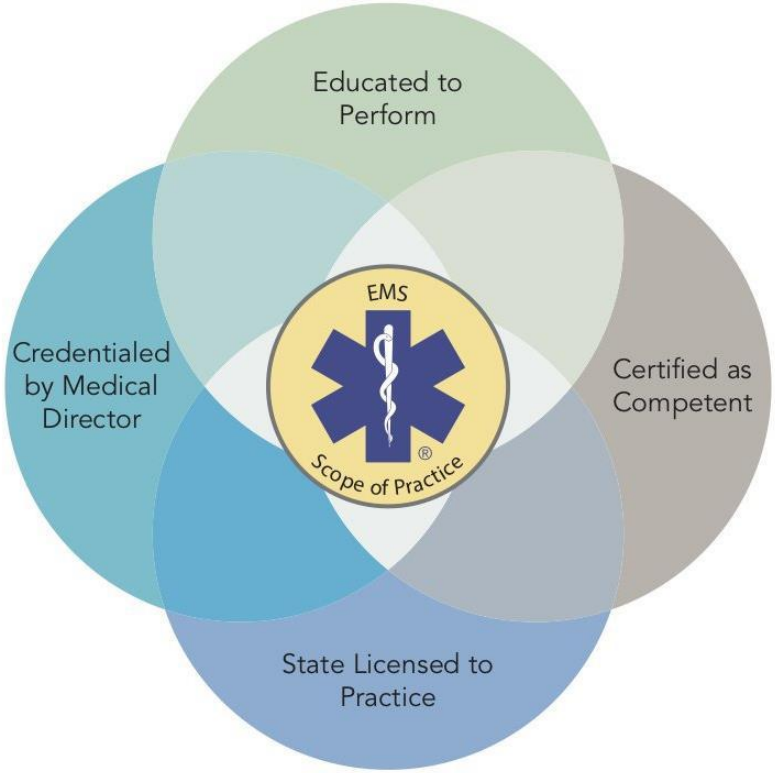
Additions - EMT

- Administration of beta agonists and anticholinergics
- Oral OTC analgesics for pain and fever
- Blood glucose monitoring
- Continuous positive airway pressure
- Pulse oximetry
- Telemetric monitoring devices and transmission of clinical data, including video data
- Assisting medics with skills (IV set up, etc.)



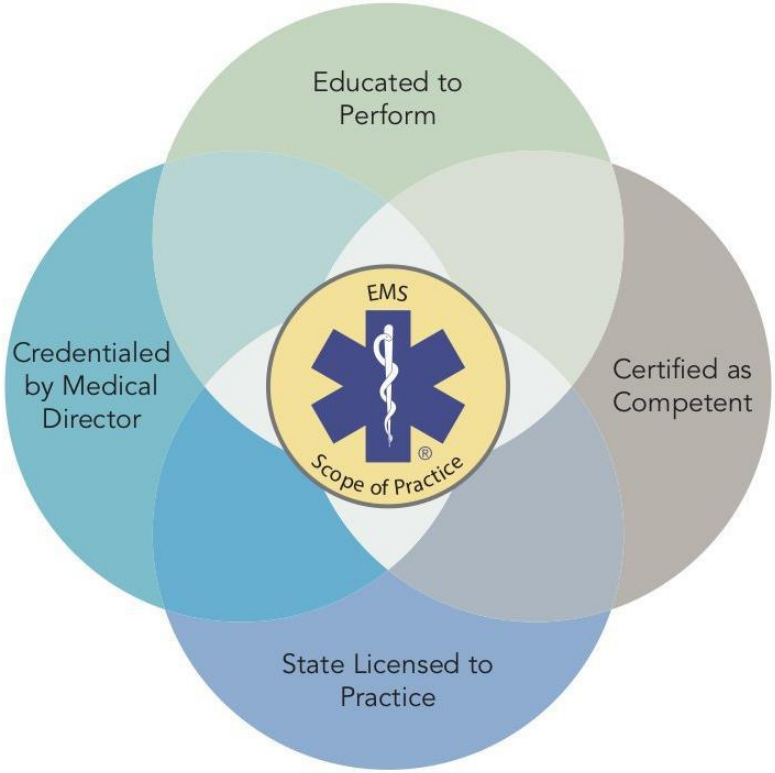
Additions - AEMT

- Monitoring and interpretation of waveform capnography
- Epinephrine during cardiac arrest and ondansetron administration
- Parenteral analgesia for pain



Additions - Paramedic

- High flow nasal cannula (RAM cannula)
- Expanded use of OTC medications



IDHS/EMS Division 2018-2019 Goals

- Rewrite of the 836 IAC Articles 1 through 4
- Obtain 90% data reporting compliance of the Indiana certified ambulance service providers
- Develop a statewide quality improvement program for EMS utilizing patient data submitted to the EMS registry.
- In cooperation with the public safety training academy expand the executive leadership course to include EMS specific topics
- Develop the automated electronic interface between Acadis and National Registry database to facilitate a more efficient certification process.
- Develop rule language clarifying the EMS training institution's responsibilities for improving student outcomes.
- Promote and encourage expanded practice opportunities for EMS providers with a focus on integrated health care, public health and chronic care management.
- Further develop education and training for both patient and EMS provider mental health awareness.
- Explore additional or alternative mechanisms of reimbursement for EMS provider care based on care rendered not miles transported.
- Promote recruitment and retention of EMS and other public safety professions.
- Continue the development of the online application process for EMS provider and institutional organization certifications.
- Implement the recognition of EMS personnel interstate licensure compact act (REPLICA).
- Continue to encourage and promote EMS planning and participation in disaster preparedness.

Thank you!

- Your input and participation in the Indiana EMS System is vitally important.
- Mkaufmann@dhs.in.gov
- 317-514-6985

Indiana Government Center South

302 W. Washington St. Room E238

Indianapolis, Indiana 46204

Trauma Registry

Camry Hess, *Data Analyst*

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2018

District 1

Community Hospital Munster

Franciscan Health Crown Point

Franciscan Health Michigan City

Franciscan Health Rensselaer

La Porte Hospital

Methodist Hospitals Inc Northlake Campus

Methodist Hospitals Inc Southlake Campus

Portage Hospital

Porter Regional Hospital Valparaiso

Valparaiso Medical Center

St Catherine Hospital East Chicago

Email questions to: **indianatrauma@isdh.in.gov**

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2018

District 2

Community Hospital of Bremen

Elkhart General Hospital

Kosciusko Community Hospital

Memorial Hospital of South Bend

Saint Joseph Regional Medical Center (Mishawaka)

Saint Joseph Regional Medical Center (Plymouth)

Woodlawn Hospital

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2018

District 3

Bluffton Regional Medical Center

Cameron Memorial Community Hospital

DeKalb Health

Dukes Memorial Hospital

Dupont Hospital

Lutheran Hospital of Indiana

Parkview Huntington Hospital

Parkview LaGrange Hospital

Parkview Noble Hospital

Parkview Randallia

Parkview Regional Medical Center

Parkview Wabash

Parkview Whitley Hospital

St. Joseph Hospital (Fort Wayne)

Email questions to: **indianatrauma@isdh.in.gov**

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2018

District 4

Franciscan Health Crawfordsville

Franciscan Health Lafayette East

IU Health Arnett Hospital

IU Health Frankfort Hospital

IU Health White Memorial Hospital

Memorial Hospital Logansport

St Vincent Williamsport

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2018

District 5

Community East Health Network Community Hospital

Community North Health Network Community Hospital

Community South Health Network Community Hospital

Eskenazi Health

Franciscan Health Indianapolis

Franciscan Health Mooresville

Hancock Regional Hospital

Hendricks Regional Health

IU Health Methodist Hospital

IU Health Morgan Hospital

IU Health North Hospital

IU Health Riley Hospital for Children

IU Health Saxony Hospital

IU Health West Hospital

Johnson Memorial Hospital

Major Hospital

Peyton Manning Children's Hospital at St Vincent

St Vincent Carmel Hospital

St Vincent Hospital & Health Services Indy

Witham Health Services

Witham Health Services at Anson

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Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2018

District 6

Community Hospital of Anderson and Madison Co.

Community Howard Regional Health

Henry Community Health

IU Health Ball Memorial Hospital

IU Health Blackford Hospital

IU Health Jay

IU Health Tipton Hospital

Marion General Hospital

Reid Health

Rush Memorial Hospital

St Vincent Anderson Regional Hospital

St Vincent Kokomo

St Vincent Mercy Hospital

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2018

District 7

Greene County General Hospital
Putnam County Hospital
St Vincent Clay Hospital
Sullivan County Community Hospital
Terre Haute Regional Hospital
Union Hospital Clinton
Union Hospital Terre Haute

District 8

Columbus Regional Hospital
IU Health Bedford Hospital
IU Health Bloomington Hospital
IU Health Paoli Hospital
Monroe Hospital
Schneck Medical Center
St Vincent Dunn Hospital
St Vincent Salem Hospital

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Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2018

District 9

Baptist Health Floyd

Clark Memorial Hospital

Dearborn County Hospital DBA Highpoint Health

King's Daughter's Health

Margaret Mary Health

Scott County Memorial Hospital

St Vincent Jennings Hospital

District 10

Daviess Community Hospital

Deaconess Gateway Hospital

Deaconess Hospital

Gibson General Hospital

Good Samaritan Hospital

Memorial Hospital & Health Care Center

Perry County Memorial Hospital

St Vincent Evansville

St Vincent Warrick

Email questions to: **indianatrauma@isdh.in.gov**

Summary of Hospitals Reporting Status- Q2 2018

New to Reporting / Started Reporting Again

- St Joseph Hospital (Fort Wayne)
- St Vincent Carmel Hospital
- Woodlawn Hospital

Did not Report

- Community Hospital Munster
- IU Health Tipton Hospital

Email questions to: **indianatrauma@isdh.in.gov**

Quarter 2 2018 Statewide Report

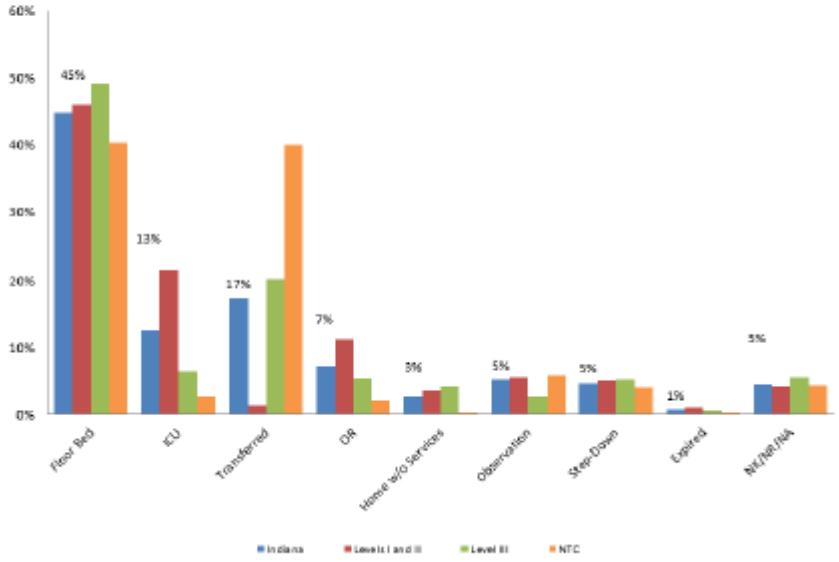
- 9,420 incidents
- April 1, 2018 – June 30, 2018
- 102 total hospitals reporting
  - 10 Level I and II Trauma Centers
  - 12 Level III Trauma Centers
  - 80 Non-Trauma Hospitals

Indiana State Department of Health

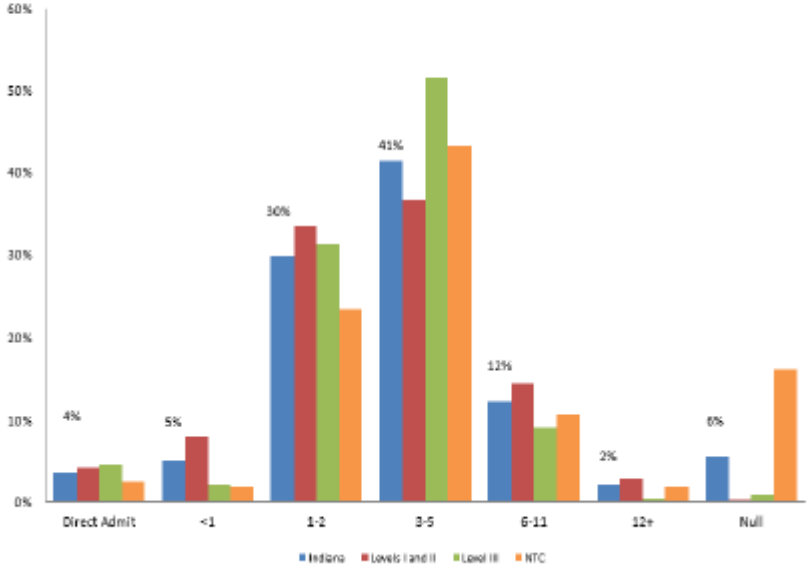
Email questions to: **indianatrauma@isdh.in.gov**

ED Disposition / Length of Stay - Page 2

ED Disposition by Percentage



ED Length of Stay (Hours)



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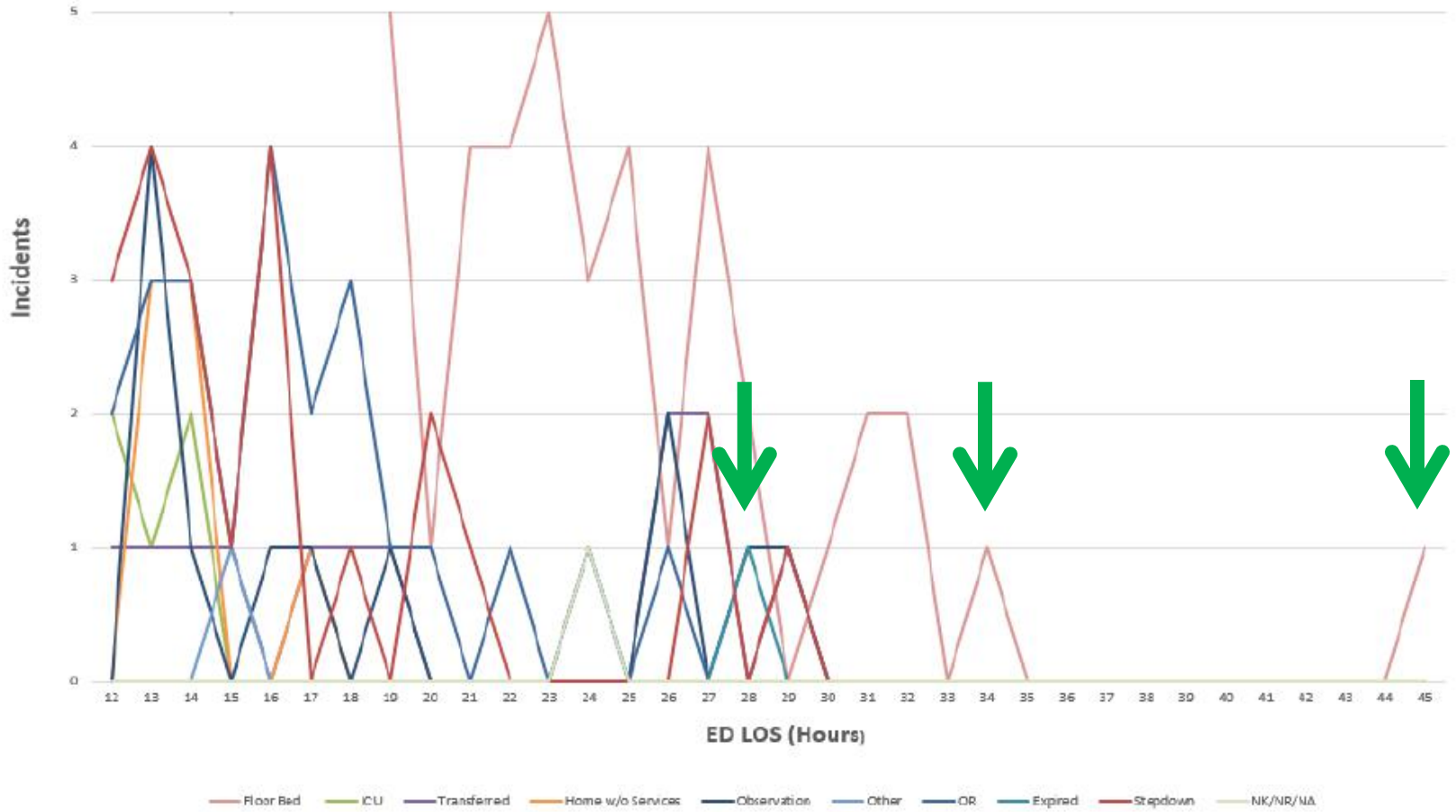
ED LOS > 12 Hours - Page 3

ED Disposition for ED LOS >12 Hours



N=201 *One case expired at 28 hours

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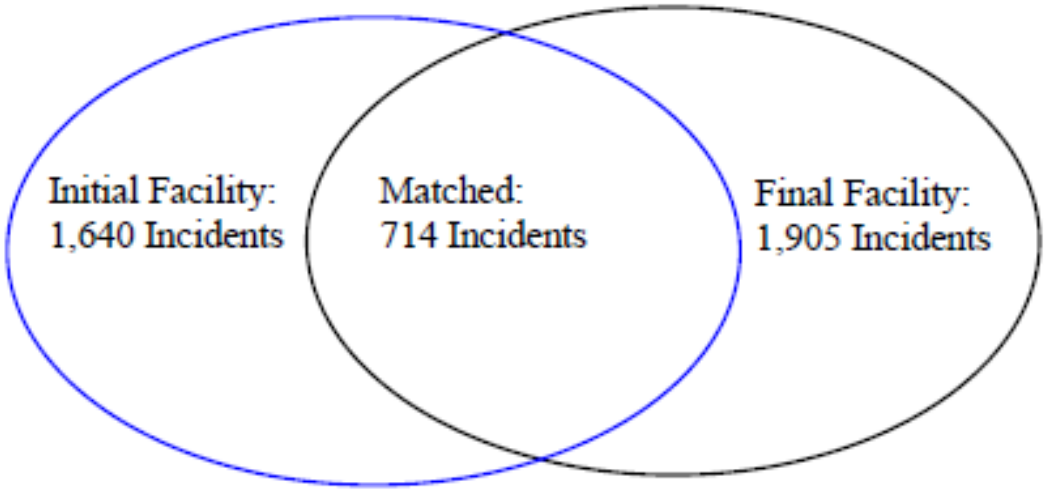
ED LOS > 12 Hours - Page 4

ED LOS > 12 Hours, N=201

Facilities	134 Level I and II 7 Level III 60 Non-trauma Centers	**Region**	75 North; 77 Central; 24 South; 25 Unknown/Out of State
Average Distance from Scene to Facility	22.7 Miles	**ISS**	112 (1-8 cat); 67 (9-15 cat); 16 (16-24), 3 (25-44) , 3 (No ISS)
Transport Type	162 Ambulance; 30 Private Vehicle; 9 Unknown	**GCS Motor**	1 (category 3); 1 (category 5); 171 (category 6); 15 (Unknown); 7 (Missing)
Cause of Injury	5 Cut/Pierce; 106 Fall; 5 Firearm; 2 Machinery; 56 Transportation; 16 Struck; 3 Other Specified; 1 Blank; 7 Other	**RTS—Systolic**	2 (category 3); 190 (category 4); 9 (unknown)
Signs of Life	201 Yes	**RTS—Resp. Scale**	184 (category 3); 2 (category 4); 15 (unknown)
Age	59 Years (2-97 Years)	**Resp. Assistance**	7 Yes; 184 No; 10 Unknown
Gender	89 Female; 112 Male	**ED LOS Hours**	21 (12-38)
Interfacility Transfer	156 No; 45 Yes	**ED Disposition**	1 Died; 115 Floor bed; 7 Home w/o services; 5 ICU; 12 Observation; 23 OR; 22 Telemetry; 13 Transferred; 1 Not Applicable; 2 Unknown

-Region was created from injury zip code. Missing = no injury zip or injury zip from out of state.
-Numbers represent counts per category or mean with minimum and maximum in parentheses.
-No signs of life is defined as having none of the following: organized EKG activity, papillary responses, spontaneous respiratory attempts or movement, and unassisted blood pressure. This usually implies the patient was brought to the ED with CPR in progress (2018 Trauma Registry Data Dictionary, page 207).

Linking - Page 5



Linked Transfer Patient Averages - Page 6

For Linked Transfer Patients:

For Transfer Patients:				
	All Transfer Patients	Critical*	Physiological Critical**	ISS Critical***
Number of Patients	714	302	254	81
EMS Notified to Scene	7.8 minutes	7.5 minutes	7.6 minutes	7.7 minutes
EMS Scene Arrival to Departure	17.3 minutes	17.5 minutes	17.5 minutes	17 minutes
EMS Scene Departure to Initial Hospital ED Arrival	18.9 minutes	16.8 minutes	15.6 minutes	18.7 minutes
Initial Hospital ED Arrival to Departure	2 hours 8.2 minutes	1 hour 59 minutes	2 hours 0.9 minutes	1 hour 44.8 minutes
Initial Hospital ED Departure to Final Hospital ED Arrival	1 hour 56.3 minutes	1 hour 43.3 minutes	1 hour 46 minutes	1 hour 30.4 minutes
TOTAL TIME	4 hours 48.5 minutes	4 hours 24.1 minutes	4 hours 27.6 minutes	4 hours 1.6 minutes

*Critical patient is defined as having a GCS ≤ 12, OR Shock Index > 0.9 OR ISS >15 at the initial hospital.
**Physiological Critical Transfer patient is defined as having a Shock Index > 0.9 OR GCS ≤ 12 at the initial hospital.
***ISS Critical Transfer patient is defined as having an ISS > 15 at the initial hospital

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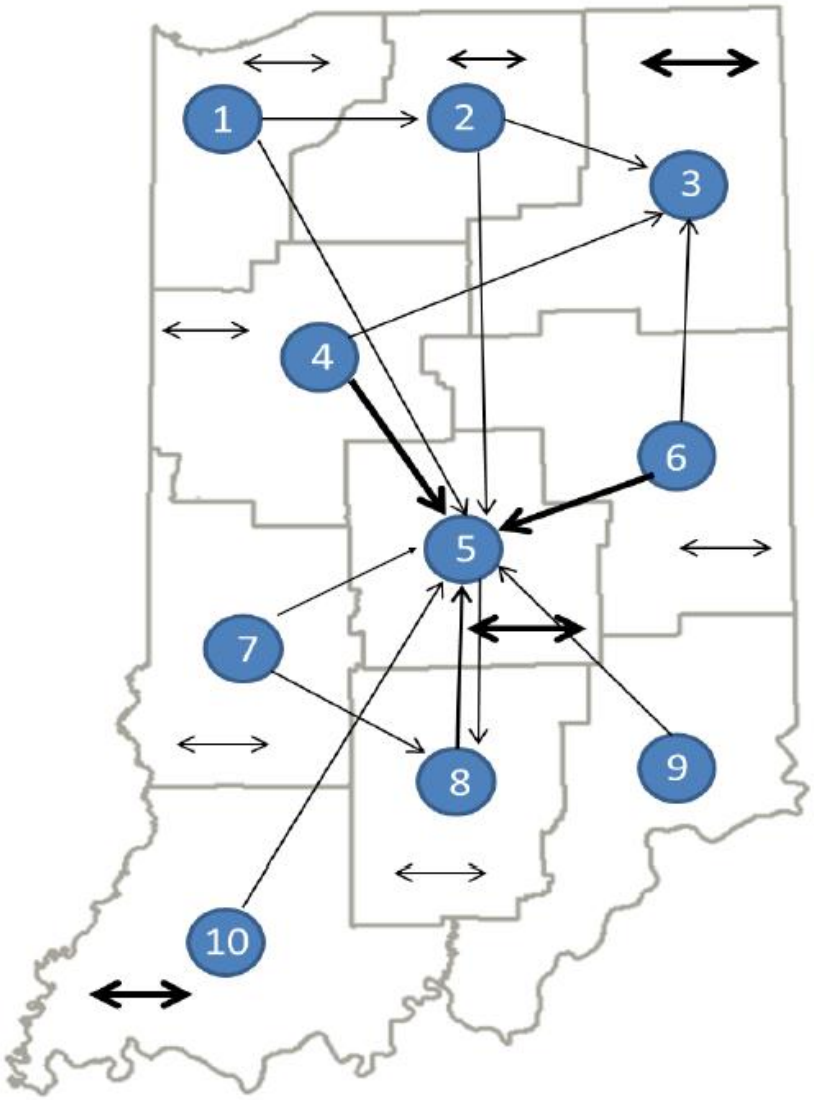
Transfer Patient Data - Page 7

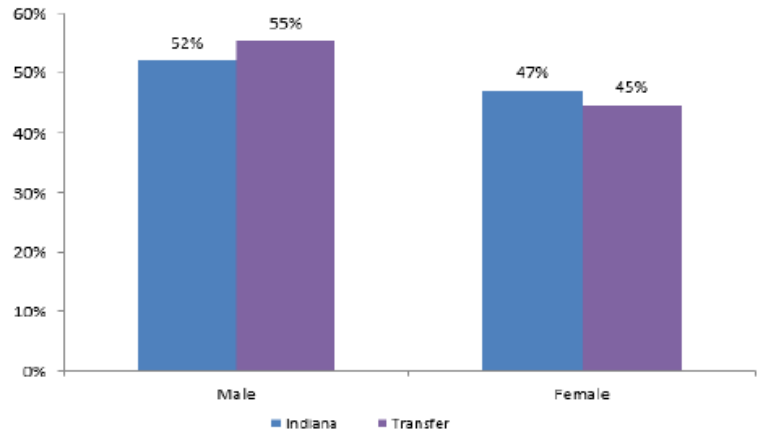


*The thickness of the line indicates the frequency of transfers out of or within the public health preparedness district The circles represent transfers from a specific PHPD, not of a specific hospital or county.

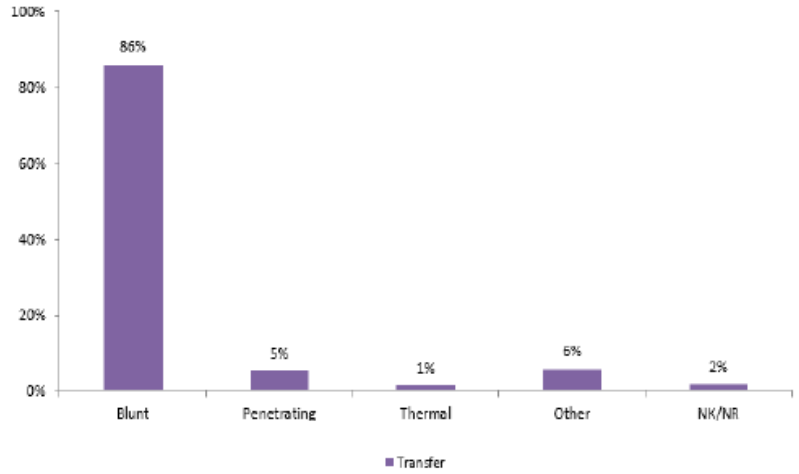
For Transfer Patients:		
Public Health Preparedness District Initial Hospital	Public Health Preparedness District Final Hospital	Incident Counts
1	1	8
1	2	21
1	5	13
2	2	15
2	3	4
2	5	5
3	3	130
3	5	3
4	4	19
4	5	32
5	5	147
6	3	10
6	5	73
6	6	6
7	5	43
7	7	19
7	8	1
8	5	43
8	8	18
9	5	3
10	5	14
10	10	87

Transfer Patient Population - Page 8

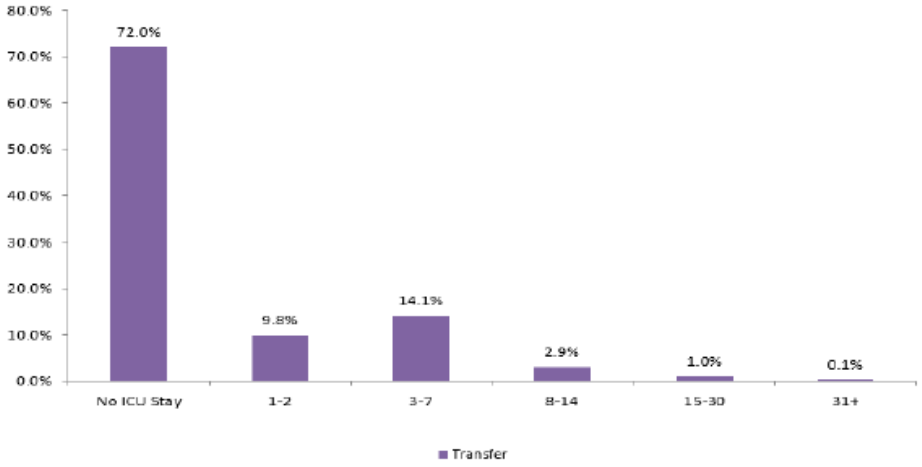
Patient Gender



Injury Severity Score (ISS)



ICU Length of Stay (days)- Final Hospital



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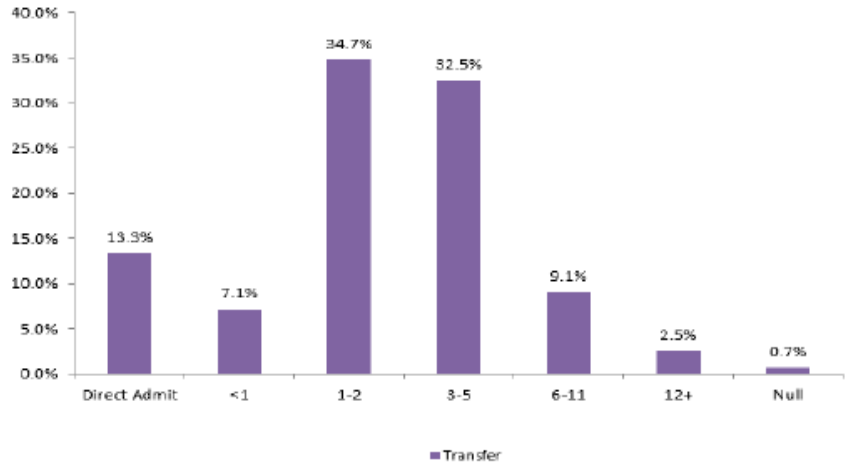
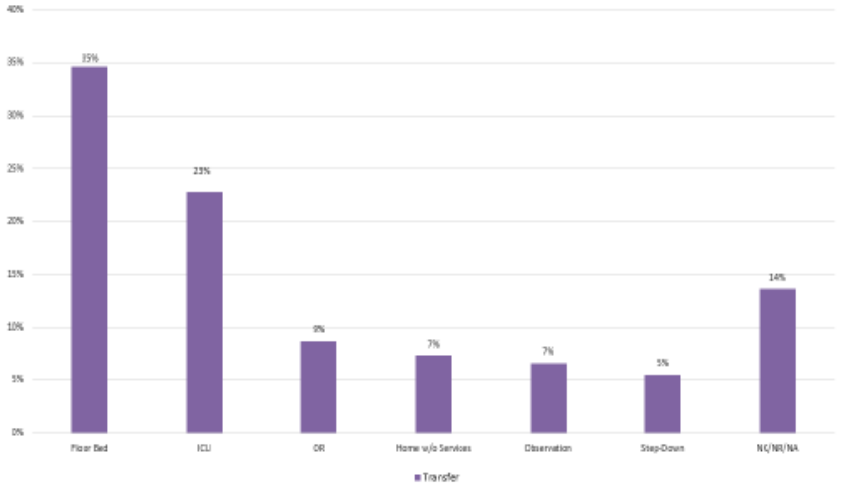
Transfer Patient Population - Page 9

ED Length of Stay (hours)- Final Hospital



ED Disposition by Percentage- Final Hospital



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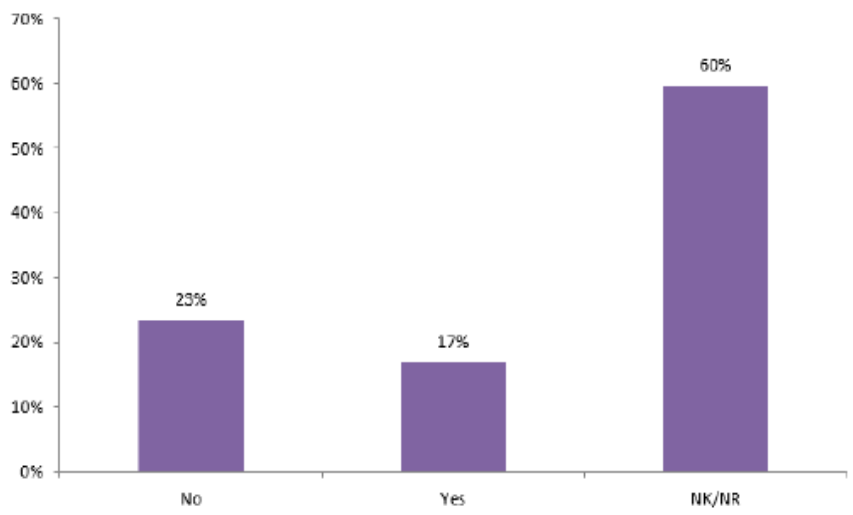
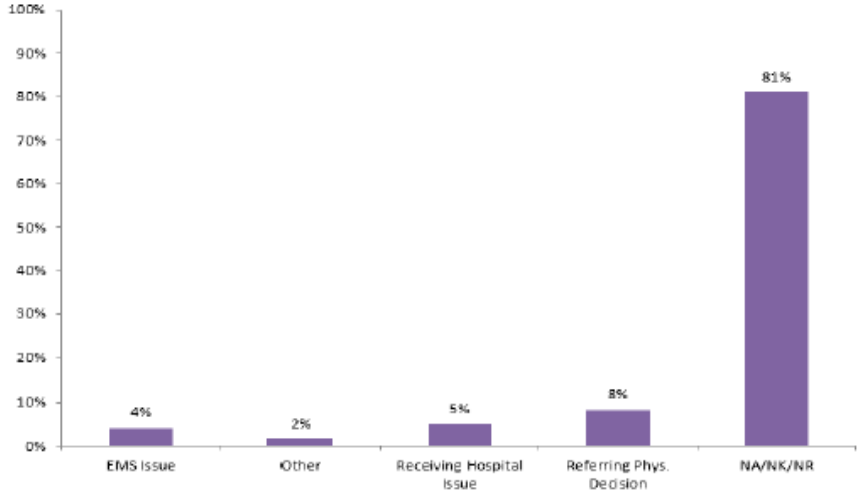
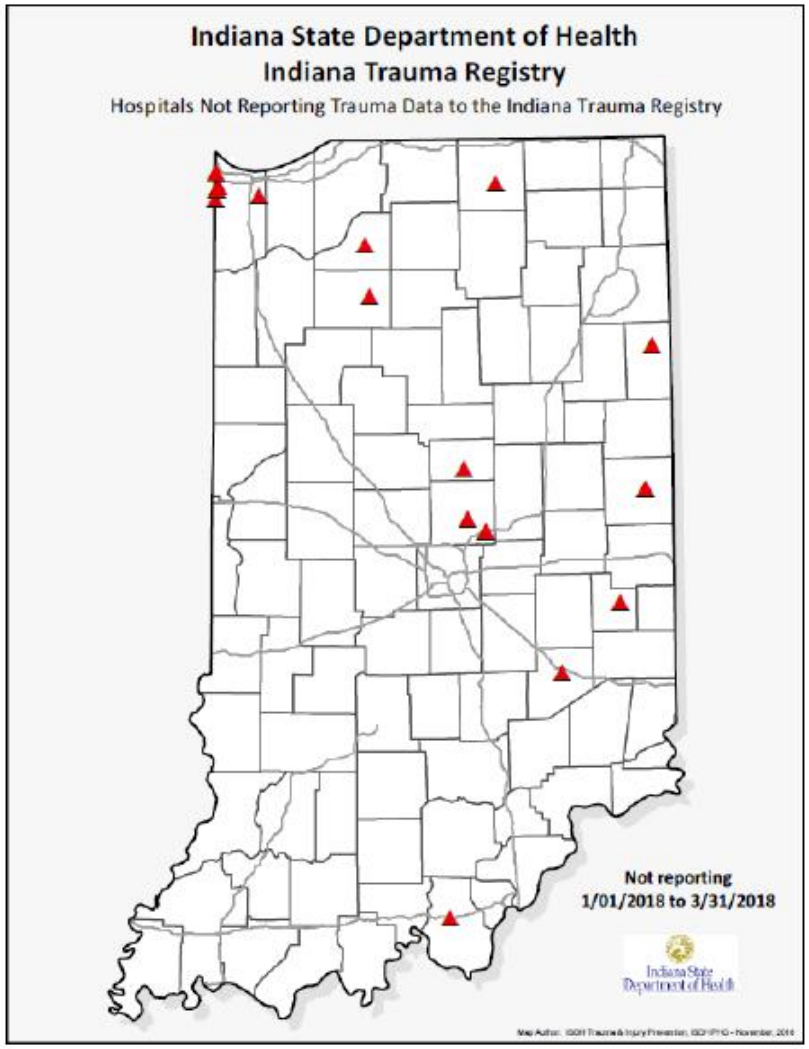
Transfer Patient Population - Page 9





Not Reporting Hospitals - Page 10



Hospital that did not report during Q2 2018:

-Adams Memorial Hospital
-Community Westview
-Decatur County Memorial
-Fayette Regional Health
-Franciscan Health Dyer
-Franciscan Health Hammond
-Franciscan Health Munster
-Goshen Hospital
-Harrison County
-IU Health—Starke
-IU Health—Tipton
-Pulaski Memorial
-Riverview Health
-St Catherine Regional (Charlestown)
-St Elizabeth—Central
-St. Mary Medical Center—Hobart
-St Vincent—Fishers
-St Vincent—Randolph

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Reporting Hospitals - Page 11

Indiana State Department of Health
Indiana Trauma Registry

Hospitals Reporting Trauma Data Quarter 2
April 1, 2018 - June 30, 2018

I II Level I and II Trauma Centers

Deaconess Hospital
Eskenazi Health
IU Health Methodist Hospital
Lutheran Hospital of Indiana
Memorial Hospital of South Bend
Parkview Regional Medical Center
Riley Hospital for Children at IU Health
St Mary's Medical Center of Evansville
St Vincent Indianapolis Hospital & Health Services
Terre Haute Regional Hospital

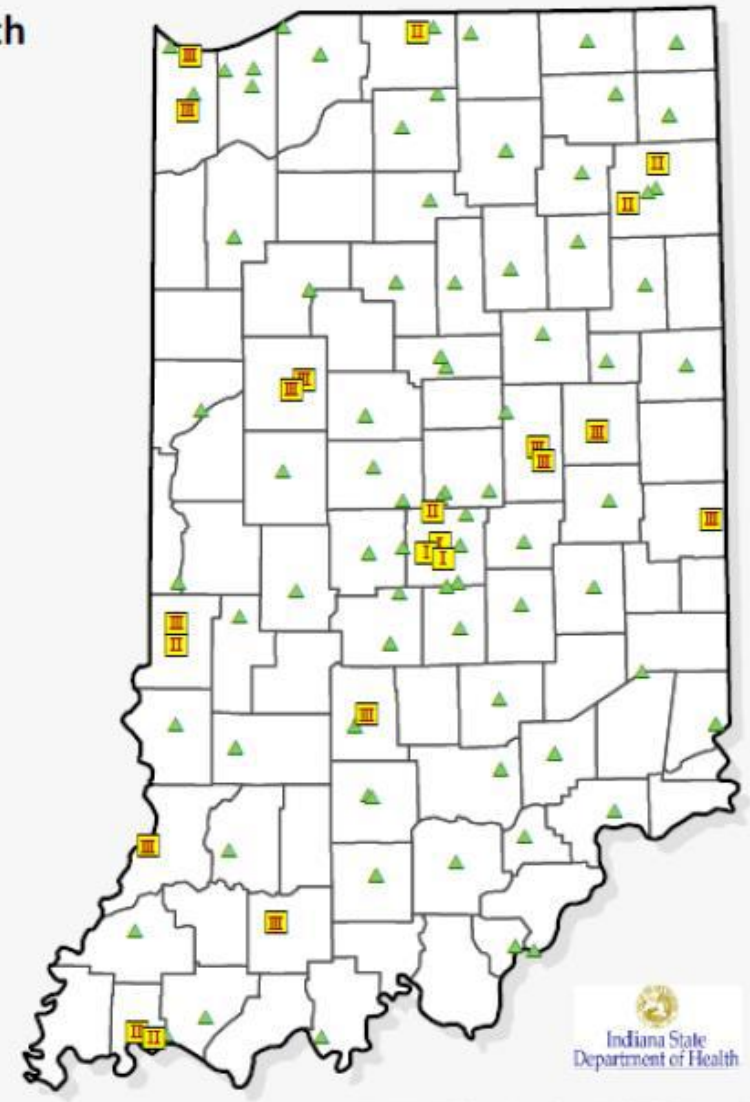
III Level III Trauma Centers

Community Hospital of Anderson & Madison Co.
Franciscan St Anthony Health - Crown Point
Franciscan St Elizabeth Health - Lafayette East
Good Samaritan Hospital
IU Health Arnett Hospital
IU Health Ball Memorial Hospital
IU Health Bloomington Hospital
Memorial Hospital and Health Care Center
Methodist Hospitals - Northlake Campus
Reid Hospital & Health Care Services
St Vincent Anderson
Union Hospital Terre Haute

▲ Non-Trauma Hospitals

82 Non-Trauma Hospitals

Hospital categories include Verified and "In the Process" Trauma Centers as of March 31, 2018.



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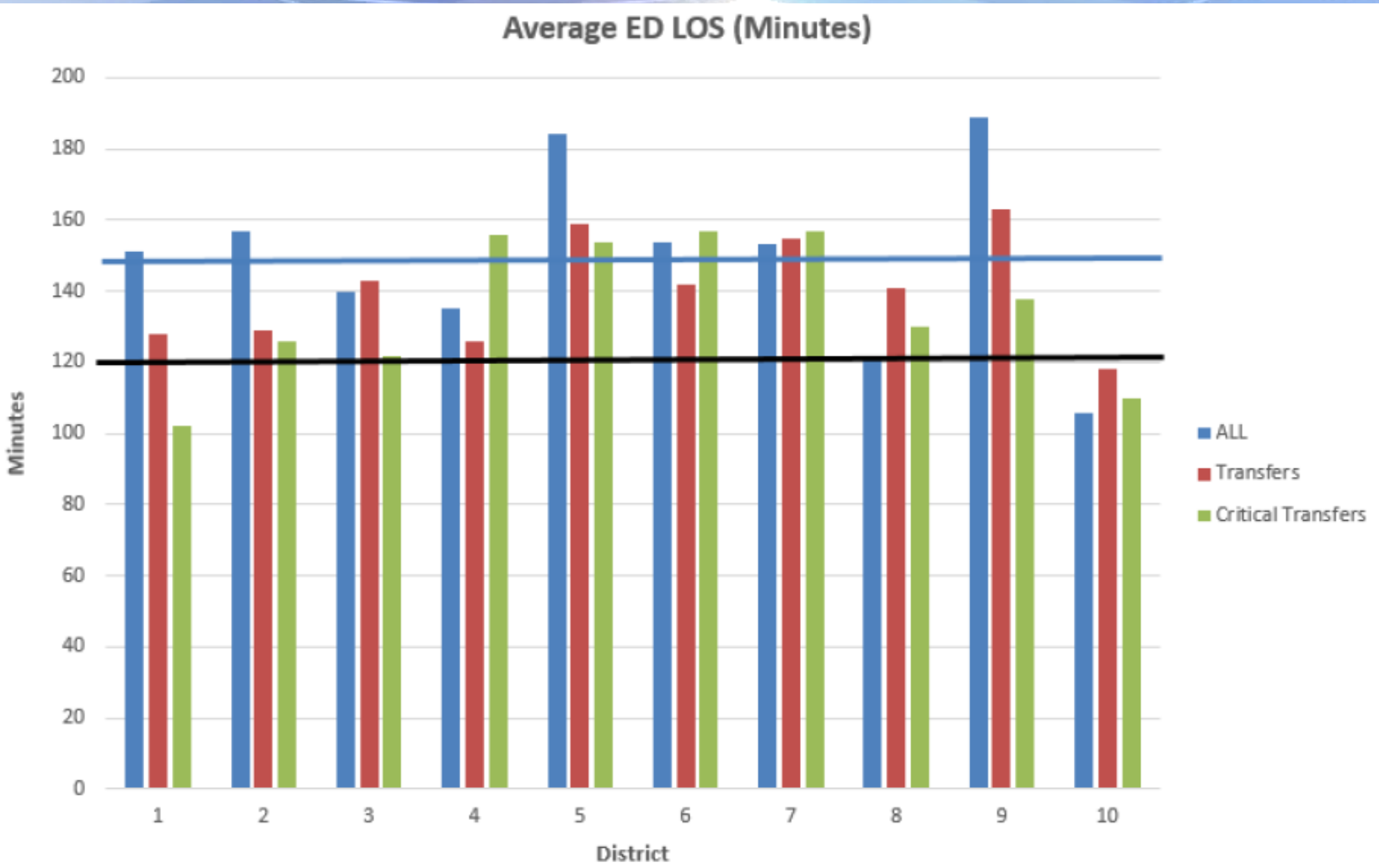
ED LOS by District - Page 14



*Black line represents the 120 minute performance improvement filter
**Blue line represents the state average

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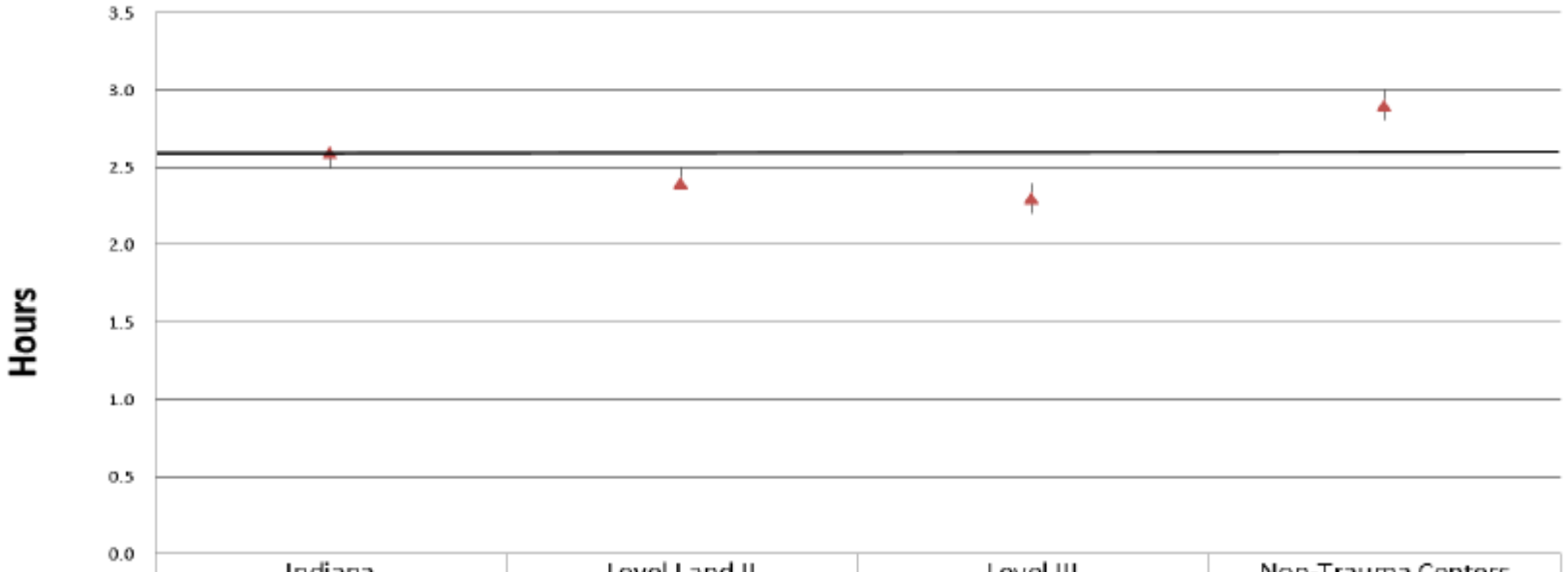
ED LOS - Page 15

All Patients

Average ED LOS (Hours)



	Indiana	Level I and II	Level III	Non-Trauma Centers
Upper CL	2.6	2.5	2.4	3.0
▲ Mean	2.6	2.4	2.3	2.9
Lower CL	2.5	2.4	2.2	2.8

2019 Data Dictionary

- Coming soon!
- Waiting on the 2019 NTDB Data Standard

2019 ISTCC & ITN Meetings

- Location: Indiana Government Center – South, Conference Room B.
- Webcast still available.
- Time: 10:00 A.M. EST.

- 2019 Dates:
  - February 22
  - April 26
  - June 21
  - August 16
  - October 11
  - December 13

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Other Business

Indiana State Department of Health

Email questions to: **indianatrauma@isdh.in.gov**