Indiana State Trauma Care Committee

April 21, 2017



Updates

Katie Hokanson, Director of Trauma and Injury Prevention



Email questions to: indianatrauma@isdh.in.gov

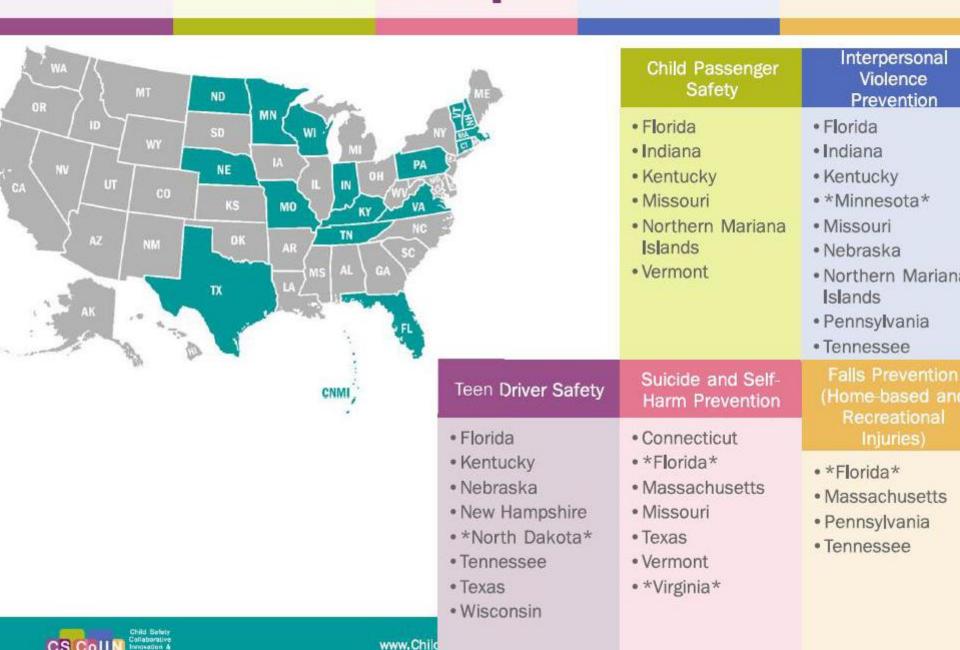


Child Safety Collaborative Innovation & Improvement Network

Child Safety COIIN



Participants



Trauma-Related Legislation

Senate Bill 119

- Air ambulance service standards for use of air medical to transport patients from the scene to trauma centers.
- House Bill 1145
 - Stroke protocols for EMS and hospitals.
- House Bill 1200
 - ATV bill requiring those under 18 to wear helmets.
- Senate Bill 156
 - Requires Family and Social Services Administration (FSSA) with assistance from ISDH to develop a comprehensive plan to increase the number of inpatient and residential beds used for detoxification, treatment and rehabilitation.
- Senate Bill 226
 - Limits the amount of an opioid prescription a prescriber may issue.
- Senate Bill 392
 - Emergency Medication in schools (includes naloxone).

Division Staffing Updates

- Annie Hayden
 - Resources and Records Consultant
- Angela Adle
 - Records Consultant for National Violent Death Reporting System (NVDRS) and Prescription Drug Overdose (PDO) project
- Meghan Davis
 - Records Consultant for NVDRS and PDO projects.
- James Carroll
 - PDO Community Outreach Coordinator



2017 EMS Medical Director's Conference



4th annual

EMS Medical Directors' Conference

Friday, April 28, 2017

Indianapolis Marriott North 3645 River Crossing Parkway Indianapolis, IN 46240

8am - 5pm



Get notified when registration opens!

Send your contact information to: indianatrauma@isdh.in.gov







2017 EMS Medical Director's Conference

- Presentations include:
 - Keynote speakers:
 - Using EMS data for bio-preparedness
 - Caring for geriatric patients
 - EMS case reports from Emergency Medicine residents
 - Conquering refractory V-fibrillation in the prehospital setting
 - Community Paramedicine
- Thank you to our supporters!









2017 Injury Prevention Conference



THIRD ANNUAL

IPAC Conference

Making Connections: Community, Programs, and Progress

Monday, May 15, 2017 Conner Prairie Welcome Center Fishers, IN Get notified when registration opens!

Send your contact information to:

indianatrauma@isdh.in.gov



2017 Injury Prevention Conference

Presentations Include:

- Preventing Violence in Indiana through Collective Impact
- Intimate Partner Violence in Marion County: Critical Concepts for Prevention/Intervention
- Unpacking the Prevention Toybox: Activities for Engaging Community Partners
- A Collaboration to Address ATV Safety for Indiana's Youth
- Water Awareness in Residential Neighborhoods (W.A.R.N.)
- Stop the Bleed
- Older Adult Falls

Child Passenger Safety Technician Scholarship Program

- Goal is to increase the number of active technicians in trauma centers and community organizations throughout the state
- ISDH can reimbursement organizations and future technicians \$250 dollars for attending class:
 - \$85 for class
 - Travel costs, lodging, etc.
- Utilizing Scholarship Program:
 - 7 future technicians



Booster Bash Events:

Booster Bash:

- Toolkit & booster seats provided to organizations.
- Goal is to identify organizations to hold event, including schools, community centers, or existing community events that serve children between ages of 4-8 who show financial need.



Booster Bash Events:

- Completed:
 - Vanderburgh- April 6th
 - Lawrence- April 7th and 14th
- Confirmed Events:
 - Vigo- April 25th
 - Cass- May 10th, 11th, and 19th
 - Clinton- May 20th
- 225 booster seats distributed for events!



Contact Information:

Preston Harness, MPH, CPST
Injury Prevention Program Coordinator
Indiana State Department of Health
Division of Injury & Trauma Prevention

PHarness@isdh.IN.gov

(317) 232-3121

Indiana State

<u>Department of Health</u>

Indiana Violent Death Reporting System (NVDRS)

- 2015—1,581 cases
- 2016 (as of March 2017)
 - Violent Deaths—1,760
 - Accidental Overdoses—1,383
- Coroner/Law Enforcement Participation Status:
 - 69 out of 92 county coroners (75%)
 - 356 out of 400 law enforcement agencies (89%)

2015 Case Completion

- 2015—818 pilot cases (Marion, Lake, Allen, St. Joseph, Madison, Vanderburgh and all child deaths)
 - 328 cases completed
 - 771 cases have at least one source document
 - Data closeout date: June 30, 2017

 Barriers to case completion: IMPD, Allen County Coroner/Prosecutor, St. Joseph Homicide Unit, Elkhart County

16

2017 Suicide in Indiana Report

- Released April 2017
- Featuring:
 - 2011-2015 Mortality
 - 2011-2014 Morbidity

Report available at: indianatrauma.org

Contact Information:

Rachel Kenny, MPH

Rkenny@isdh.in.gov

(317) 233-8197



LOCAL HEALTH DEPARTMENT NALOXONE KITS

Indiana State

<u>Department of Health</u>

Purpose

- Expand the distribution of naloxone kit across state
- Increase education about the state law that provides immunity for lay responders to carry & administer naloxone
- Counties were selected based on criteria outlined in a request for proposal (RFP)

Naloxone Kit Distribution

- Division established a
 Request for Proposal
 (RFP) process to
 distribute Naloxone kits
 to Local Health
 Departments (LHDs).
 - First Round:
 - Fall 2016
 - 20 LHDs
 - 3,472 kits (September 2016
 August 2017).



Naloxone Kit Distribution

- Second Round:
 - March 2017
 - 22 LHDs
 - 2,106 kits (April 2017 March 2018)



Email questions to: indianatrauma@isdh.in.gov

2017 Fireworks Injury Reporting

• 2017 cycle: Sept. 13, 2016 -Sept. 12, 2017

• Updated fax number: 317-232-1265

 Forms can be found at http://www.state.in.us/isdh/19042.htm#Fireworks

Epidemiology Resource Center: Stats Explorer

- Provides quick access to publicly-available health statistics.
 - Morbidity and mortality data.
- Available in chart, map or table formats.
- 2016 provisional data available for selected stats.
- https://gis.in.gov/apps/isdh/meta/stats_layers.h
 tm

2018 ISTCC & ITN Meetings

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

- Dates:
 - February 16
 - April 20
 - June 15
 - August 17
 - October 19
 - December 14

Regional Updates



Regional updates

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



Subcommittee Update Designation Subcommittee

Dr. Lewis Jacobson, Trauma Medical Director

St. Vincent Indianapolis Hospital



Trauma Designation Subcommittee Update

April 14, 2017 Lewis Jacobson, MD, FACS Committee Chair

Spencer Grover, Wendy St. John, Lisa Hollister, Dr. Emily Fitz, Jennifer Konger, Jennifer Mullen, Judi Holsinger, Kelly Blanton, Missy Hockaday, Art Logsdon, Katie Hokanson, Ramzi Nimry

ISDH Trauma Designation Subcommittee Meeting Agenda

04/14/2017

- 1. One Year Reviews
 - a. Union Hospital
- 2. Discussion of one year review template
- 3. Discussion of application and one year review document responsibilities

Union Hospital

- Located: Terre Haute, Indiana
- Seeking: Level III adult trauma center status
- The one year review was reviewed and no deficiencies were discovered by the subcommittee
- Consultation Visit: September 1 & 2, 2016
- Verification visit scheduled for: June 29 & 30, 2017

"In the Process" of ACS Verification Trauma Centers

	1			I			
Facility Name	City	Level	Adult / Pediatric	"In the Process" Date*	1 Year Review Date**	ACS Consultation Visit Date	ACS Verification Visit Date
Community Hospital Anderson	Anderson	III	Adult	06/20/2014	08/21/2015	May 2016	July/August 2017
Methodist Northlake	Gary	III	Adult	08/20/2014	10/30/2015	10/7-10/8, 2015	05/11-5/12, 2017
Franciscan Health Crown Point	Crown Point	III	Adult	12/18/2015	February 2017	09/26-09/27, 2016	November/December 2017
Reid Health	Richmond	III	Adult	12/18/2015	February 2017	02/02-02/03, 2016	June 2017
Terre Haute Regional Hospital	Terre Haute	II	Adult	12/18/2015	February 2017	09/08-09/09, 2016	August 2017
Union Hospital	Terre Haute	III	Adult	02/26/2016	April 2017	09/01-09/02, 2016	06/29-06/30, 2017
Memorial Hospital & Health Care Center	Jasper	III	Adult	08/24/2016	October 2017	05/16-05/17, 2017	TBD
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.

American College of Surgeons Needs Based Assessment of Trauma Systems (NBATS) Tool

- CY 2015
- All districts
- Trauma center = in the process or ACS verified

Question 1

1. Population

a. total TSA population of less than 600,000 received 2 point b. total TSA population of 600,000 to 1,200,000 received 4 points c. total TSA population of 1,200,000 to 1,800,000 received 6 points d. total TSA population of 1,800,000 to 2,400,000 received 8 points e. total TSA population of greater than 2,400,000 received 10 points

Points Assigned: ____

Question 1

District	Population
1	813,915
2	653,554
3	732,933
4	372,331
5	1,936,255
6	634,242
7	517,368
8	377,840
9	459,789
10	489,720

Question 2

- 2. Median Transport Times (combined air and ground scene only no transfer)
 - a. Median transport time of less than 10 minutes received 0 points
 - b. Median transport time of 10 20 minutes receives 1 points
 - c. Median transport time of 21- 30 minutes receives 2 points
 - d. Median transport time of 31 40 minutes receives 3 points
 - e. Median transport time of greater than 41 minutes receives 4 points

Points .	Assigned	l:
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District	Median Time (Minutes)
1	11
2	18
3	21
4	18
5	15
6	14
7	25
8	19
9	14
10	16

Question 3 - Skipped

3. Lead Agency/System Stakeholder/Community Support

Lead agency support for a trauma center (if none exist) or an additional trauma center in the TSA – 5 points.

Trauma System Advisory Committee (or equivalent body) statement of support for a trauma center (if none exist) or an additional trauma center in the TSA – 5 points.

Community support demonstrated by letters of support from 25- 50% of city and county governing bodies within the TSA – 1 points

Community support demonstrated by letters of support from over 50% of city and county governing bodies within the TSA – 2points

Points Assigned:	
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- Severely injured patients (ISS > 15) discharged from acute care facilities not designated as Level I, II, or III trauma centers.
 - a. Discharges of 0-200 severely injured patients receives 0 points
 - b. Discharges of 201 400 severely injured patients receives 1 points
 - c. Discharges of 401 600 severely injured patients receives 2 points
 - d. Discharges of 601-800 severely injured patients receives 3 points
 - e. Discharges of greater than 800 severely injured patients receives 4 points

Points	Assigned	l:
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District	Count
1	91
2	72
3	20
4	25
5	57
6	40
7	80
8	55
9	27
10	41

5. Level I Trauma Centers

- For the existence of each verified Level I trauma center already in the TSA assign 1 negative point
- For the existence of each verified Level II trauma center already in the TSA assign 1 negative point
- For the existence of each verified Level III trauma center already in the TSA assign 0.5 negative points

Points Assigned:	
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District	Points
1	-0.5
2	-1
3	-1.5
4	-1
5	-4.5
6	-1.5
7	0
8	0
9	0
10	-2.5

Numbers of severely injured patients (ISS > 15) seen in trauma centers (Level I and II) already in the TSA

The expected number of high-ISS patients is calculated as:

500 x (# of Level I and Level II centers in the TSA) = _____

- a. If the TSA has more than 500 severely injured patients above the expected number assign 2 points
- If the TSA has 0-500 severely injured patients above the expected number assign 1 point
- If the TSA has 0-500 fewer severely injury patients than the expected number assign 1 negative point
- d. If the TSA has more than 500 fewer severely injured patients than the expected number assign 2 negative points

Points Assigned: ____

D	Count	Constant	# of TCs	Expected	Difference
1	174	500	0	0	174
2	202	500	1	500	-298
3	128	500	2	1000	-872
4	143	500	0	0	143
5	881	500	3	1500	-619
6	261	500	0	0	261
7	142	500	0	0	142
8	141	500	0	0	141
9	55	500	0	0	55
10	172	500	2	1000	-828

Scoring System

The following scoring system shall be used to allocate trauma centers within the TSAs:

- 1. TSAs with scores of 5 points or less shall be allocated 1 trauma center
- 2. TSAs with scores of 6-10 points shall be allocated 2 trauma centers
- 3. TSAs with score of 11-15 points shall be allocated 3 trauma centers
- 4. TSAs with scores of 16-20 points shall be allocated 4 trauma centers

Scoring System

District	Q1	Q2	Q3	Q4	Q5	Q6	Total	Allocation
1	4	1	-	0	-0.5	1	5.5	1 or 2
2	4	1	-	0	-1	-1	3	1
3	4	2	-	0	-1.5	-2	2.5	1
4	2	1	-	0	-1	1	3	1
5	8	1	-	0	-4.5	-2	2.5	1
6	4	1	-	0	-1.5	1	4.5	1
7	2	2	-	0	0	1	5	1
8	2	1	-	0	0	1	4	1
9	2	1	-	0	0	1	4	1
10	2	1	-	0	-2.5	-2	-1.5	0

Subcommittee Update Performance Improvement Subcommittee

Dr. Stephanie Savage, *Trauma Medical Director* IU Health Methodist





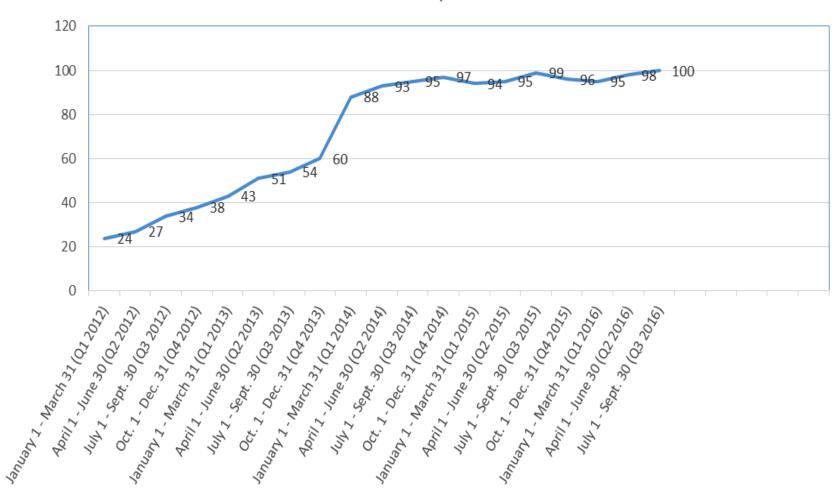
Committee Members: Chair Stephanie Savage, MD, Amanda Rardon, Andy VanZee, Angela Cox-Booe, Annette Chard, Bekah Dillon, Brittanie Fell, Carrie Malone, Christy Claborn, Chuck Stein, Dawn Daniels, Dusten Roe, Emily Grooms, Jennifer Mullen, Jodi Hackworth, Kelly Mills, Kristi Croddy, Latasha Taylor, Lesley Lopossa, Lindsey Williams, Lisa Hollister, Lynne Bunch, Marie Stewart, Mark Rohlfing, Mary Schober, Merry Addison, Michele Jolly, Michelle Moore, Michelle Ritchey, Missy Hockaday, Olivia Roloff, Peter Jenkins, MD, Regina Nuseibeh, Rexene Slayton, Sarah Quaglio, Spencer Grover, Tammy Robinson, Tracy Spitzer

ISDH Staff: Katie Hokanson, Ramzi Nimry, Camry Hess

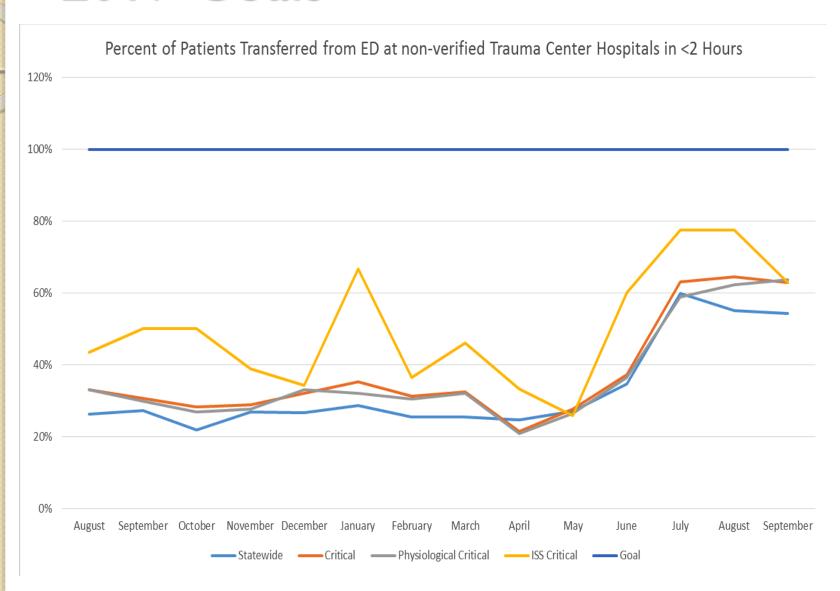
District Representation: 9 districts are represented

2017 Goals

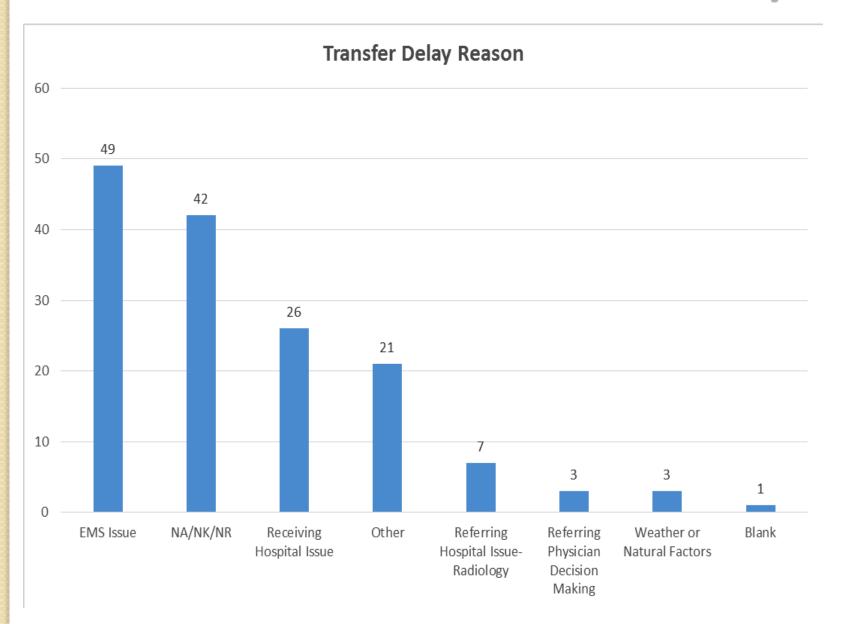
Trauma Registry, Total Number of Hospitals Reporting Quarterly (since 2012)



2017 Goals



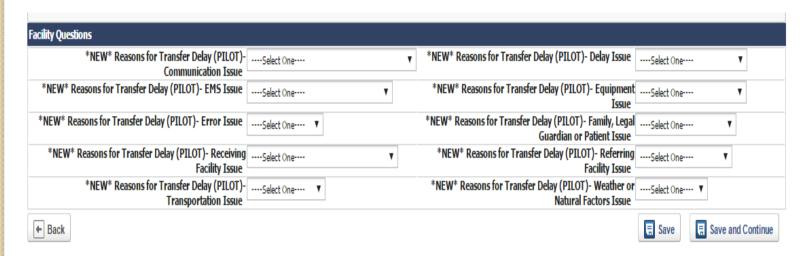
ED LOS/Reason for Transfer Delays



Pilot Project

5 centers have agreed to participate

- Community East
- IU Health North
- Methodist Southlake
- St. Vincent Kokomo
- Schneck Medical Center



2017 Goals

- I. Increase number of hospitals reporting to the Indiana Trauma Registry
- 2. Decrease average ED LOS at non-trauma centers
 - -Pilot project to evaluate transfer delays
- 3. Increased Trauma Registry participation
 - -Coding quizzes. Report participation to committee
- 4. Trauma Transfer Guidelines (Indiana's Inter-Facility Guideline)
 - -Trauma Care Committee Vote
- 5. Regional Representation at Pl

Next Meetings

May 16 from 10:00-11:00am EST at the ISDH (Larkin Conference Room or via conference call line.

July 11 from 10:00-11:00am EST at the ISDH (Larkin Conference Room or via conference call line.

September 12 from 10:00-11:00am EST at the ISDH (Larkin Conference Room or via conference call line.

November 14 from 10:00-11:00am EST at the ISDH (Larkin Conference Room or via conference call line.

Transfer Patterns of Severely Injured Patients Among Non-Trauma Centers

Peter Jenkins, *Trauma Surgeon*IU Health – Methodist Hospital



TRANSFER PATTERNS AND MORTALITY AMONG SEVERELY INJURED PATIENTS TREATED AT NON-TRAUMA CENTERS

Peter C. Jenkins MD, MSc April 21, 2017



Disclosures

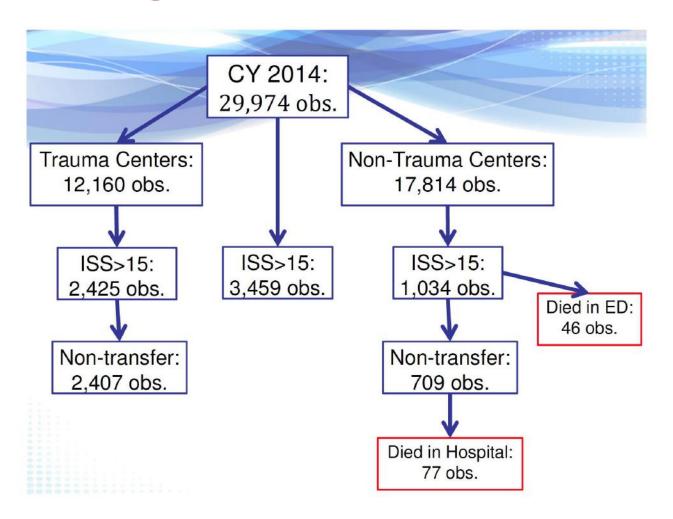
No conflicts of interest to report.

Background:

American College of Surgeons – Trauma Center Needs Assessment Tool				
Table 4				
Desired State	xx% of injured patients with ISS > 15 treated without transfer at facilities			
	other than designated Level I, II, and II trauma centers			
Parameters	xx - no data, suggest < 5%			
Current State	Determine:			
	 % of patients with ISS > 15 treated in designated trauma centers compared with total number of injured patients with ISS >15 in the state 			



Background:



Background:

- What are the conclusions for this table?
 - 68.57% of patients with ISS>15 are treated at non-trauma centers and are **not** transferred.
 - The recommended suggestion is <5%.



Goals

- 1. Determine transfer patterns of severely injured patients at non-trauma hospitals
- 2. Identify patient and injury characteristics associated with transfer to trauma centers
- 3. Examine outcomes of patients who remain at non-trauma centers
- 4. Discuss future directions

Methods

- ISDH data (2013-2015)
- Calculate transfer rate at the population level
- Calculate transfer rate at the hospital level
- Multivariate logistic regression clustered at the hospital level to examine factors associated with:
 - Transfer status
 - Mortality (patients who remain)



Patient Selection:

10,674 patients (ISS >15) 543 patients age <15 years 10,131 patients 3377 transfer in = "yes" 6,754 patients 214 NSL 6,540 patients 5,285 trauma center admissions 1,255 patients

Results: transfer rate

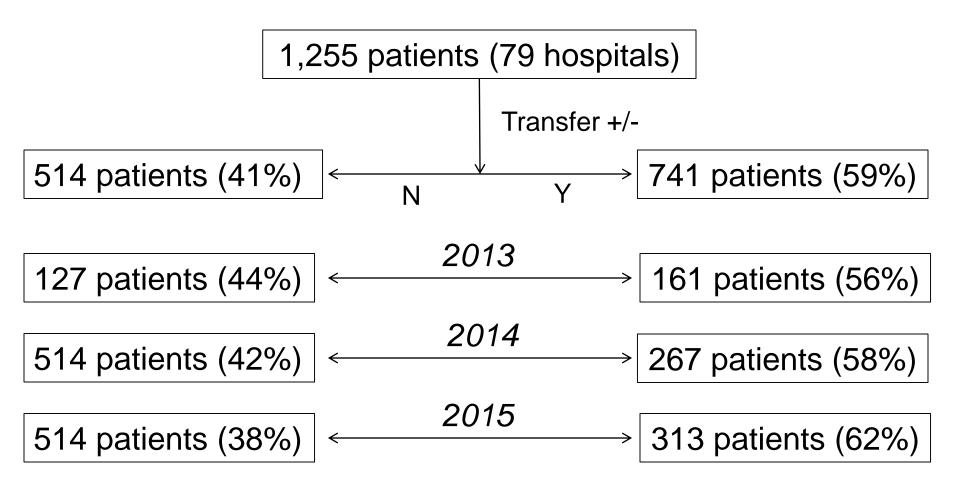
1,255 patients (79 hospitals)

Transfer +/
514 patients (41%)

N

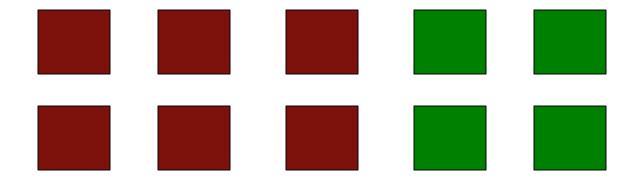
Transfer +/
741 patients (59%)

Results: transfer rate

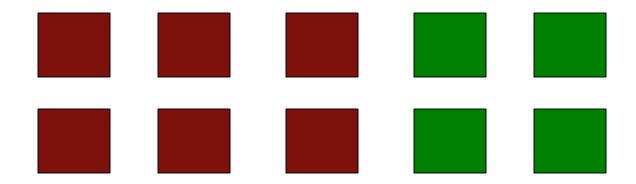




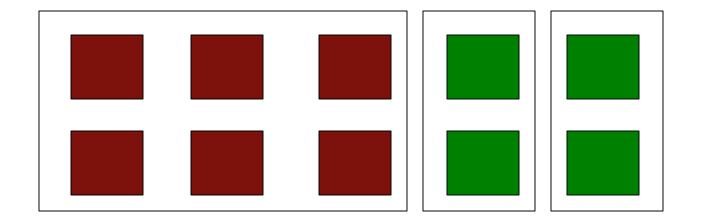
Results: state transfer rates

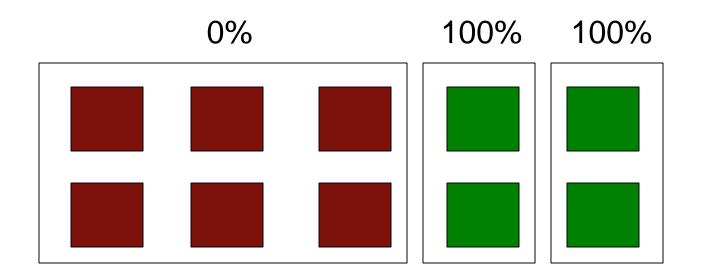


Results: state transfer rates

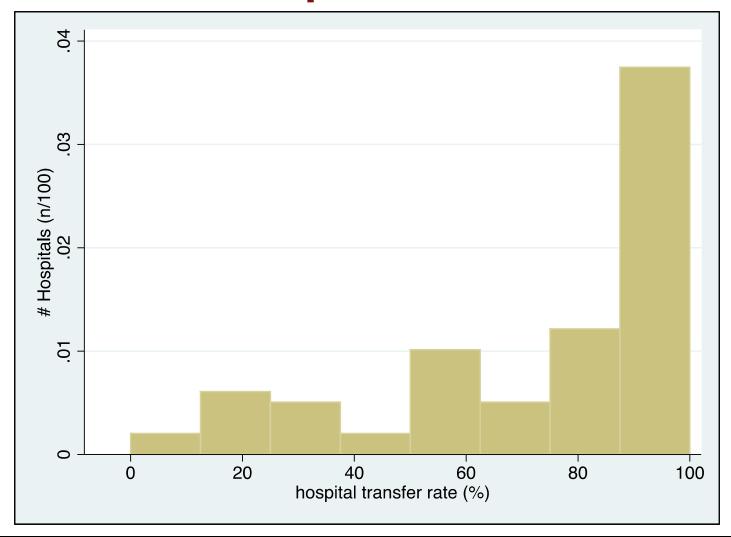


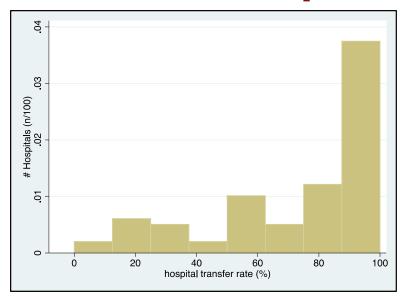
40% Transferred





67% Hospital transfer rate





Mean hospital transfer rate = 74%

Median hospital transfer rate= 81%

Table 1

Characteristics of severely injured patients admitted to non-trauma centers by transfer status (n=1,255)

status (n=1,255)	Remained at non-	Transferred to	P-value
	trauma center	trauma center	
Age, %			<0.00
16-25 y	12.2	20.5	
26-35 y	7.5	13.8	
36-45 y	7.1	10.5	
46-55 y	11.4	16.3	
56-65 y	15.6	13.3	
66-75 y	14.4	10.6	
76-85 y	20.1	11.7	
> 85 y	11.8	3.4	
Missing, n	6	4	
Female, %	37.0	31.1	0.03
Race, %			0.03
White	91.1	92.0	
Black	6.9	4.3	
Other/Unknown	2.0	3.7	
Primary Payer			<0.00
Source, %			
Medicaid	4.6	7.5	
Medicare	42.2	19.6	
Commercial	27.2	32.7	
Self pay	9.3	15.5	
Other	10.0	17.2	
Not known	4.7	7.6	

Table 1

Patient injury	21.7 (8.1)	20.5 (6.5)	< 0.00
severity using ISS			
98, mean (SD)			
Mechanism of			<0.00
Injury, %			
Fall	54.4	28.0	
Motor vehicle	21.2	35.0	
collision			
Pedestrian struck	3.7	4.6	
Transport	2.6	4.5	
Firearm	2.4	3.7	
Cut/pierce	0.6	1.6	
Other bike	1.6	1.1	
Machine	0.2	1.1	
Fire/Burn	2.0	12.3	
Pedestrian other	0.2	0.3	
Natural	0.6	0.5	
Overexertion	0.7	0.1	
Other	5.1	3.9	
Missing	4.9	3.4	

Chi-square used to calculate p value for categorical variables and t-test used to calculate p value for continuous variables.



Results: OR transfer

	Odds Ratio	P-value
Age		
16-25 y	1	
26-35 y	0.96	0.87
36-45 y	0.88	0.66
46-55 y	0.91	0.61
56-65 y	0.66	0.44
66-75 y	0.89	0.66
76-85 y	0.81	0.53
> 85 y	0.40	<0.000
Male	1.18	0.25
Race		
White	1	
Black	0.50	0.03
Other/Unknown	1.13	0.79
Primary Payer		
Source		
Commercial	1	
Medicaid	1.08	0.76
Medicare	0.47	<0.000
Self pay	1.33	0.27
Other	1.60	0.10
Not known	2.23	0.13

Results: OR transfer

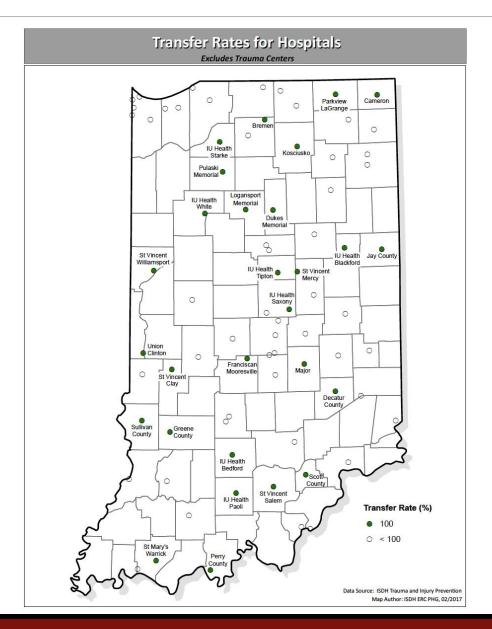
	Odds Ratio	P-Value	
ISS 98	0.97	0.04	
Pulse Rate	0.99	0.67	
Mechanism of			
Injury			
Blunt	1		
Burn	9.37	< 0.000	
Penetrating	2.03	0.04	
Other	0.73	0.42	
Blank	0.96	0.86	

Results: OR mortality (n=514)

	Odds Ratio	P-value
Age		
16-25 y	1	
26-35 y	1.46	0.54
36-45 y	0.14	0.02
46-55 y	0.97	0.94
56-65 y	0.58	0.12
66-75 y	1.34	0.70
76-85 y	1.29	0.77
> 85 y	4.59	0.06
Male	2.49	0.01
Race		
White	1	
Black	0.31	0.08
Other/Unknown	10.32	0.01
Primary Payer		
Source		
Commercial	1	
Medicaid	5.34	0.01
Medicare	1.96	0.19
Self pay	1.24	0.77
Other	1.34	0.69
Not known	1.19	0.78

Results: OR mortality (n=514)

	Odds Ratio	P-Value
ISS 98	1.15	< 0.000
Pulse Rate	0.99	0.67
Mechanism of		
Injury		
Blunt	1	
Burn	-	
Penetrating	62.85	<0.000
Other	3.93	0.01
Blank	1.46	0.46
Hospital transfer		
rate, tertile		
T1 (0%-54%)	1	
T2 (55%-80%)	1.9	0.03
T3 (>80%)	9.23	0.01



Next steps?



Thank you ISDH team!

American College of Surgeons - Committee on Trauma Update

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



Quarter 3 Trauma Registry Data Report

Camry Hess, *Database Analyst* Indiana State Department of Health



District 1

Community Hospital – Munster

Franciscan Health – Crown Point

Franciscan Health – Dyer

Franciscan Health- Hammond

Franciscan Health – Michigan City

Franciscan Health - Rensselaer

IU Health – La Porte

Methodist Hospital Northlake

Methodist Hospital Southlake

Portage Hospital

Porter Regional Hospital (Valparaiso)

St Catherine Hospital (East Chicago)

St. Mary Medical Center (Hobart)

Valparaiso Medical Center

District 2

Community Hospital of Bremen

Elkhart General Hospital

IU Health - Starke Hospital

Kosciusko Community Hospital

Memorial Hospital South Bend

Pulaski Memorial Hospital

St. Joseph Regional Medical Center (Mishawaka)

St. Joseph Regional Medical Center (Plymouth)

Woodlawn Hospital

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 Hospital

Parkview Whitley Hospital

District 4

Franciscan Health - Crawfordsville

Franciscan Health – Lafayette East

IU Health - Arnett Hospital

IU Health - White Memorial

Memorial Hospital (Logansport)

St. Vincent Frankfort

St. Vincent Williamsport Hospital

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

Hendricks Regional Health

IU Health - Methodist Hospital

IU Health – Morgan Hospital

IU Health - North Hospital

IU Health - Riley for Children

IU Health - Saxony Hospital

IU Health – West Hospital

Johnson Memorial Hospital

Peyton Manning Children's Hospital at St Vincent

Riverview Hospital

St. Vincent Fishers Hospital

St. Vincent Hospital and Health Services Indianapolis

Witham Health Services

Witham Health Services at Anson

District 6

Community Hospital of Anderson & Madison Co.

Community Howard Regional Health

Henry County Memorial Hospital

IU Health – Ball Memorial Hospital

IU Health - Blackford Hospital

IU Health – Tipton Hospital

Jay County Hospital

Marion General Hospital

Reid Hospital and Health Care Services

St. Vincent Anderson Regional Hospital

St. Vincent Kokomo

St. Vincent Mercy Hospital

District 7

Greene County General Hospital

Putnam County Hospital

St. Vincent Clay Hospital

Sullivan County Community Hospital

Terre Haute Regional Hospital

Union Hospital (Terre Haute)

Union Hospital Clinton

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

District 9

Clark Memorial Hospital

Dearborn County Hospital

Decatur County Memorial Hospital

Baptist Health Floyd

King's Daughters' Health

Margaret Mary Community Hospital

Scott County Memorial Hospital

District 10

Daviess Community Hospital

Deaconess Hospital

Deaconess Gateway Hospital

Gibson General

Good Samaritan Hospital

Memorial Hospital & Health Care Center

Perry County Memorial Hospital

St. Mary's Medical Center of Evansville

Summary of Hospitals Reporting Status- Q2 2016

New to Reporting / Started Reporting Again

- IU Health Arnett Hospital
- Pulaski Memorial Hospital
- St. Mary's Warrick Hospital
- St Vincent Randolph Hospital

Summary of Hospitals Reporting Status- Q3 2016

Did not Report

- Decatur County Memorial Hospital
- Dukes Memorial Hospital
- Franciscan Health-Dyer
- Franciscan Health-Hammond
- IU Health Starke Hospital
- St. Mary Medical Center (Hobart)
- St. Vincent Clay
- Woodlawn Hospital

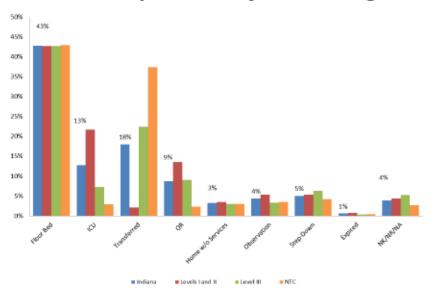
Quarter 3 2016 Statewide Report

- 10,494 incidents
- July 1, 2016 September 30, 2016
- 100 total hospitals reporting
 - 10 Level I and II Trauma Centers
 - 10 Level III Trauma Centers
 - 80 Non-Trauma Hospitals

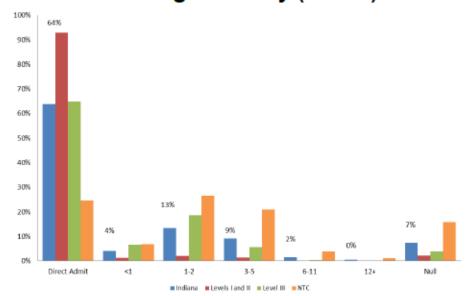


ED Disposition / Length of Stay - Page 2

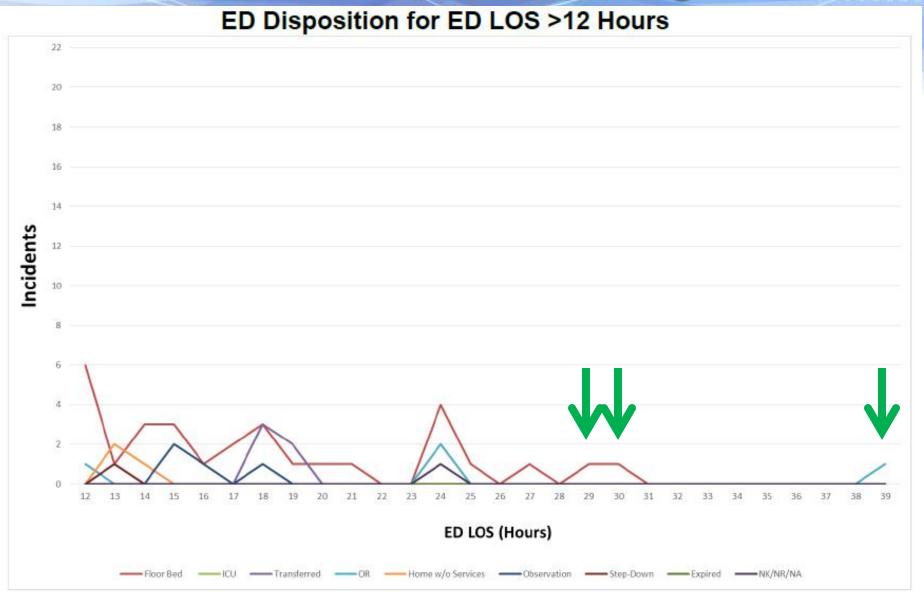
ED Disposition by Percentage



ED Length of Stay (Hours)



ED LOS > 12 Hours - Page 3



ED LOS > 12 Hours - Page 4

ED LOS > 12 Hours, N=45

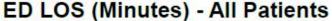
Facilities	3 Level I and II 0 Level III 42 Non-trauma Centers	Region	10 North; 16 Central; 16 South; 3 Un- known
Average Distance from Scene to Facility	13.1 Miles	ISS	25 (1-8 cat); 11 (9-15 cat); 3 (16-24); 6 (No ISS)
Transport Type	26 Ambulance; 15 Private Vehicle; 1 Police; 3 Unknown	GCS Motor	1 (5 cat); 33 (6 cat); 11 (unknown)
Cause of Injury 6 Transport; 32 Falls; 3 Inanimate Mech. Forces; 4 Unknown		te RTS—Systolic 4 (3-4)	
Signs of Life 45 Yes		RTS—Resp. Scale	3 (3-4)
Age 56.6 Years (1-95 Years)		Resp. Assistance	0 Yes; 10 No; 35 Unknown
Gender 21 Female; 24 Male		ED LOS	19.2 (12-39)
Interfacility Transfer	4 Yes; 41 No	ED Disposition	27 Floor; 3 Home without services; 4 Observation; 3 OR; 1 Step-down; 6 Transferred; 1 Not Applicable

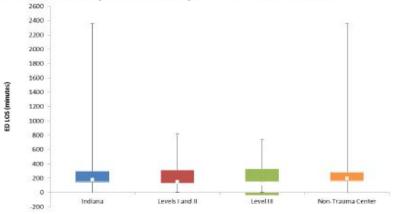
⁻Region was created from injury zip code. Missing = no injury zip or injury zip from out of state.

⁻Numbers represent counts per category or mean with minimum and maximum in parentheses.

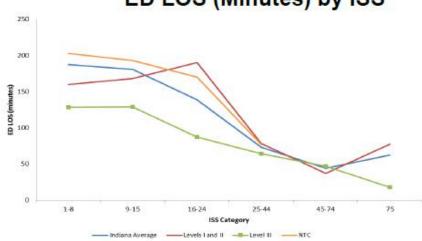
⁻No signs of life is defined as having none of the following: organized EKG activity, papillary responses, spontaneous respiratory attempts or movement, and unassisted blood pressure. This usually implies the patient was brought to the ED with CPR in progress (2015 Trauma Registry Data Dictionary, page 185).

ED Length of Stay: Bar & Whisker - Page 5





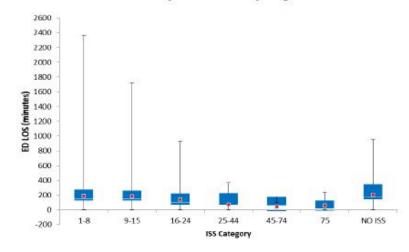
ED LOS (Minutes) by ISS



A table with all the values for ED LOS is found on page 52.

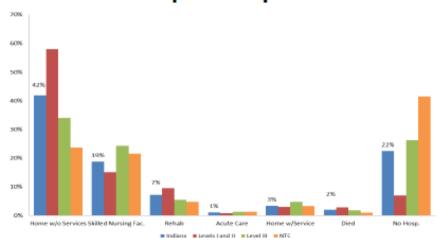
ED LOS (Minutes) by ISS

Note for EDLOS by ISS, there were 23 cases with ISS of 75; none were at a non-trauma center.



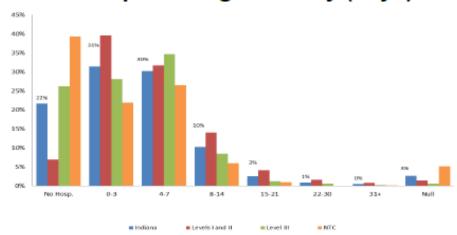
Hospital Disposition and LOS - Page 6

Hospital Disposition



Hospital dispositions with <1% included: Another institution, Null, Psychiatric Hospital, Long-Term Care Hospital and Intermediate Care

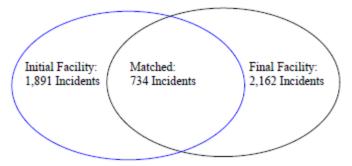
Hospital Length of Stay (days)



Linking - Page 7

For Quarter 3 2016, of the 10,494 incidents reported to the Indiana Trauma Registry, 1,891 cases that had an ED Disposition of "Transferred to another acute care facility" at the initial facility or that had the Inter-Facility Transfer equal to "Yes" at the Trauma Center. Of those transferred, 734 cases were probabilistically matched. The linked cases make up 17% of the Q3 2016 data. All public health preparedness districts are represent-

ed. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.



The initial facility in which transfers come from may be considered Critical Access Hospitals (CAHs). All Indiana CAHs are considered Rural, and must meet additional requirements to have a CAH designation, such as having no more than 25 inpatient beds and being located in a rural area. Facilities that are highlighted indicate that these facilities reported data for Quarter 3 2016.

Jay County Hospital Margaret Mary Community Parkview LaGrange Hospital Parkview Wabash Hospital Columbus Regional Hospital Daviess Community Hospital Margaret Mary Community Parkview LaGrange Hospital Columbus Regional Hospital Daviess Community Hospital Margaret Mary Community Parkview LaGrange Hospital Parkview Wabash Hospital Columbus Regional Hospital Daviess Community Hospital Margaret Mary Community Parkview LaGrange Hospital Parkview Wabash Hospital Parkview Wabash Hospital Columbus Regional Hospital Parkview Wabash Hospita

Within this transfer data section, the purple columns represent the transfer cases and the single percentages represent the percent for the transfer cases. For two demographic variables, patient age groupings and gender, the Indiana average is included to provide more insight to this transfer population.

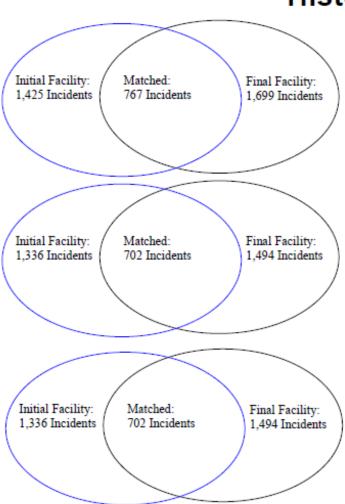
indiana Chicai Access Hospitais (CAHS)				
Adams Memorial Hospital	Perry County Memorial Hospital			
Cameron Memorial Community Hospital Inc	Pulaski Memorial Hospital			
Community Hospital of Bremen Inc	Putnam County Hospital			
Decatur County Memorial Hospital	Rush Memorial Hospital			
Dukes Memorial Hospital	Scott Memorial Hospital			
Gibson General Hospital	St. Mary's Warrick Hospital			
Greene County General Hospital	St. Vincent – Clay Hospital			
Harrison County Hospital	St. Vincent – Dunn Hospital			
IU Health Bedford Hospital	St. Vincent – Frankfort Hospital			
IU Health Blackford Hospital	St. Vincent – Jennings Hospital			
IU Health Paoli Hospital	St. Vincent – Mercy Hospital			
IU Health Tipton Hospital	St. Vincent – Randolph Hospital			
IU Health White Memorial Hospital	St. Vincent - Salem Hospital			
Jasper County Hospital	St. Vincent – Williamsport Hospital			
Jay County Hospital	Sullivan County Community Hospital			
Margaret Mary Community Hospital Inc	Union Hospital Clinton			
Parkview LaGrange Hospital	Woodlawn Hospital			

Indiana Critical Access Hospitals (CAHs)

	Rural Hospitals				
	Columbus Regional Hospital	Kosciusko Community Hospital			
	Daviess Community Hospital	Major Hospital			
	Fayette Regional Health System	Marion General Hospital			
	Franciscan Health-Michigan City	Memorial Hospital (Logansport)			
	Franciscan Health-Crawfordsville	Memorial Hospital & Health Care Center (Jasper)			
1	Good Samaritan Hospital	Parkview Noble Hospital			
•	Henry Community Health	Reid Health			
	IU Health – LaPorte Hospital	St. Joseph's Regional Medical Center – Plymouth			
	IU Health – Starke Hospital	Schneck Medical Center			
	King's Daughters' Health				

Historical Links - Page 8

Historical Links



For Quarter 4, 2015, of the 8,728 incidents reported to the Indiana Trauma Registry, 1,425 cases that had an ED Disposition of "Transferred to another acute care facility" at the initial facility or that had the Inter-Facility Transfer equal to "Yes" at the Trauma Center. Of those transferred, 767 cases were probabilistically matched. The linked cases make up 25% of the Q4 2015 data. All public health preparedness districts are represented. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.

For Quarter 1, 2016, of the 8,077 incidents reported to the Indiana Trauma Registry, 1,336 cases that had an ED Disposition of "Transferred to another acute care facility" at the initial facility or that had the Inter-Facility Transfer equal to "Yes" at the Trauma Center. Of those transferred, 702 cases were probabilistically matched. The linked cases make up 25% of the Q1 2016 data. All public health preparedness districts are represented. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.

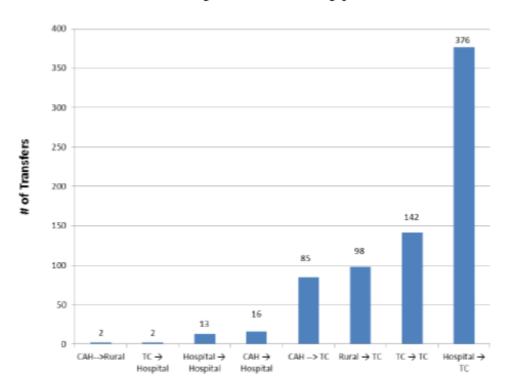
For Quarter 2, 2016, of the 9,188 incidents reported to the Indiana Trauma Registry, 1,676 cases that had an ED Disposition of "Transferred to another acute care facility" at the initial facility or that had the Inter-Facility Transfer equal to "Yes" at the Trauma Center. Of those transferred, 787 cases were probabilistically matched. The linked cases make up 23% of the Q2 2016 data. All public health preparedness districts are represented. The diagram below illustrates the overlap between the transfers reported from the initial facility and from the final facility that can be matched.

Transfer Patient: Facility Type - Page 9

Facility to Facility Transfers

For Transfer Patients:			
Initial Hospital Type	Final Hospital Type	Incident Count	
Critical Access Hospital	Rural	2	
Trauma Center	Hospital	2	
Hospital	Hospital	13	
Critical Access Hospital	Hospital	16	
Critical Access Hospital	Trauma Center	85	
Rural Hospital	Trauma Center	98	
Trauma Center	Trauma Center	142	
Hospital	Trauma Center	376	

Facility Transfer Type



Rural = Rural Hospital; TC = ACS Verified or In Process Trauma Center;

CAH = Critical Access Hospital; Hospital = does not fall into above categories

Linked Transfer Patient Averages - Page 10

For Linked Transfer Patients:

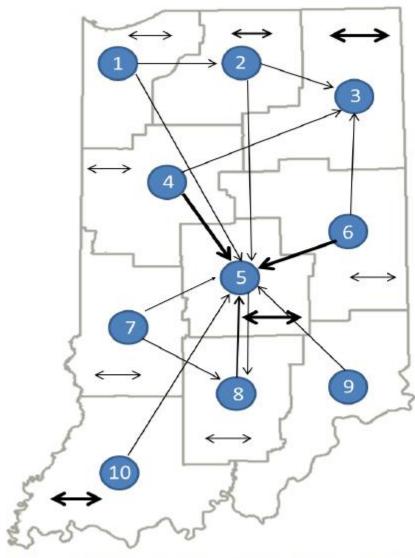
For Transfer Patients:				
	All Transfer Patients	Critical*	Physiological Critical**	ISS Critical***
Number of Patients	734	253	200	76
EMS Notified to Scene	8.4 minutes	8.4 minutes	8.5 minutes	8.8 minutes
EMS Scene Arrival to Departure	24.3 minutes	14.8 minutes	14.2 minutes	15.8 minutes
EMS Scene Depar- ture to Initial Hospital ED Arrival	24.5 minutes	36.6 minutes	44.6 minutes	17.2 minutes
Initial Hospital ED Arrival to Departure	2 hours 1 minute	1 hour 45.9 minutes	1 hour 45.9 minutes	1 hour 45.5 minutes
Initial Hospital ED Departure to Final Hospital ED Arrival	2 hours 6.1 minutes	1 hour 58.2 minutes	2 hours 4.3 minutes	1 hour 43.8 minutes
TOTAL TIME	5 hours 4.3 minutes	4 hours 43.9 minutes	4 hours 57.5 minutes	4 hours 11.1 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

Transfer Patient Data - Page 11



*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.

or Transfer Patients:			
Public Health Preparedness District Initial Hospital	Public Health Preparedness District Final Hospital	Incident Counts	
1	1	3	
1	2	17	
1	4	2	
1	5	8	
2	2	17	
2	3	1	
2	5	6	
3	3	150	
3	5	1	
4	3	4	
4	4	9	
4	5	45	
5	5	127	
5	8	1	
6	3	9	
6	5	123	
6	6	5	
7	5	34	
7	7	18	
8	5	45	
8	7	1	
8	8	7	
8	10	2	
10	5	8	
10	10	91	

Transfer Patient Data - Page 12

For Transfer Patients:				
		Physiological Critical**	ISS Critical***	
Number of Patients	734	253	200	76
Total Time	5 hours 4.3 minutes	4 hours 43.9 minutes	4 hours 57.5 minutes	4 hours 11.1 minutes
Total Mileage	49.4	53.7	54.4	54.1
Injury Scene to Initial Hospital Mileage***	7.8	7.1	7.1	7.1
Initial Facility to Final Facility Mileage	41.6	46.6	47.3	47

Estimated Average Distance (miles) by Region (region of final hospital):

Region	Injury Scene to Initial Facility Mileage	Initial Facility to Final Facility Mileage	Total Mileage	Drive Count	Air Count
Indiana Average	7.8	41.6	49.4	633	101
North Region	6.9	29.1	36.0	192	8
Central Region	7.6	49.5	57.1	358	74
South Region	10.8	32.4	43.2	81	19

^{*}Critical patient is defined as having a GCS

12, OR Shock Index

0.9 OR ISS

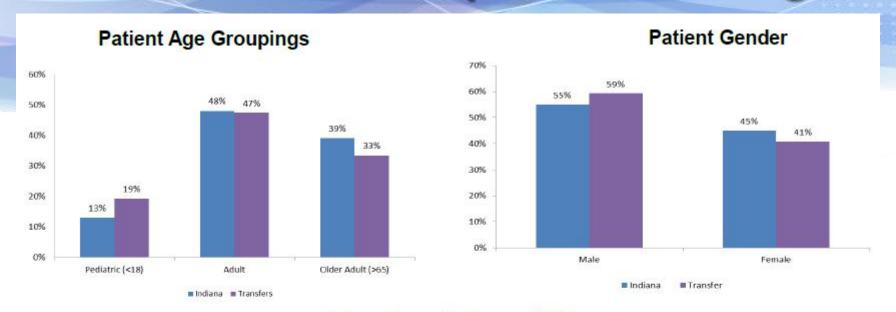
15 at the initial hospital.

^{**}Physiological Critical Transfer patient is defined as having a Shock Index > 0.9 OR GCS ≤ 12 at the initial hospital.

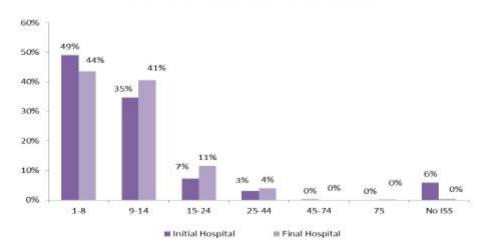
^{***} ISS Critical Transfer patient is defined as ISS > 15 at the initial hospital.

[†]Injury Scene to Initial Facility Mileage location estimated by zip code centroid

Transfer Patient Population - Page 13

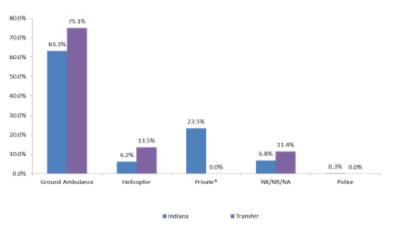


Injury Severity Score (ISS)



Transfer Patient Population - Page 14

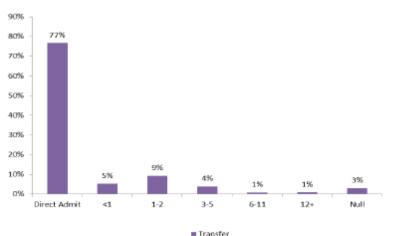
Transport Mode- Final Hospital



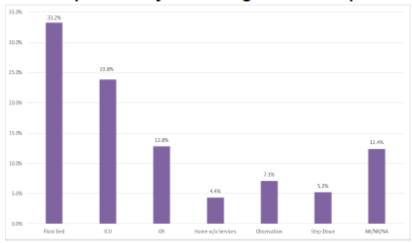
<1% Transport Mode: Police, Other

Indicates Private/ Public Vehicle, Walk-in

ED Length of Stay (hours)- Final Hospital

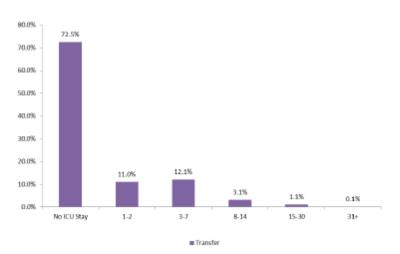


ED Disposition by Percentage- Final Hospital



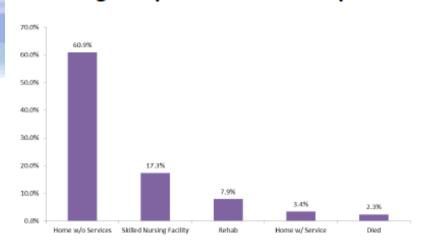
<1%: Transferred, Expired, AMA, Other

ICU Length of Stay (days)- Final Hospital



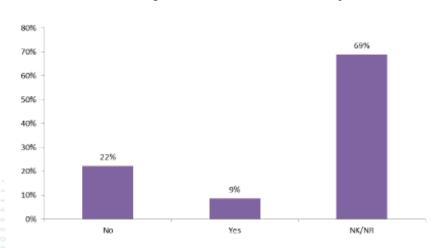
Transfer Patient Population - Page 15

Discharge Disposition Final Hospital

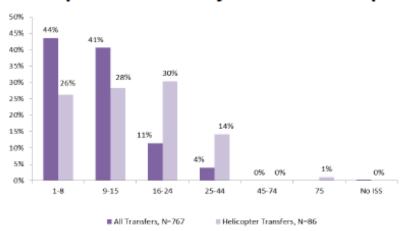


<1%: Acute care, AMA, another inst. Correctional, long-term care, hospice, psych hospital, no hospital stay

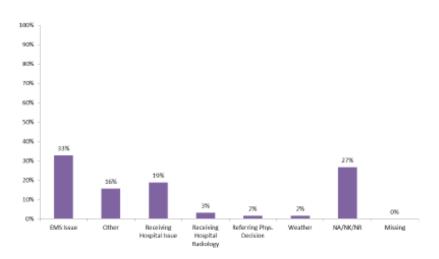
Transfer Delay Indicated-Initial Hospital



Helicopter Transfers by ISS- Final Hospital



Initial Facility Transfer Delay Reason



Higher than Average ED LOS for Transferred Patients

Hospital ID

ID 1

ID 62

ID 63

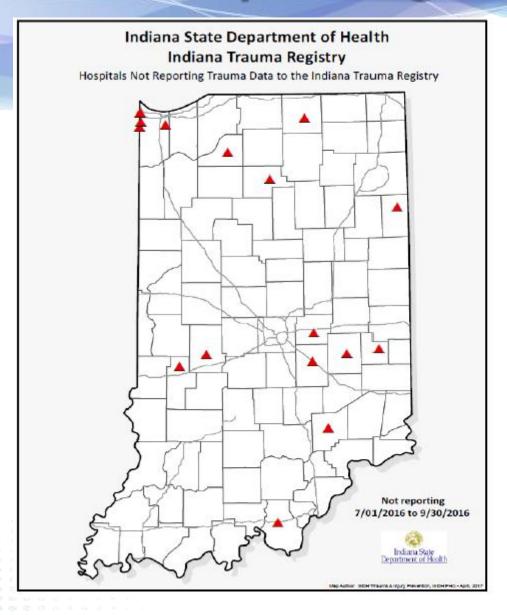
ID 71

ID 80

ID 85

ID 116

Not Reporting Map - Page 16



Hospital that did not report during Q3 2016:

- -Adams Memorial Hospital
- -Fayette Regional Health
- -Franciscan Health-Dyer
- -Franciscan Health-Hammond
- -Franciscan Health-Munster
- -Hancock Regional
- -Harrison County
- -IU Health-Goshen
- -IU Health-Starke
- -Major Hospital
- -Rush Memorial Hospital
- -St Mary Medical Center-Hobart
- -St Vincent—Clay
- -St Vincent-Jennings
- -Woodlawn Hospital

Reporting Map - Page 17

Indiana State Department of Health Indiana Trauma Registry

Hospitals Reporting Trauma Data Quarter 3 July 1, 2016 - September 30, 2016

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

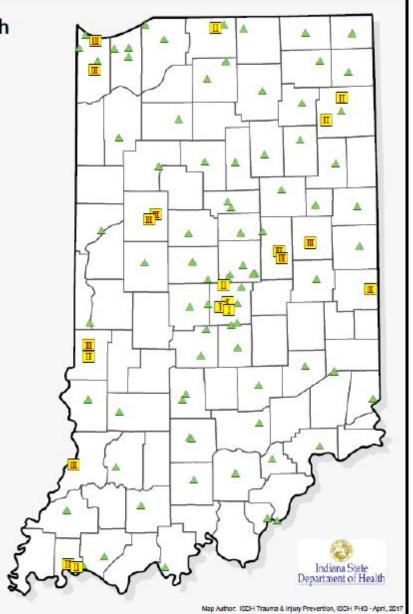
Level III Trauma Centers

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
Methodist Hospitals - Northlake Campus
Reid Hospital & Health Care Services
St Vincent Anderson
Union Hospital Terre Haute

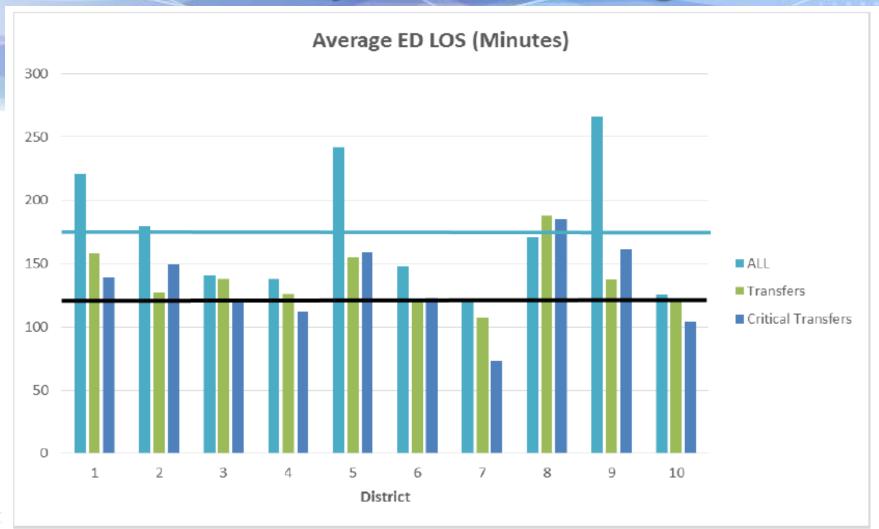
Non-Trauma Hospitals

80 Non-Trauma Hospitals

Hospital categories include Verified and "In the Process" Trauma Centers as of June 30, 2016.



ED LOS by District- Page 21



^{*}Black line represents the 120 minute performance improvement filter

^{**}Blue line represents the state average

Questions?



Other Business



Committee Meeting Dates for 2017

- June 16
- August 18
- October 20
- December 15

