Indiana State Trauma Care Committee

October 21, 2016

Indiana State
Department of Health

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

Updates

Katie Hokanson, *Trauma and Injury Prevention Director*

Jessica Schultz, *Injury Prevention Epidemiologist Consultant*

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Department of Health

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

2016 EMS Medical Director's Conference

- Friday, August 26, 9 – 3:30
- Sheraton Indianapolis at Keystone Crossing

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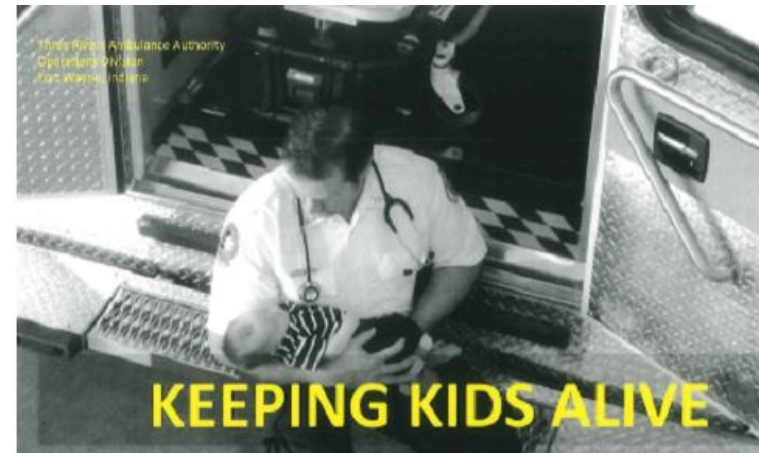
2016 Indiana Latino Expo

Labor of Love Summit 2016
Helping Indiana Reduce Infant Death

- Monday, October 17, 8 – 5
- JW Marriott
- *Success Through Partnerships*
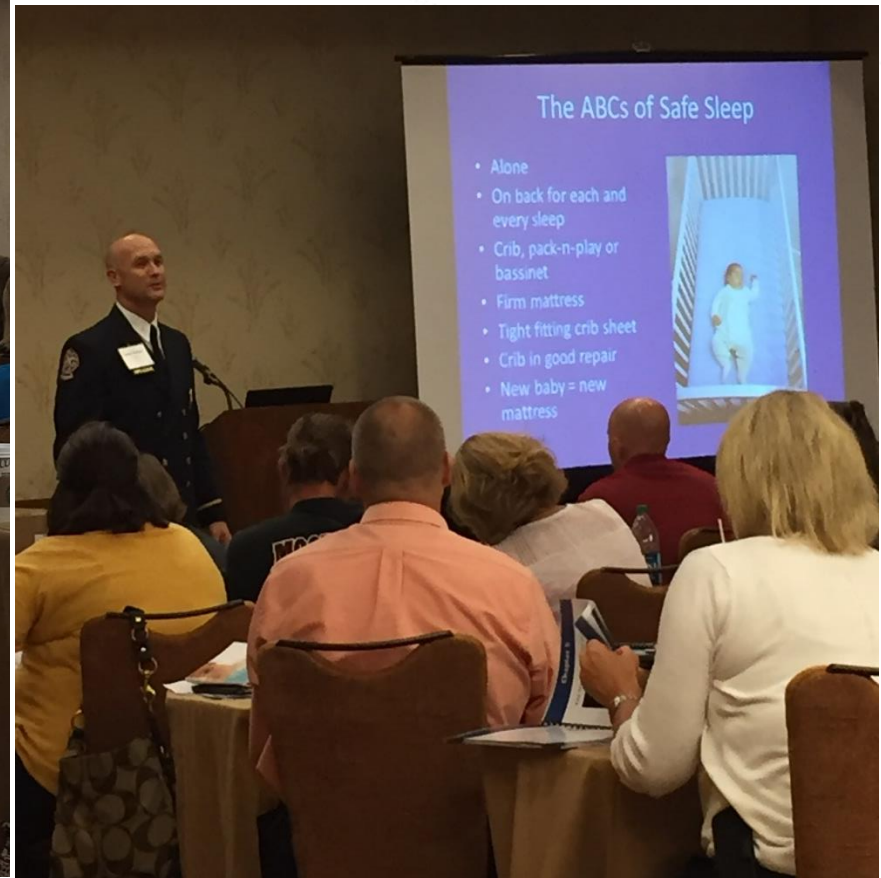- *NEW* Training for Emergency Response Professionals
  - Direct On-Scene Education

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

Labor of Love Summit 2016
Helping Indiana Reduce Infant Death

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

Labor of Love Summit 2016
Helping Indiana Reduce Infant Death

Prescription Drug Overdose Prevention for States Program Supplement application Update

- **Funded!**

- Duration: 3 years

- FOA Released 5/26/2016

- Application due 6/27/2016

- Received NOA 9/1/2016

Indiana State Department of Health

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Prescription Drug Overdose: Prevention for States Grant

Grant Activities:

1. Enhance and maximize prescription drug monitoring program (INSPECT)

2. Implement community interventions in high-need areas

3. Evaluate impact of policy changes in Indiana

Indiana State Department of Health

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PFS Supplemental: Strategy 2

1) Resources to 18 local health departments to build regional PDO prevention infrastructure

2) Establish a train-the-trainer programs for naloxone & PDO prevention education

3) Resources to coroners to improve toxicology testing and reporting for improve surveillance

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High Burden County Selection

- Rate of opioid deaths.
- Rate of non-fatal opioid Emergency Department visits.
- All drug poisoning death rates.
- Community Need
  - Poverty Rate.
  - Health department capacity.
  - Controlled substance prescriptions filled and entered into INSPECT per person.
  - Inadequate social support.
  - Monthly unemployment rate.

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High Burden Counties

1. Blackford
2. Clark
3. Crawford
4. Delaware
5. Grant
6. Howard
7. Jennings
8. LaPorte
9. Lawrence
10. Marion
11. Montgomery
12. Morgan
13. Pulaski
14. Starke
15. Sullivan
16. Tipton
17. Vanderburgh
18. Washington

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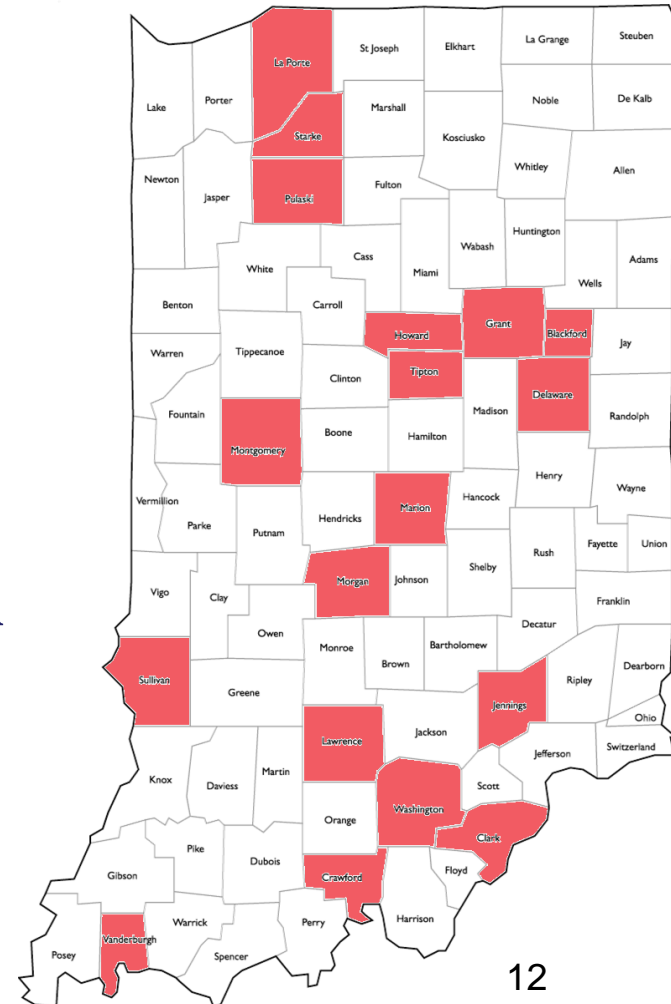
Prescription Drug Overdose: Prevention for States Grant
PDO Staff

Staff Name	Role	Email	Phone
Kayley Dotson	PDO Epidemiologist	kdotson@isdh.in.gov	317-234-9656
Bonnie Bernard	PDO Community Outreach Coordinator	bbernard@isdh.in.gov	317-234-1304
Annie Hayden	PDO Records Consultant	anhayden@isdh.in.gov	317-234-9729
Lauren Savitskas	PDO Community Outreach Coordinator	lsavitskas@isdh.in.gov	317-234-9657

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Regional Updates

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Department of Health

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Regional updates

- District 1
- District 2
- District 3
- District 5
- District 6
- District 10

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Department of Health

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Emergency Department Survey Results

Spencer Grover, *Indiana Hospital Association*

Indiana State
Department of Health

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

2011 Results

- 79 hospitals
- All Hospitals
- Trauma Centers
- Non-trauma centers

2015 Results

- 93 hospitals
- All hospitals
- Verified Trauma Centers
- In Process and Verified Trauma Centers
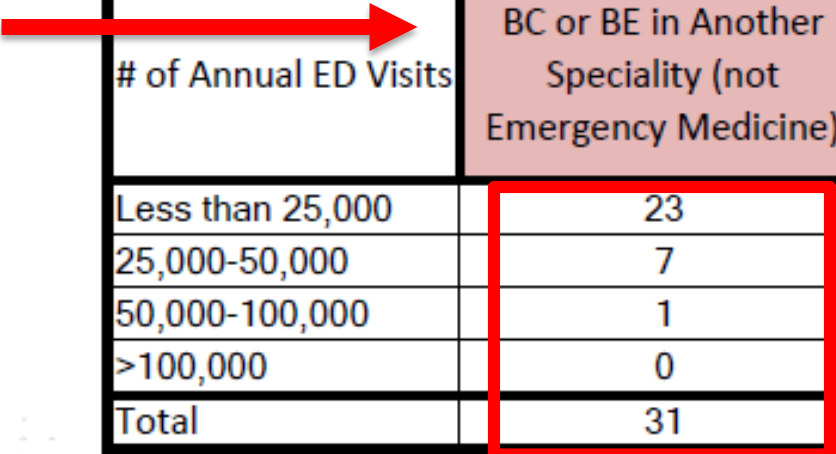- Non-trauma Centers

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Calculations

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2011 Survey - All Hospitals

Physician Requirements to work in the Emergency Department

Board Certification and Board Eligible Requirements			
# of Annual ED Visits	BC or BE in Another Speciality (not Emergency Medicine)	Licensed Indiana Physician	Hospitals That Do Not Require BC/BE in Emergency Medicine
Less than 25,000	23	14	37
25,000-50,000	7	0	7
50,000-100,000	1	1	2
>100,000	0	0	0
Total	31	15	46

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Calculations

	Summary		
Hospitals Requirement: BC/BE in Another Specialty			
# of Annual ED Visits	ATLS	ACLS	PALS
Less than 25,000	15 (65%)	20 (87%)	15 (65%)
25,000-50,000	2 (29%)	5 (71%)	5 (71%)
50,000-100,000	1 (100%)	1 (100%)	1 (100%)
>100,000	0 (0%)	0 (0%)	0 (0%)
Total	18 (58%)	26 (84%)	21 (68%)

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Comparisons: All Hospitals

- Participating Hospitals, 79 to 93
- Physicians staffing the ED to be BC or BE in Emergency Medicine, 42% to 67%
- Lower ATLS, ACLS and PALS
- CEUs increased

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Comparisons: Trauma Centers

- BC or BE in Emergency Medicine or another specialty, **57% to 100%**
- Increase in ATCN, TNCC and ENPC
- PALS
- APN and PA requirements

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Comparisons: Non-trauma Centers

- BC or BE in Emergency Medicine, 53% to 62%
- Non-physician requirements
- CEU requirements for RNs, APNs and PAs

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Subcommittee Update
Designation Subcommittee

Dr. Gerry Gomez, *Trauma Medical Director*

Eskenazi Health

Indiana State
Department of Health

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

Trauma Designation Subcommittee Update

October 21, 2016
Gerardo Gomez, MD, FACS
Committee Chair

Dr. Lewis Jacobson, Dr. R. Lawrence Reed, Spencer Grover, Wendy St. John, Jennifer Mullen, Lisa Hollister, Amanda Elikofer, Katie Hokanson, Ramzi Nimry, Missy Hockaday, Teri Joy, Art Logsdon, Judy Holsinger, Jennifer Conger, Dr. Emily Fitz, Dr. Matthew Sutter, Dr. Christopher Hartman, Ryan Williams

ISDH Trauma Designation Subcommittee Meeting Agenda

9/29/2016

1. 1 Year Reviews

   a. Methodist Northlake Hospital; Gary, Indiana– Level III

2. Terre Haute Regional Hospital proposal

3. Eskenazi ACS Trauma Reverification visit (September 8-9, 2016)

1.) Methodist Northlake; Gary, Indiana– Level III

- This is the second 1 year report Methodist Northlake has submitted

- The application was reviewed and no deficiencies were discovered by the subcommittee

- The subcommittee proposes to approve the 1 year progress report

- Verification visit scheduled for February 2017

2.) Terre Haute Regional Hospital Proposal

- **After much discussion, the subcommittee proposes leaving the 2 year language the same at this time.**

- **The subcommittee will review the status of applicant institutions on a case by case basis.**

- **Consultation visit September 2016**

- **Verification visit planned Fall 2017**

- **One year progress report**

"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
Franciscan St. Elizabeth East	Lafayette	III	Adult	12/20/2013	02/20/2015	02/12-02/13, 2015	December 2015 Focus Visit: 11/15/16
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	February 2017
Franciscan St. Anthony Health Crown Point	Crown Point	III	Adult	12/18/2015	January/February 2017	09/26-09/27, 2016	TBD
Reid Health	Richmond	III	Adult	12/18/2015	January/February 2017	02/02-02/03, 2016	June 2017
Terre Haute Regional Hospital	Terre Haute	II	Adult	12/18/2015	January/February 2017	09/08-09/09, 2016	April 2017
Union Hospital	Terre Haute	III	Adult	02/26/2016	March/April 2017	09/01-09/02, 2016	TBD
Memorial Hospital & Health Care Center	Jasper	III	Adult	08/24/2016	September/October 2017	TBD	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.

Updated on: Wednesday, September 28, 2016

Locations of ACS Verified and "In the Process of ACS Verified" Trauma Centers in Indiana

Level I: 4 Verified Centers / Level II: 5 Verified Centers (1 Center in process) / Level III: 4 Verified Centers (7 Centers in process)

Trauma Centers
in Indiana

Level I

Indianapolis
Eskenazi Health
IU Health Methodist Hospital
Riley Hospital for Children at IU Health
St. Vincent Indianapolis Hospital

Level II

Evansville
Deaconess Hospital
St. Mary's Medical Center of Evansville
Ft. Wayne
Lutheran Hospital of Indiana
Parkview Regional Medical Center
South Bend
Memorial Hospital of South Bend

Level III

Lafayette
IU Health - Arnett Hospital
Muncie
IU Health - Ball Memorial Hospital
Anderson
St. Vincent Regional Hospital
Vincennes
Good Samaritan Hospital

In the process of ACS Verification

Level II

Terre Haute
Terre Haute Regional

Level III

Anderson
Community Hospital - Anderson
Gary
Methodist Hospital - Northlake Campus
Lafayette
Franciscan St. Elizabeth - East
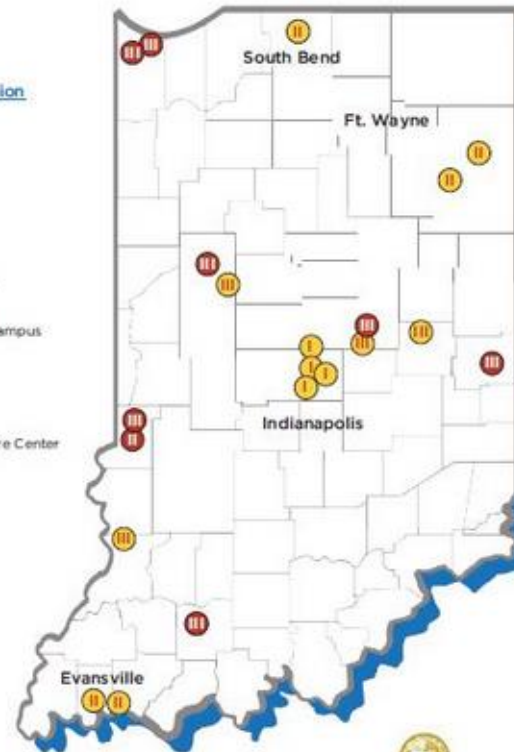**Jasper**
Memorial Hospital and Health Care Center
Richmond
Reid Health
Crown Point
Franciscan St. Anthony Health
Terre Haute
Union Hospital - Terre Haute

Indiana State Department of Health
Trauma and Injury Prevention

Updated 8-26-2016

Subcommittee Update
Indiana Trauma Quality Improvement (InTQIP) Subcommittee

Dr. Peter Jenkins, *Trauma Surgeon*

IU Health Methodist Hospital

Indiana State
Department of Health

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

Subcommittee Update
Performance Improvement Subcommittee

Missy Hockaday, *Trauma System Manager*

IU Health Methodist Hospital

Indiana State
Department of Health

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

ISDH Performance Improvement Subcommittee October 2016 update

Committee Members: Chair Larry Reed, MD Adam Weddle, Brittanie Fell, Chuck Stein, Gene Reiss, Jennifer Mullen, Kelly Mills, Lindsay Williams, Mary Schober, Tracy Spitzer, Amanda Rardon, Carrie Malone, Dawn Daniels, Jeremy Malloch, Kristi Croddy, Lisa Hollister, Missy Hockaday, Peter Jenkins, MD, Stephanie Savage, MD, Spencer Grover, Wendy St. John, Annette Chard, Chris Wagoner, Dusten Roe, Jodi Hackworth, Latasha Taylor, Merry Addison, Regina Nuseibeh, Tammy Robinson, Bekah Dillion, Christy Claborn, Emily Grooms, Kasey May, Lesley Lopossa, Marie Stewart, Michele Jolly, Sarah Quaglio, Mark Rohfling

ISDH Staff: Katie Hokanson, Ramzi Nimry, Camry Hess

Goals

1. Increase the number of hospitals reporting data to Indiana Trauma Registry
2. Decrease average ED LOS at non-trauma centers
   - Identification of "root cause"
   - "Reason for Transfer Delay"
   - Analysis by *shock index, GCS, ISS , age, body region, single vs. multiple system*
3. Increase EMS run sheet collection
4. Improve trauma registry data quality
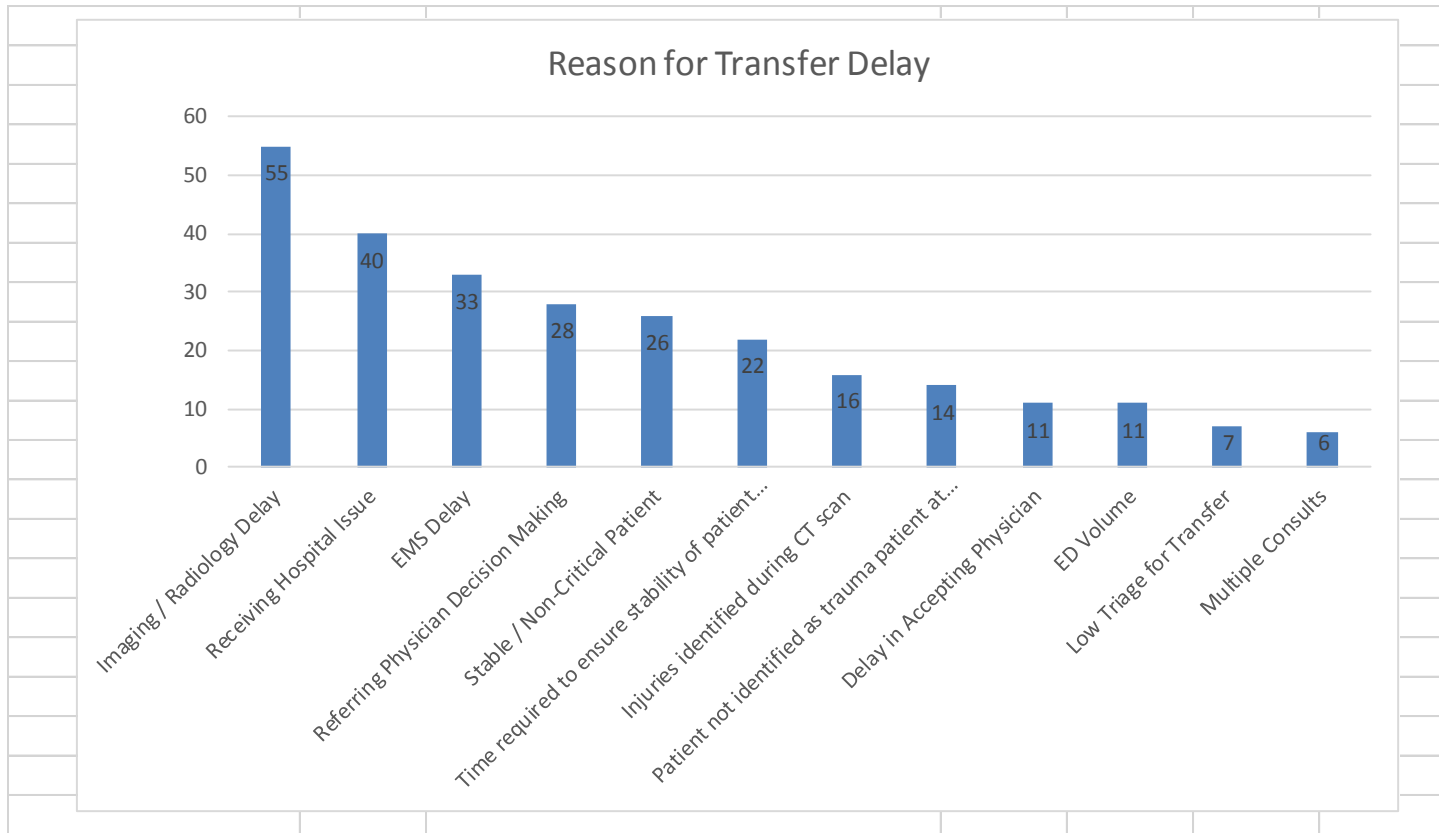
Number of Hospitals Reporting

Trauma Registry, Number of Hospitals Reporting Data by Month
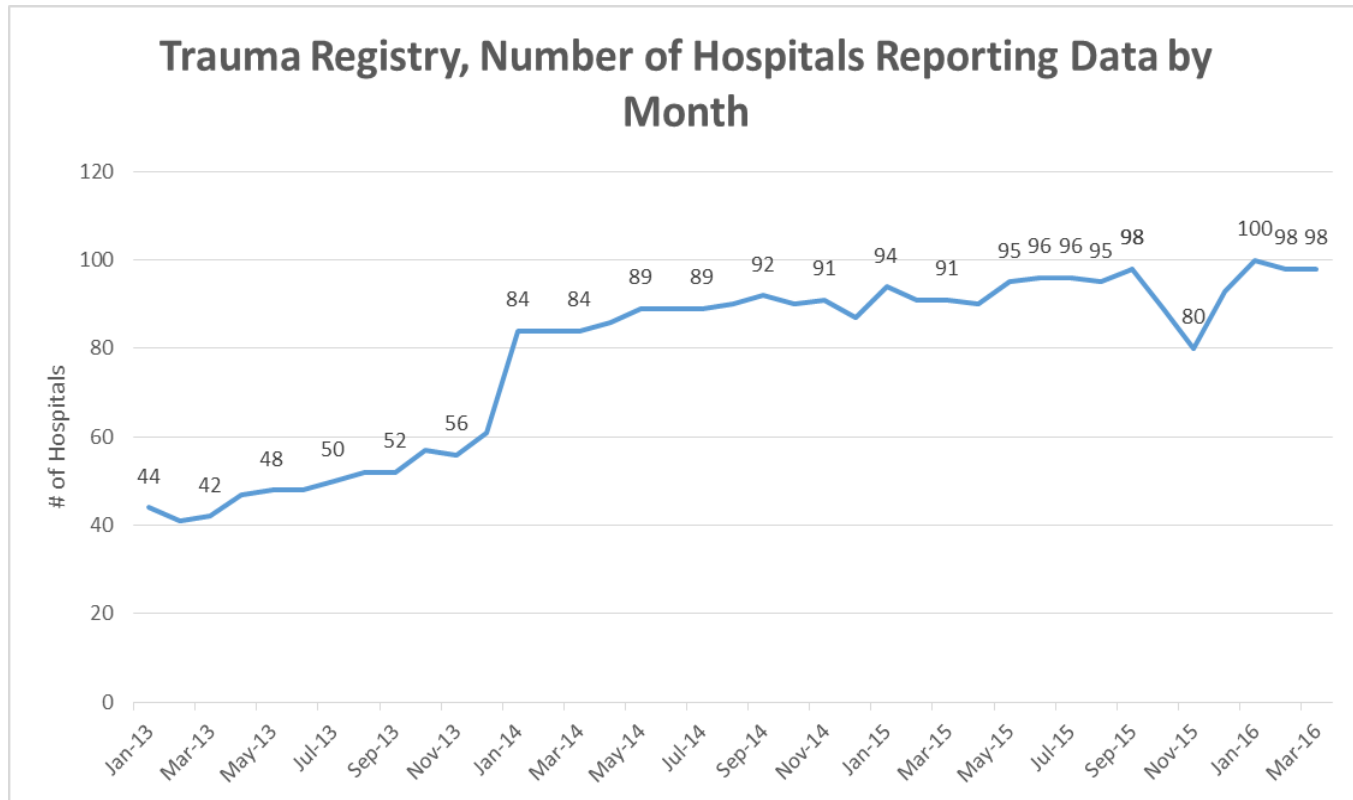
District Success

- District 1 (13/13) 100%
- District 2 (9/10) 90%
- District 3 (13/16) 81%
- District 4 (7/7) 100%
- District 5 (22/25) 88%

- District 6 (15/15) 100%
- District 7 (7/7) 100%
- District 8 (8/9) 89%
- District 9 (7/10) 70%
- District 10 (9/9) 100%

*4 new hospitals added to the list of hospitals submitting data to Trauma Registry

ED LOS at non-trauma centers

- Effective Feb 2016, ISDH provides follow-up to all facilities with ED LOS >2 hours
  - Q3 2015: 76 letters sent and 28% respondent rate
  - Q4 2015: 68 letters sent and 18% respondent rate

ED LOS/Reason for Transfer Delays

Reason for Transfer Delay

Reason	Count
Imaging / Radiology Delay	55
Receiving Hospital Issue	40
EMS Delay	33
Referring Physician Decision Making	28
Stable / Non-Critical Patient	26
Time required to ensure stability of patient...	22
Injuries identified during CT scan	16
Patient not identified as trauma patient at...	14
Delay in Accepting Physician	11
ED Volume	11
Low Triage for Transfer	7
Multiple Consults	6

Less than 5 cases: Patient should not have been included in registry, shift change, patient choice to transfer, specialty surgeon availability at referring facility, referring facility issue, new staff in ED, transfer for ETOH withdraw, communication issue, new EMR, Blood bank delay, receiving hospital issue - VA, OR availability at referring facility, weather

Reasons for Delay

Reason for Transfer Delay Q3 and Q4 2015
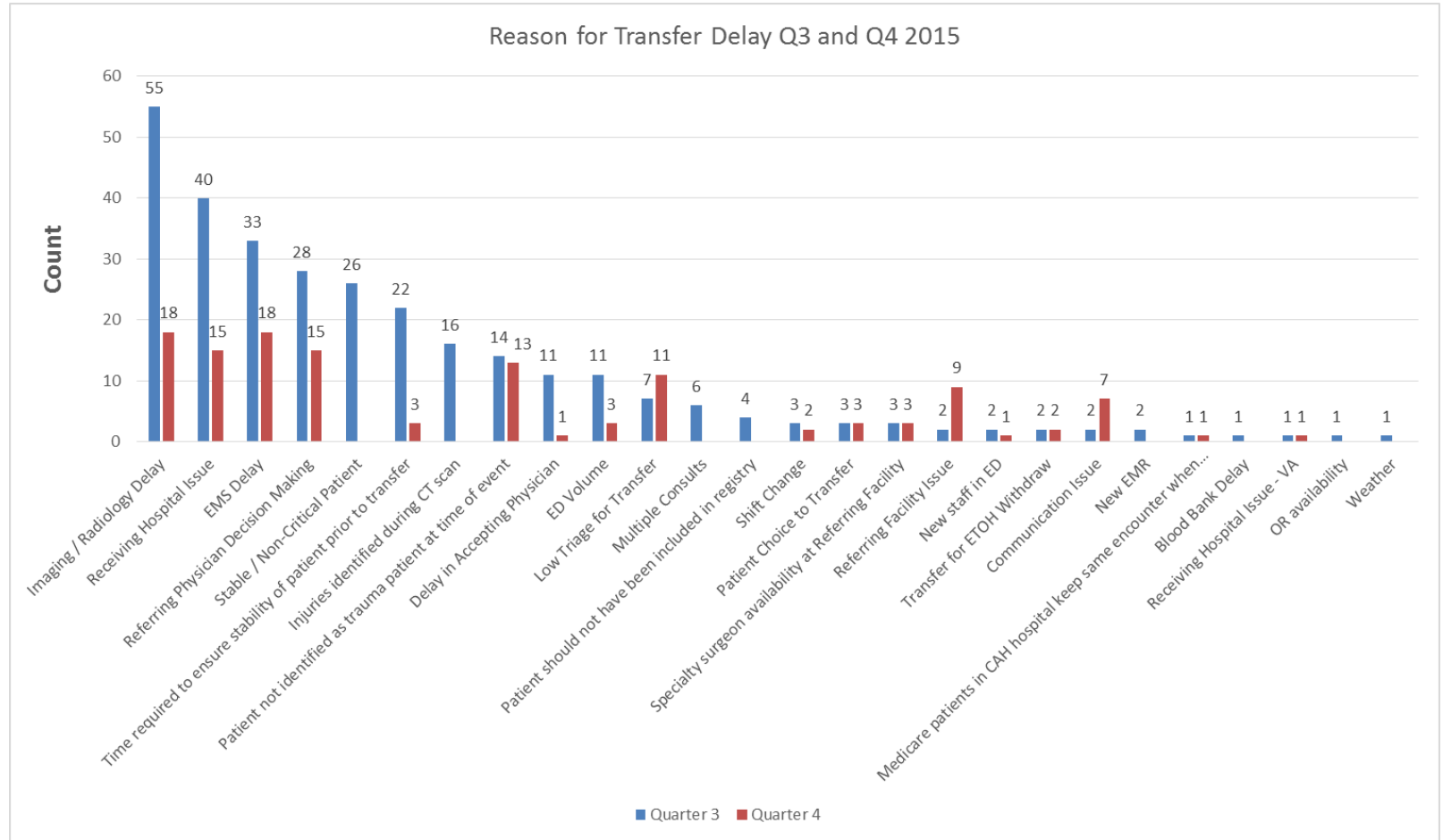
Reasons for Transfer Delay

- ## Data Q3 vs Q4 2015
  - Hospital Respondents declined 12 (21)
  - Number of delay responses declined 126 (297)
- ## Identification of barriers
  - Why do we have a decline?
  - How can we improve the submission of information?
  - What are we going to do with the information?
- ## National Search for QA tracking for delays (Kansas, Minnesota, Nebraska)

Inter-facility Transfer Protocols

- No delays for CT scans, X-rays, or labs
- Physiologic criteria and anatomic criteria
  - Respiratory distress, shock, infusing blood
  - CNS, chest, pelvis/abdomen, major extremity injury, multi-system injury, co-morbid factors, secondary deterioration
- Procedure prior to patient arrival
- Procedure after patient arrival

EMS Run sheet collection

Number of EMS Providers Not Leaving Run Sheets based on Number of Hospitals Reporting
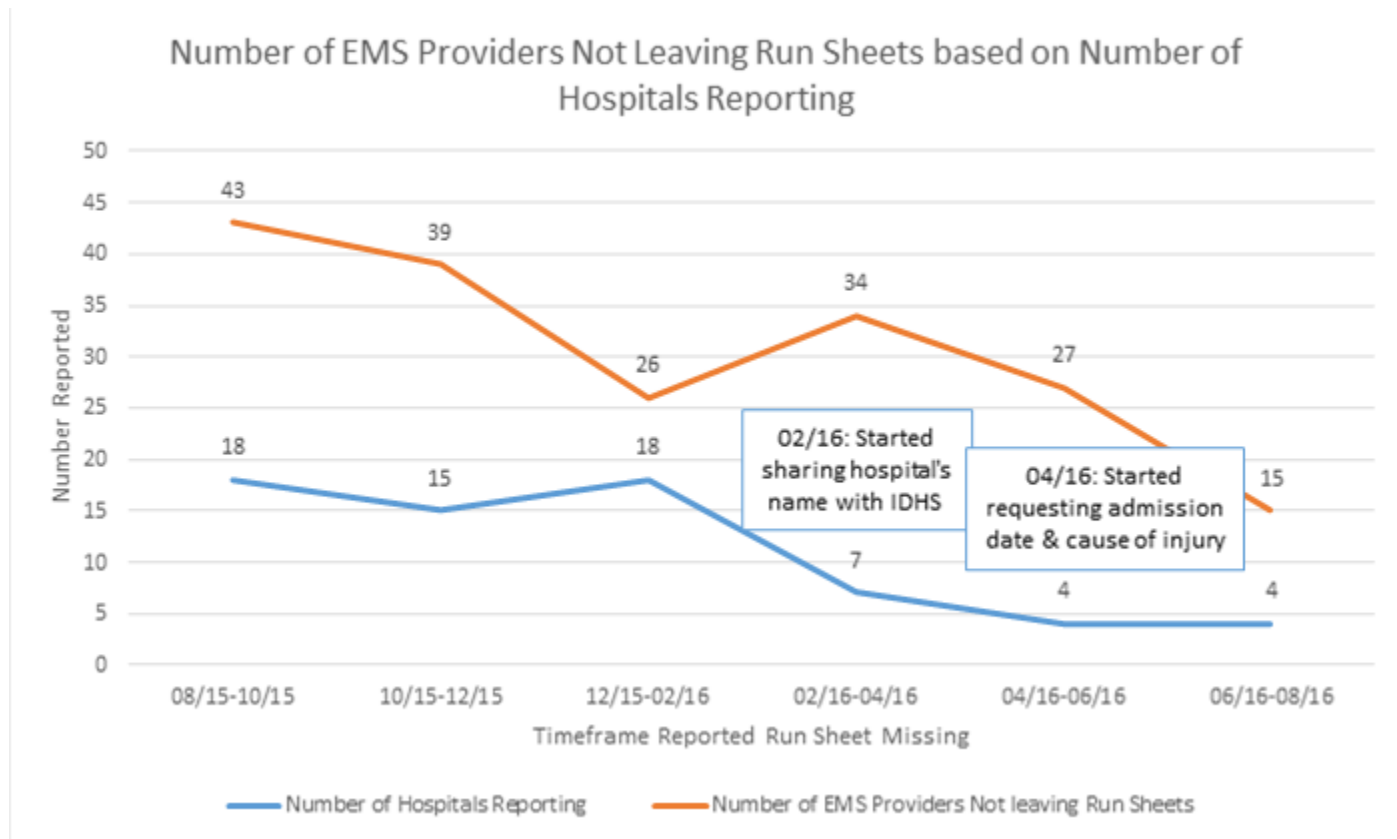
Improve Trauma Registry Data Quality

- Frequency Reports
  - Shared Best Practice What do hospitals do with the data?
  - Creation of hospital-specific frequency reports Validity reports for all hospitals submitting data to state

Future Goals

- Regional Data Request
- Interfacility transfer protocols
- Analysis of Triage and Transport rule
- Linkage software for double transfers
- State TQIP risk adjusted benchmarking system

Next Meeting

November 15, 2016

10:00-11:00am EST Larkin Conference Room

Subcommittee Update
Regional Trauma Data Subcommittee

Camry Hess, *Database Analyst*

Indiana State Department of Health

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

How to Make Elements Less Identifiable:

- Calculate the time between two dates and times.
  - Ex. Emergency department length of stay
- Give the month and year instead of a specific date
- Collapse categories with counts
  - Ex. Collapse categories with small counts into an 'Other' category
- Collapse categories geographically
  - Ex. Collapse counties into public health preparedness districts

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Demographic and Injury Information

Demographic Information

Injury Incident Date
Injury Incident Time
Date of Birth
Age
Age Units
Race
Ethnicity
Gender
Patient's Home Country
Patient's Home Zip Code
Patient's Home City
Patient's Home County
Patient's Home State
Alternate Home Residence
Primary Method of Payment
Work-Related
Patient's Occupational Industry
Patient's Occupation

Injury Information

Location E-Code
Incident Location Zip Code
Incident Country
Incident City
Incident County
Incident State
Primary E-Code
Additional E-Code
Report of Physical Abuse
Investigation of Physical Abuse
Caregiver at Discharge
Protective Devices
Child Specific Restraint
Airbag Deployment

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Pre-hospital and ED/Acute Care Information

Pre-Hospital Information

Vehicular, Pedestrian, Other Risk Injury
EMS Dispatch Date
EMS Dispatch Time
EMS Unit arrival Date at Scene or Transferring Facility
EMS Unit arrival Time at Scene or Transferring Facility
EMS Unit Departure Date from Scene or Transferring Facility
EMS Unit Departure Time from Scene or Transferring Facility
Transport Mode
Other Transport Mode
Initial Field Systolic Blood Pressure
Initial Field Pulse Rate
Initial Field Respiratory Rate
Initial Field Oxygen Saturation
Initial Field GCS – Eye
Initial Field GCS – Verbal
Initial Field GCS – Motor
Initial Field GCS – Total
Inter-Facility Transfer
Trauma Center Criteria
Pre-Hospital Cardiac Arrest

ED/Acute Care Information

ED/Hospital Arrival Date
ED/Hospital Arrival Time
ED Discharge Date
ED Discharge Time
ED Discharge Disposition
Signs of Life

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Initial Assessment and Diagnosis Information

Initial Assessment Information

Height
Weight
Initial ED/Hospital Temperature
Initial ED/Hospital Systolic Blood Pressure
Initial ED/Hospital Pulse Rate
Initial ED/Hospital Respiratory Rate
Initial ED/Hospital Respiratory Assistance
Initial ED/Hospital Oxygen Saturation
Initial ED/Hospital GCS – Eye
Initial ED/Hospital GCS – Verbal
Initial ED/Hospital – Motor
Initial ED/Hospital – Total
Initial ED/Hospital GCS Initial ED/Hospital Supplemental Oxygen
Assessment Qualifiers
Initial ED/Hospital – Height
Initial ED/Hospital – Weight
Alcohol Use Indicator
Drug Use Indicator

Diagnosis Information

Injury Diagnoses
AIS Predot Code
AIS Severity
ISS Body Region
AIS Version
Locally Calculated ISS

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Department of Health

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Co-Morbidity, Procedures, Complications/PI and Outcome Information

Co-Morbidity Information
Co-Morbid Conditions

Procedures Information
Hospital Procedures
Hospital Procedure Start Date
Hospital Procedure Start Time

Complications / PI Information
Hospital Complications

Outcome Information
Hospital Discharge Date
Hospital Discharge Time
Total ICU Length of Stay
Total Ventilator Days Hospital Discharge Disposition

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Data Request from District 1

- Transfer cases.

- Hospital throughput.

- Prolonged scene times.

- Top 3 mechanisms of injury.

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Transfer Cases

ED LOS (Minutes)	COI	Trauma Type	Pt. Age	Pt. Age Units	Transport Mode	Hospital Transferred To	Transfer Delay	Delay Reason	Critical	Inter-Facility Transfer	Double Transfer
120	Assault Firearm	Penetrating	25	Years	Ambulance	Memorial South Bend	No	N/A	Yes	No	No
60	MVA Passeng.	Blunt	54	Years	Ambulance		No	N/A	Yes	No	No
200	MVA Driver	Blunt	62	Years	Ambulance	Methodist Northlake	N/A	N/A	Yes	No	No
150	MVA Passeng.	Blunt	19	Years	Ambulance	Methodist Southlake	Yes	Referring Phys. Decision	Yes	No	No

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Hospital Throughput

ED/Acute Care Disposition	ED/Acute Care LOS (Minutes)
OR	100
Transferred	120
Floor Bed	180
Floor Bed	201
ICU	240
OR	150
Transferred	60

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Prolonged Scene Times

EMS Response Time (Minutes)	EMS Scene Time (Minutes)	EMS Transport Time (Minutes)	EMS Service Name
8	6	12	Prompt
10	4	10	South Haven FD
25	20	15	Keener Township EMS
18	30	24	Porter FD
			Prompt

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Questions?
Recommendations?

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Department of Health

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Quarter 1 Trauma Registry Data Report

Camry Hess, *Database Analyst*

Indiana State Department of Health

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

Hospitals reporting to the Indiana Trauma Registry - Quarter 1 2016

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

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry – Quarter 1 2016

District 2

Community Hospital of Bremen

Elkhart General Hospital

IU Health – Goshen

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

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry – Quarter 1 2016

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

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District 5

Community East Health Network Community Hospital

Community North Health Network Community Hospital

Community South Health Network Community Hospital

Community Westview 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 for Children

IU Health - Saxony Hospital

IU Health – West Hospital

Johnson Memorial Hospital

Major Hospital

Riverview Hospital

St. Vincent Hospital and Health Services Indianapolis

Witham Health Services

Witham Health Services at Anson

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Hospitals reporting to the Indiana Trauma Registry - Quarter 1 2016

District 6

Community Hospital of Anderson & Madison Co.

Community Howard Regional Health

Fayette Regional Hospital

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

Rush Memorial Hospital

St. Vincent Anderson Regional Hospital

St. Vincent Kokomo

St. Vincent Mercy Hospital

St. Vincent Randolph Hospital

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Hospitals reporting to the Indiana Trauma Registry – Quarter 1 2016

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

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Hospitals reporting to the Indiana Trauma Registry – Quarter 1 2016

District 8

Columbus Regional Hospital

IU Health – Bedford Hospital

IU Health – Bloomington Hospital

IU Health – Paoli Hospital

Monroe Hospital

Schneck Medical Center

St. Vincent Salem Hospital

District 9

Clark Memorial Hospital

Dearborn County Hospital

Decatur County Memorial Hospital

Floyd Memorial Hospital and Health Services

Harrison County Hospital

King's Daughters' Health

Margaret Mary Community Hospital

Scott County Memorial Hospital

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Hospitals reporting to the Indiana Trauma Registry – Quarter 1 2016

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

St. Mary's Warrick Hospital

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Summary of Hospitals Reporting Status- Q1 2016

New to Reporting / Started Reporting Again

- Community Howard Regional Health
- Decatur County Memorial Hospital
- Hendricks Regional Health
- St. Vincent Dunn Hospital
- St. Vincent Frankfort Hospital
- Sullivan County Community Hospital

Dropped off

- Franciscan Health – Mooresville
- Gibson General Hospital
- IU Health – Bedford Hospital
- St. Catherine Hospital (East Chicago)
- St. Mary's Warrick Hospital
- St. Vincent Randolph Hospital

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Quarter 1 2016 Statewide Report

- 8,077 incidents
- January 1, 2016 – March 31, 2016
- 95 total hospitals reporting
  - 10 Level I and II Trauma Centers
  - 9 Level III Trauma Centers
  - 76 Non-Trauma Hospitals

Indiana State
Department of Health

General Notes

- No trauma type (no probability of survival)
- Change in Cause of Injury categories

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ED Disposition by Percentage
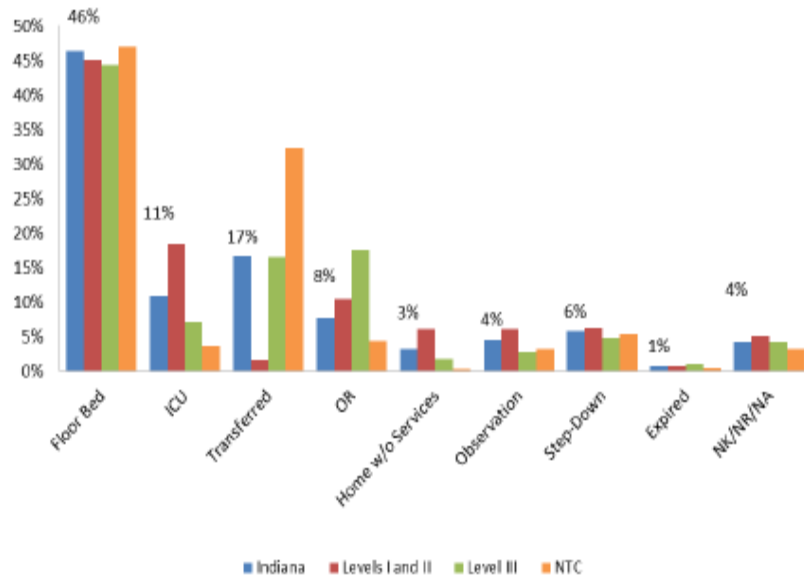
ED Length of Stay (Hours)
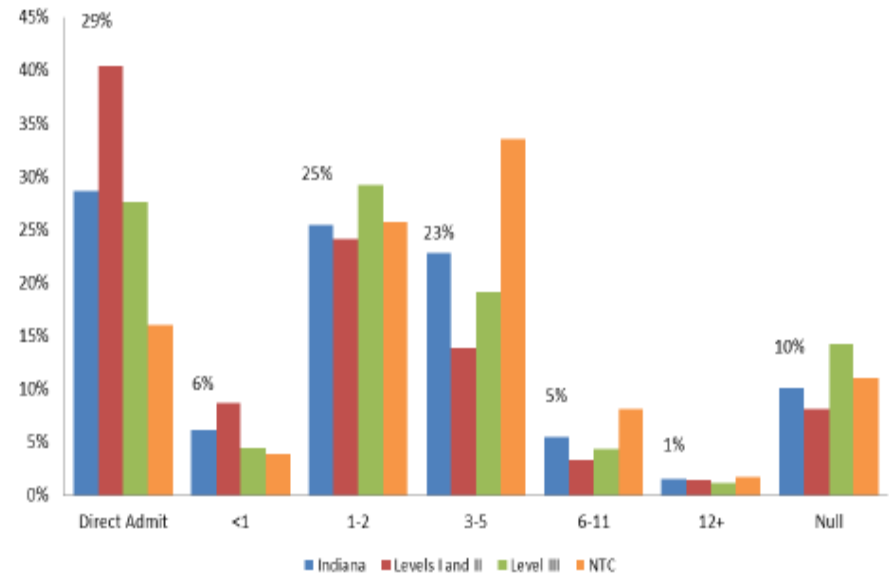
ED LOS > 12 Hours – Page 3

ED Disposition for ED LOS >12 Hours
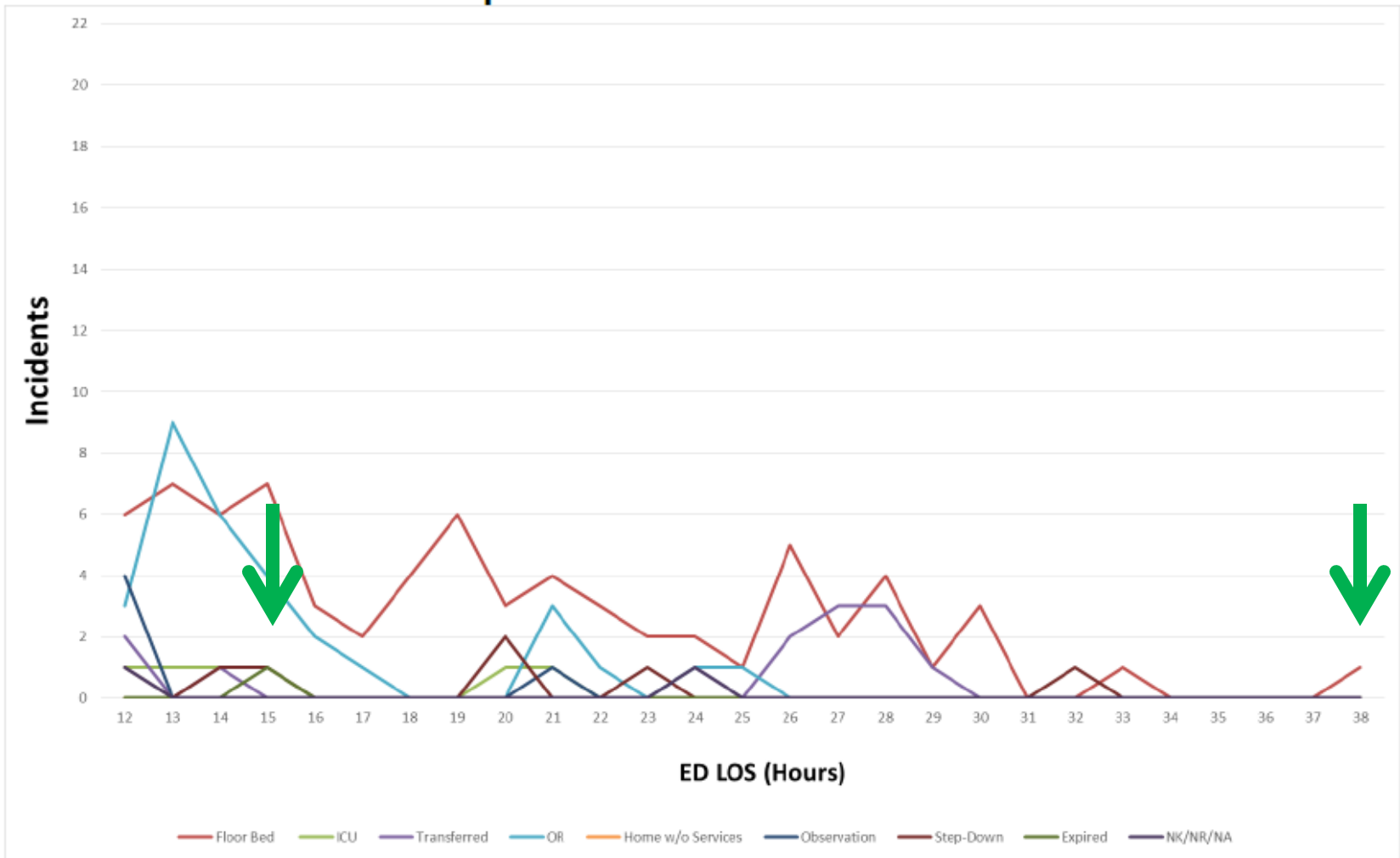
N=121   *One cases expired at 15 hours

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ED LOS > 12 Hours - Page 4

ED LOS > 12 Hours, N=121

Facilities	52 Level I and II 11 Level III 58 Non-trauma Centers	**Region**	42 North; 41 Central; 18 South; 20 Unknown
Average Distance from Scene to Facility	21.2 Miles	**ISS**	67 (1-8 cat); 40 (9-15 cat); 4 (16-24); 2 (25-44); 1 (45-74); 7 (No ISS)
Transport Type	77 Ambulance; 4 Helicopter, 31 Private Vehicle/Walk-In; 89Unknown	**GCS Motor**	2 (1 cat); 2 (4 cat); 1 (5 cat); 88 (6 cat); 28 (unknown)
Cause of Injury	12 Transport; 53 Falls; 8 Inanimate Mech. Forces, 1 Animate Mech. Forces; 47 Not Identified	**RTS—Systolic**	4 (2-4)
Signs of Life	94 Yes; 27 Not Applicable	**RTS—Resp. Scale**	3 (3-4)
Age	57.5 Years (0.3-98 Years)	**Resp. Assistance**	2 Yes; 83 No; 36 Unknown
Gender	61 Female; 60 Male	**ED LOS**	19.5 (12-38)
Interfacility Transfer	20 Yes; 101 No	**ED Disposition**	2 Cath lab; 1 Died; 70 Floor; 6 ICU; 3 Observation; 30 OR; 6 Step-down; 13 Transferred

-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 LOS (Minutes) - All Patients
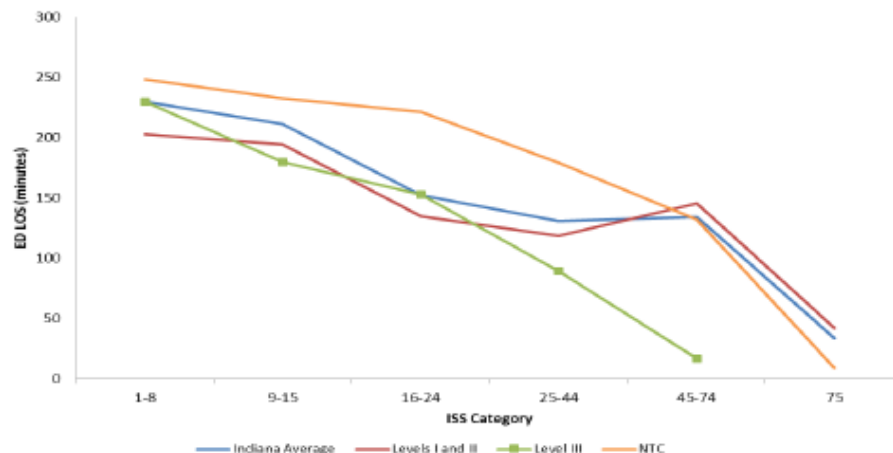
A table with all the values for ED LOS is found on page 49.

ED LOS (Minutes) by ISS

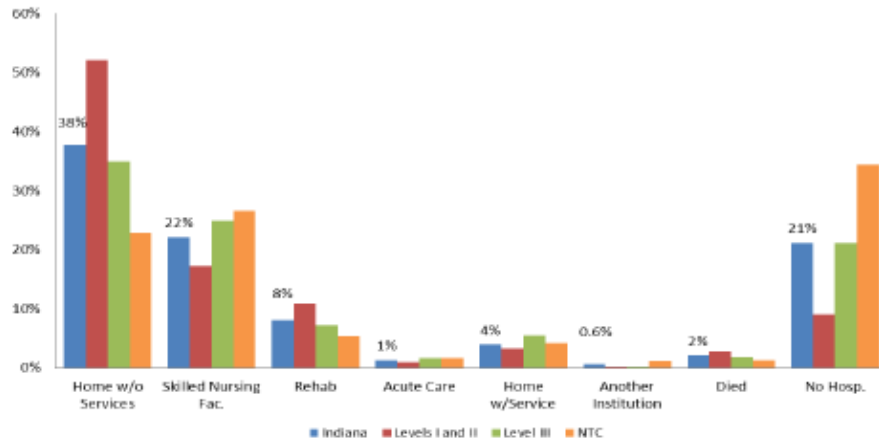Note for EDLOS by ISS, there were 4 cases with ISS of 75; one was at a non-trauma center.
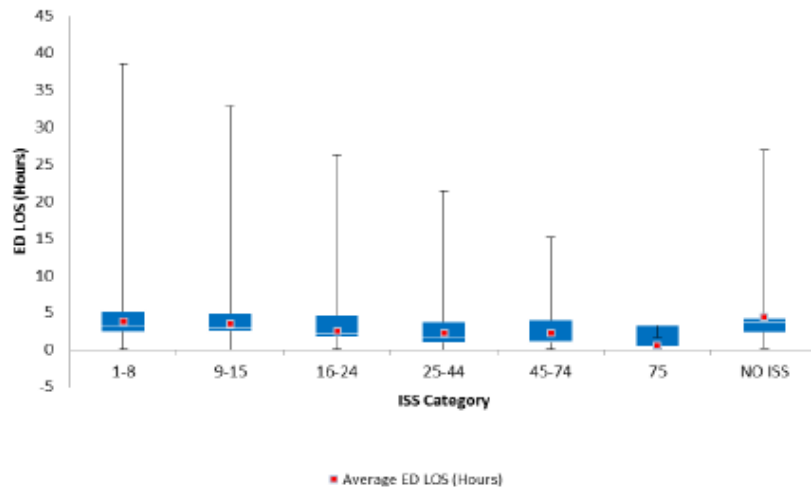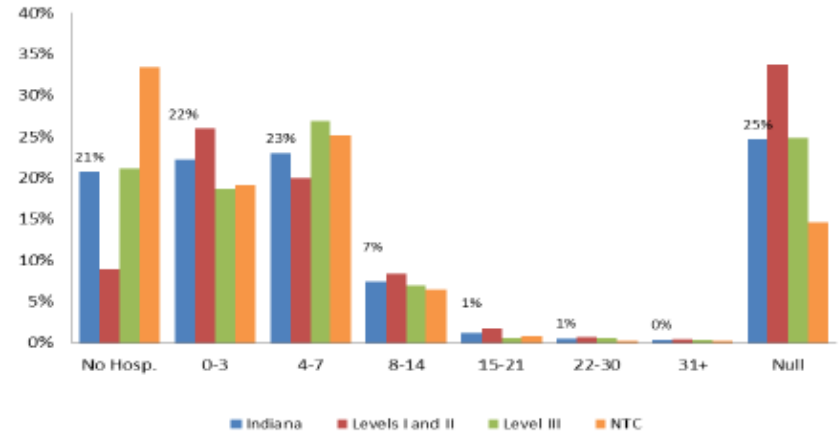
ED LOS (Minutes) by ISS

A table with values for ED LOS by ISS may be found on page 50

Hospital Disposition and LOS – Page 6

Hospital Disposition

Hospital Length of Stay (days)

Cause of Injury - Page 24

ICD-9-CM Categories

*Transportation
*Falls
*MVC
*Struck by, Against
*Machinery
*Firearm
*Cut/Pierce
*Bicyclist
*Fire/Burn
*Bites/Stings
*Natural/Environment
*Overexertion
*Not Categorized
*Pedestrian

ICD-10-CM Categories

*Transport
*Falls
*Inanimate Mechanical Forces
*Animate Mechanical Forces
*Drowning
*Breathing
*Electricity/Radiation
*Smoke
*Heat
*Venom
*Forces of Nature
*Overexertion and Travel
*Unspecified
*Poisoning
*Not Identified

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Cause of Injury - Page 24
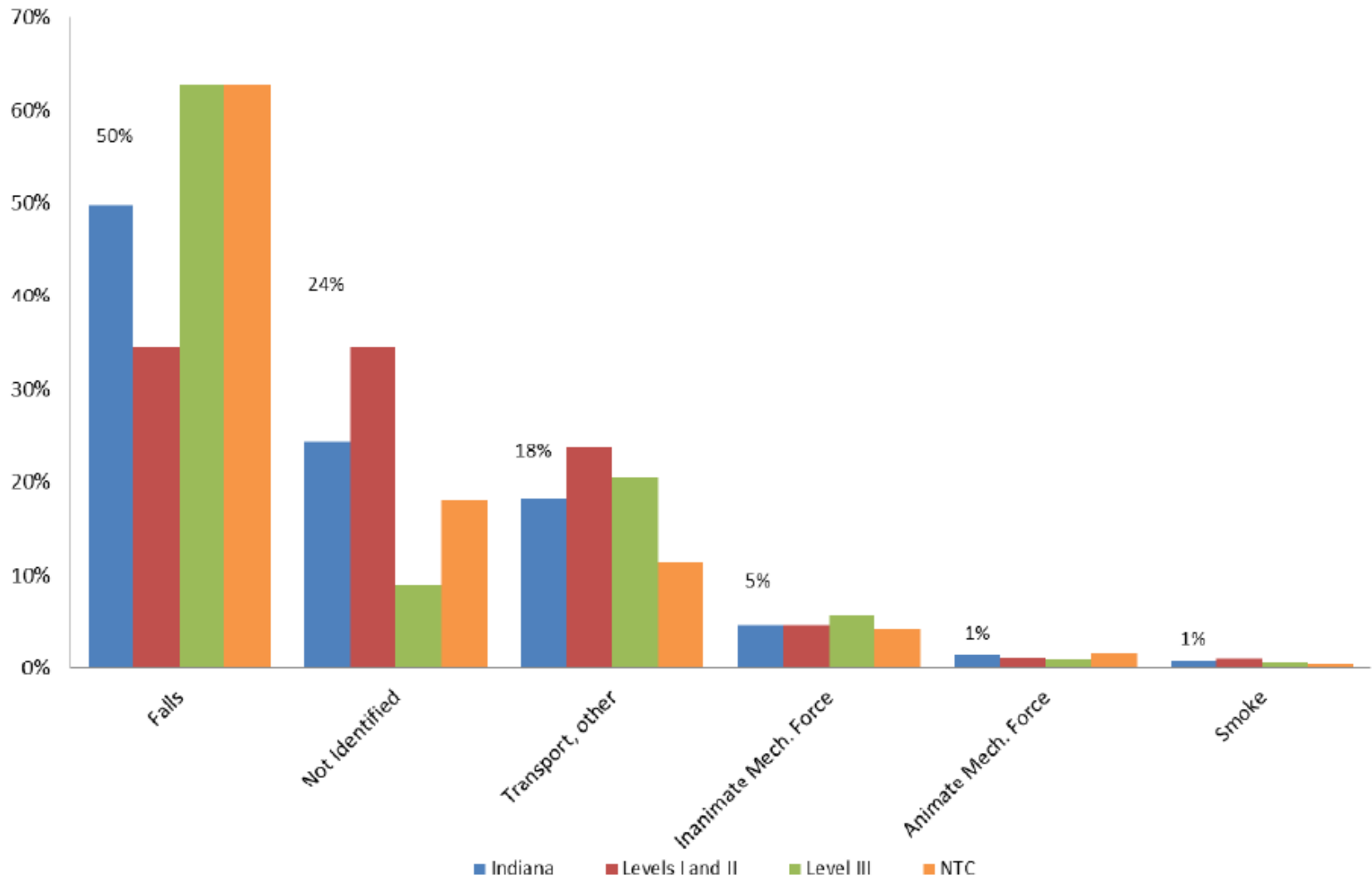
For Quarter 1 2016, of the 8,077 incidents reported to the Indiana Trauma Registry, 1,336 cases that had an ED Disposition of "Transferred to another acute care facility" at the initial facility or that had the Inter-Facility Transfer equal to "Yes" at the Trauma Center. Of those transferred, 702 cases were probabilistically matched. The linked cases make up 25% of the Q1 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.

Initial Facility: 1,336 Incidents

Matched: 702 Incidents

Final Facility: 1,494 Incidents
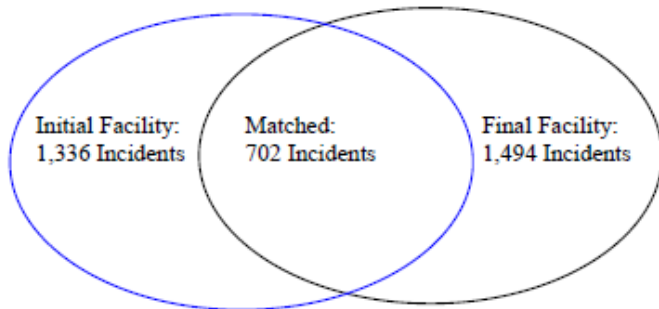
The initial facility in which transfers come from may be considered Critical Access Hospitals (CAHs). All Indiana CAHs are considered Rural, and must meet additional requirements to have a CAH designation, such as having no more than 25 inpatient beds and being located in a rural area. Facilities that are highlighted indicate that these facilities reported data for Quarter 4, 2015.

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 Critical Access Hospitals (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 Vincent Frankfort Hospital Inc
Greene County General Hospital	St Vincent Jennings Hospital Inc
Harrison County Hospital	St Vincent Mercy Hospital
IU Health Bedford Hospital	St Vincent Randolph Hospital Inc
IU Health Blackford Hospital	St Vincent Salem Hospital Inc
IU Health Paoli Hospital	St. Mary's Warrick Hospital Inc
IU Health Tipton Hospital	St. Vincent Clay Hospital Inc
IU Health White Memorial Hospital	St. Vincent Dunn Hospital Inc
Jasper County Hospital	St. Vincent Williamsport Hospital, Inc.
Jay County Hospital	Sullivan County Community Hospital
Margaret Mary Community Hospital Inc	Union Hospital Clinton
Parkview LaGrange Hospital	Woodlawn Hospital
Parkview Wabash Hospital	

Rural Hospitals

|	
Columbus Regional Hospital	Kosciusko Community Hospital
Daviess Community Hospital	Major Hospital
Fayette Regional Health System	Marion General Hospital
Franciscan St Anthony Health - Michigan City	Memorial Hospital
Franciscan St Elizabeth Health - Crawfordsville	Memorial Hospital and Health Care Center
Good Samaritan Hospital	Parkview Noble Hospital
Henry County Memorial Hospital	Reid Hospital & Health Care Services
Indiana University Health La Porte Hospital	Saint Joseph RMC - Plymouth
Indiana University Health Starke Hospital	Schneck Medical Center
King's Daughters' Health	

7

Historical Links
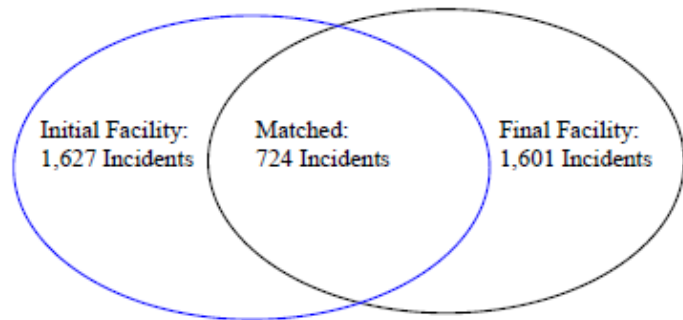
For Quarter 2, 2015, of the 8,605 incidents reported to the Indiana Trauma Registry, 1,627 cases that had an ED Disposition of "Transferred to another acute care facility" at the initial facility or that had the Inter-Facility Transfer equal to "Yes" at the Trauma Center. Of those transferred,
724 cases were probabilistically matched. The linked cases make up 22% of the Q2 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 3, 2015, of the 9,555 incidents reported to the Indiana Trauma Registry, 1,824 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,
819 cases were probabilistically matched. The linked cases make up 22% 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.
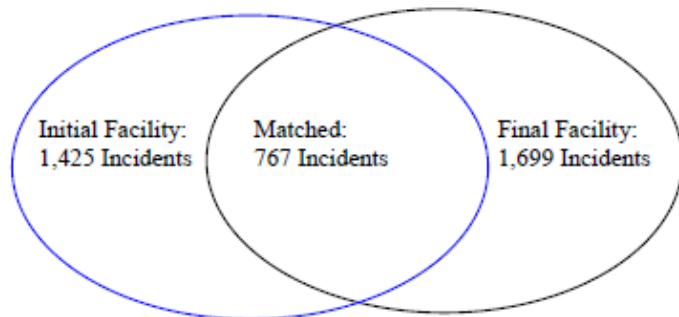
For Quarter 4, 2015, of the 8,728 incidents reported to the Indiana Trauma Registry, 1,425 cases that had an ED Disposition of "Transferred to another acute care facility" at the initial facility or that had the Inter-Facility Transfer equal to "Yes" at the Trauma Center. Of those transferred,
767 cases 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.

Initial Facility: 1,627 Incidents | Matched: 724 Incidents | Final Facility: 1,601 Incidents

Initial Facility: 1,824 Incidents | Matched: 819 Incidents | Final Facility: 1,865 Incidents

Initial Facility: 1,425 Incidents | Matched: 767 Incidents | Final Facility: 1,699 Incidents

Facility to Facility Transfers

For Transfer Patients:		
Initial Hospital Type	Final Hospital Type	Incident Counts
Trauma Center	Hospital	4
Critical Access Hospital	Hospital	8
Hospital	Hospital	12
Critical Access Hospital	Trauma Center	81
Trauma Center	Trauma Center	99
Rural Hospital	Trauma Center	128
Hospital	Trauma Center	370

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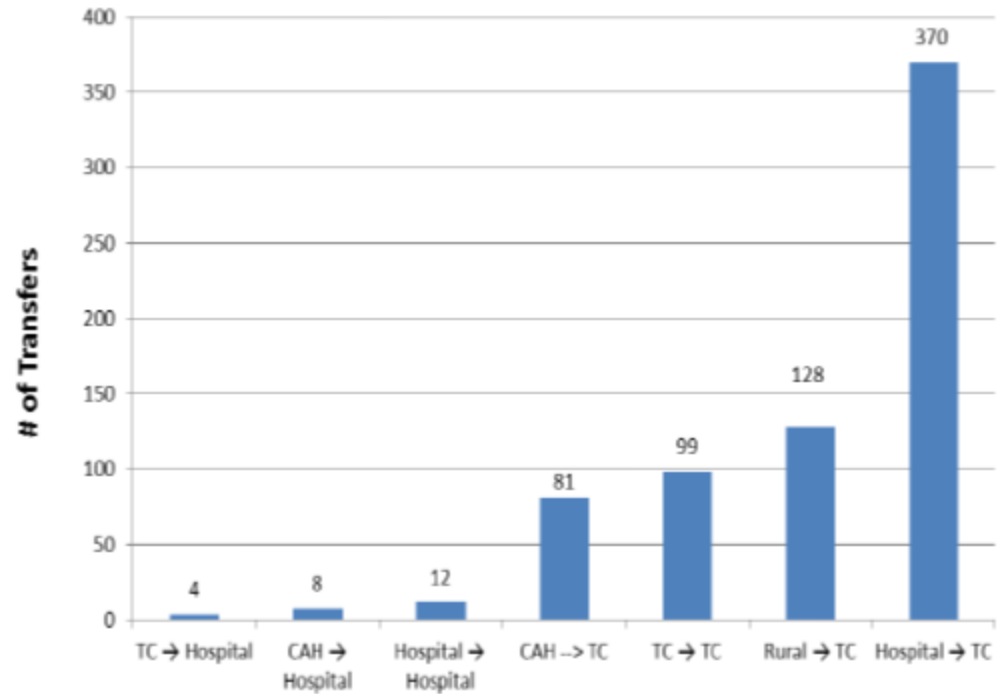
Rural = Rural Hospital; TC = ACS Verified or In Process Trauma Center;

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

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Linked Transfer Patient Averages – Page 10

For Linked Transfer Patients:

For Transfer Patients:	All Transfer Patients	Critical*	Physiological Critical**	ISS Critical***
Number of Patients	702	325	298	57
EMS Notified to Scene	8.1 minutes	8.2 minutes	7.9 minutes	10.4 minutes
EMS Scene Arrival to Departure	18 minutes	17.7 minutes	17.3 minutes	16.5 minutes
EMS Scene Departure to Initial Hospital ED Arrival	18.8 minutes	17.6 minutes	16.8 minutes	21.7 minutes
Initial Hospital ED Arrival to Departure	3 hours 9 minutes	3 hours 5.9 minutes	3 hours 9.6 minutes	2 hours 9.7 minutes
Initial Hospital ED Departure to Final Hospital ED Arrival	1 hour 7.3 minutes	1 hour 6.9 minutes	1 hour 9.5 minutes	1 hour 17.2 minutes
TOTAL TIME	5 hours 1.2 minutes	4 hours 58.3 minutes	5 hours 1.1 minutes	4 hours 15.5 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 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.
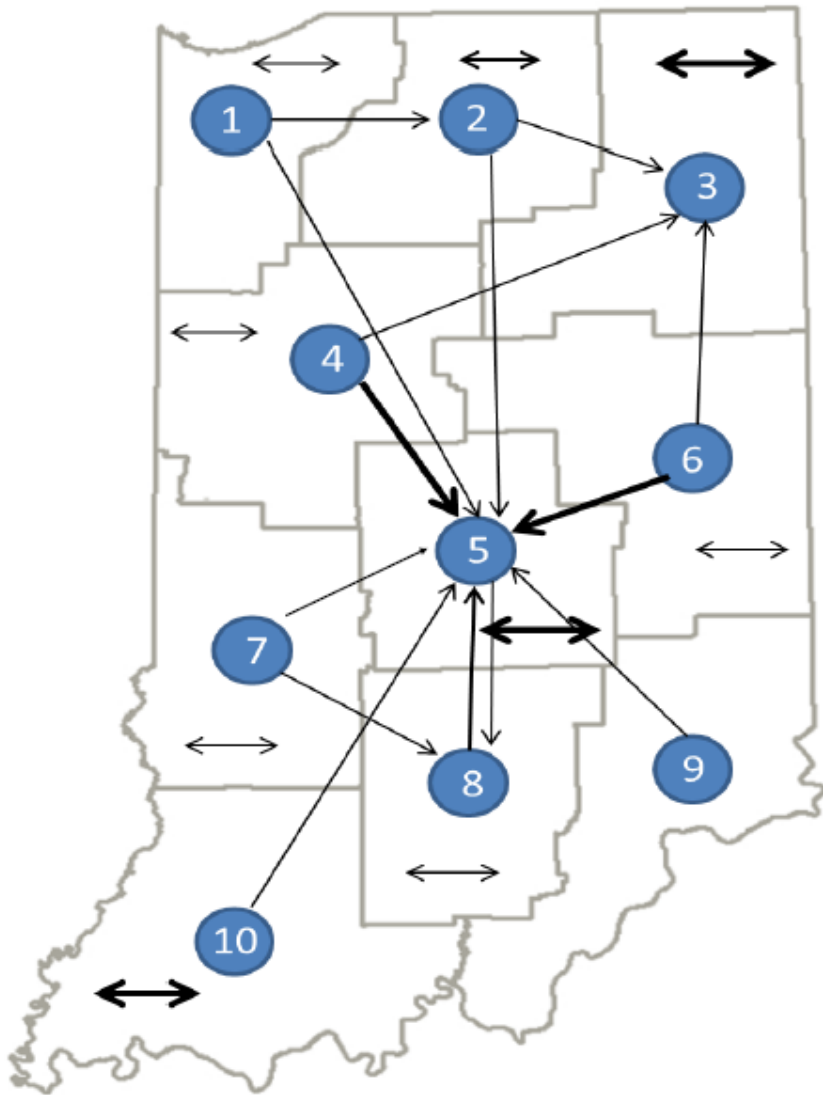
For Transfer Patients:		
Public Health Preparedness District Initial Hospital	Public Health Preparedness District Final Hospital	Incident Counts
1	1	13
1	2	22
1	4	5
1	5	16
2	2	20
2	5	3
3	3	144
3	5	1
4	3	7
4	4	13
4	5	42
5	5	135
6	5	81
6	6	8
7	5	29
7	7	4
7	8	1
8	5	41
8	8	2
8	10	1
9	5	7
9	9	1
10	5	6
10	10	95

Transfer Patient Data - Page 12

For Transfer Patients:

	All Transfer Patients	Critical*	Physiological Critical**	ISS Critical***
Number of Patients	702	325	298	57
Total Time	5 hours 1.2 minutes	4 hours 58.3 minutes	5 hours 1.1 minutes	4 hours 15.5 minutes
Total Mileage	48.6	53.1	53.0	54.4
Injury Scene to Initial Hospital Mileage*	7.6	7.6	7.7	7.6
Initial Facility to Final Facility Mileage	41	45.5	45.4	46.9

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	7.6	41	48.6	617	85
North Region	5.3	28.5	33.7	198	13
Central Region	8.1	49.3	57.3	330	61
South Region	10.6	35.1	45.7	89	11

*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

Statistics for Estimated Average Distance by Region calculated by Public Health Geographics, Epidemiology Resource Center, ISDH

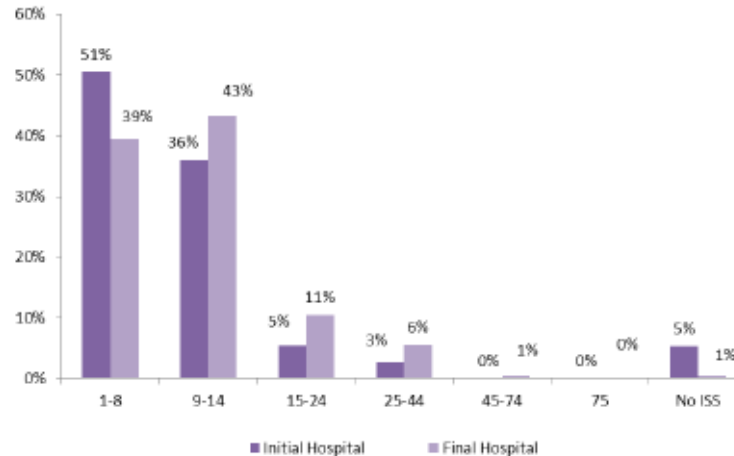# Transfer Patient Population – Page 13
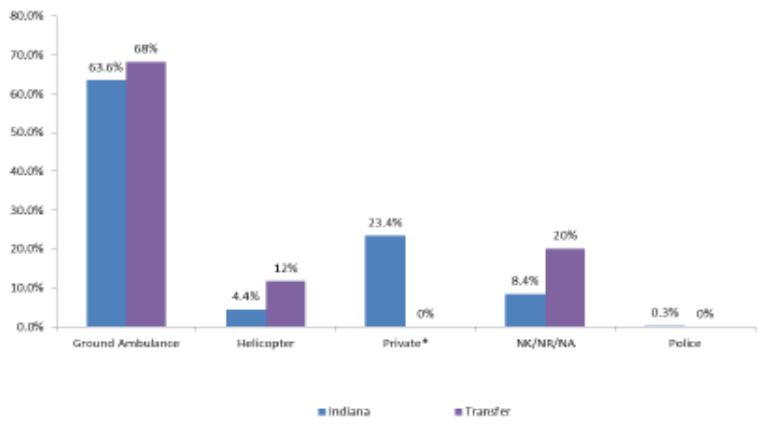

Patient Age Groupings
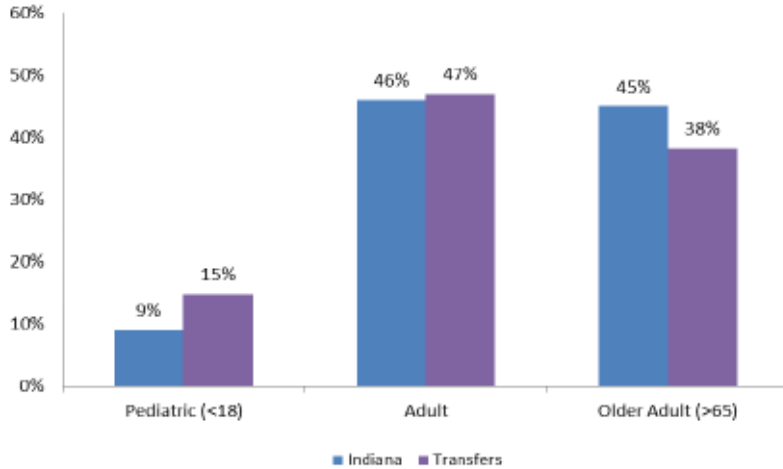
Patient Gender
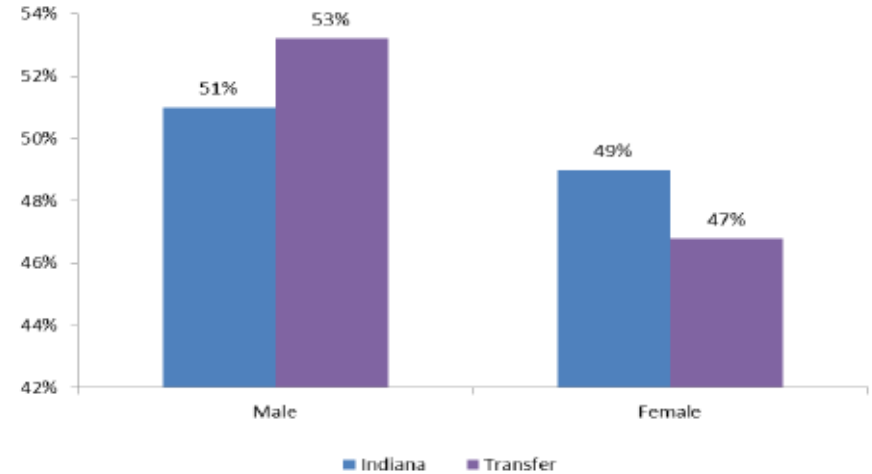
Injury Severity Score (ISS)

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Transport Mode– Final Hospital

ED Disposition by Percentage- Final Hospital

<1% Transport Mode: Police, Other   * Indicates Private/ Public Vehicle, Walk-in
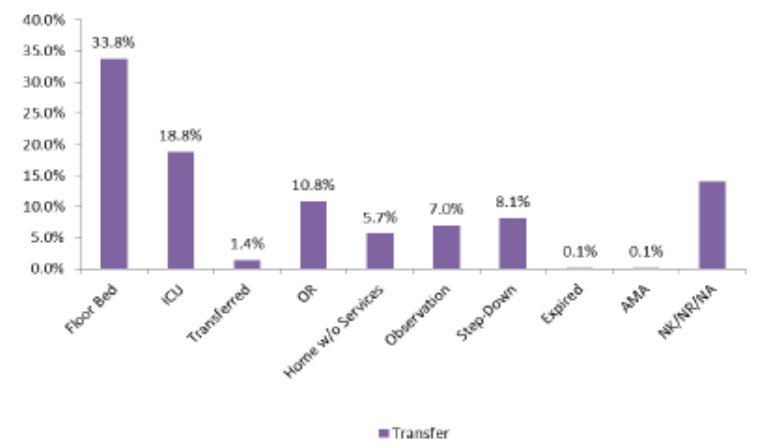
ED Length of Stay (hours)- Final Hospital
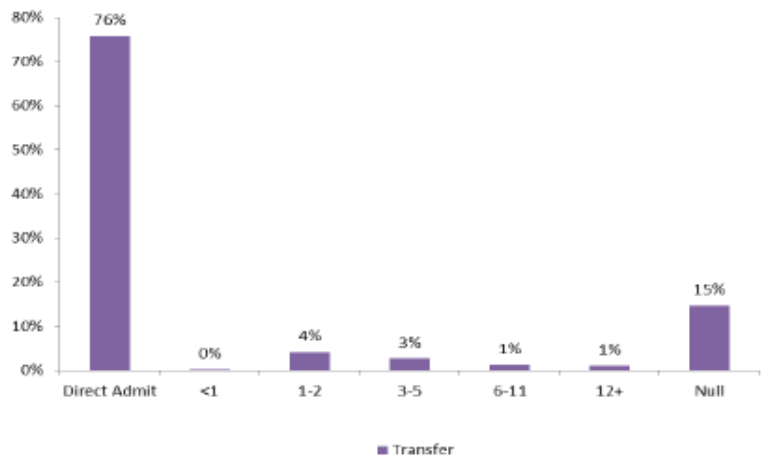
ICU Length of Stay (days)- Final Hospital
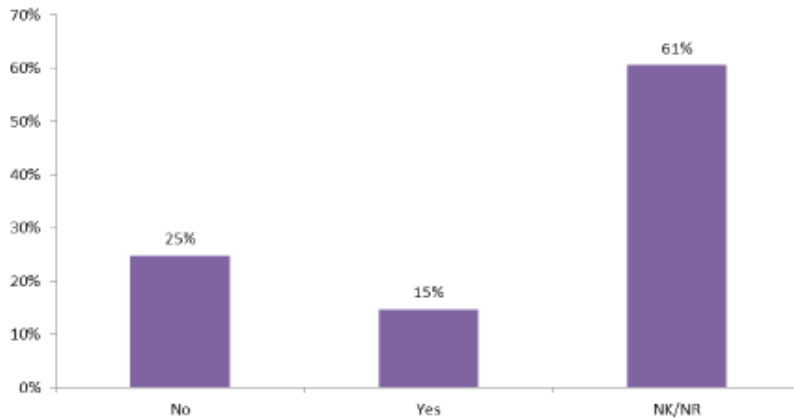
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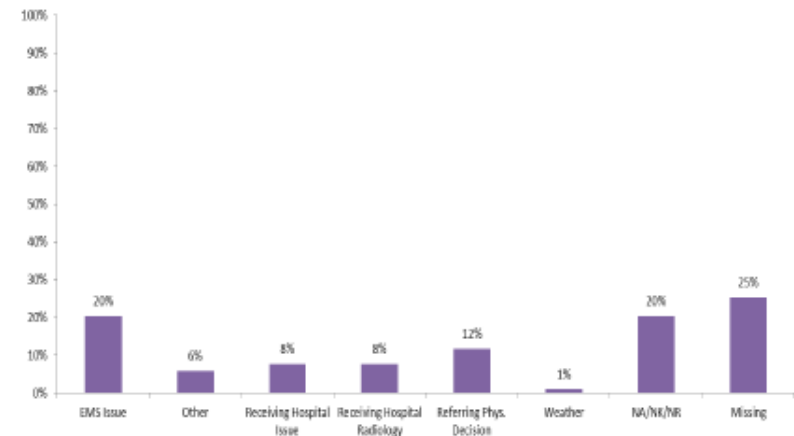**Discharge Disposition– Final Hospital**
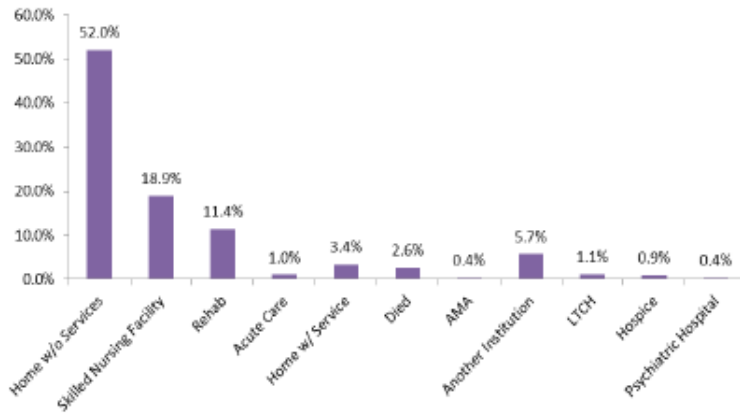
Helicopter Transfers by ISS– Final Hospital
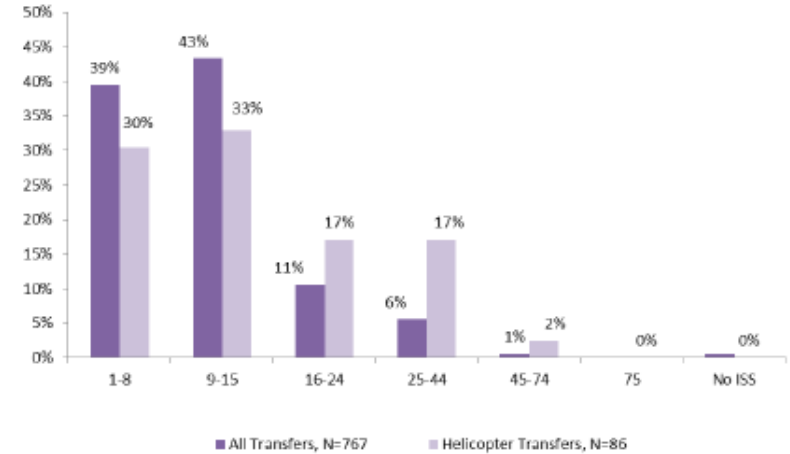
Transfer Delay Indicated- Initial Hospital

Initial Facility Transfer Delay Reason

Higher than Average ED LOS for Transferred Patients

Hospital ID

ID 6

ID 10
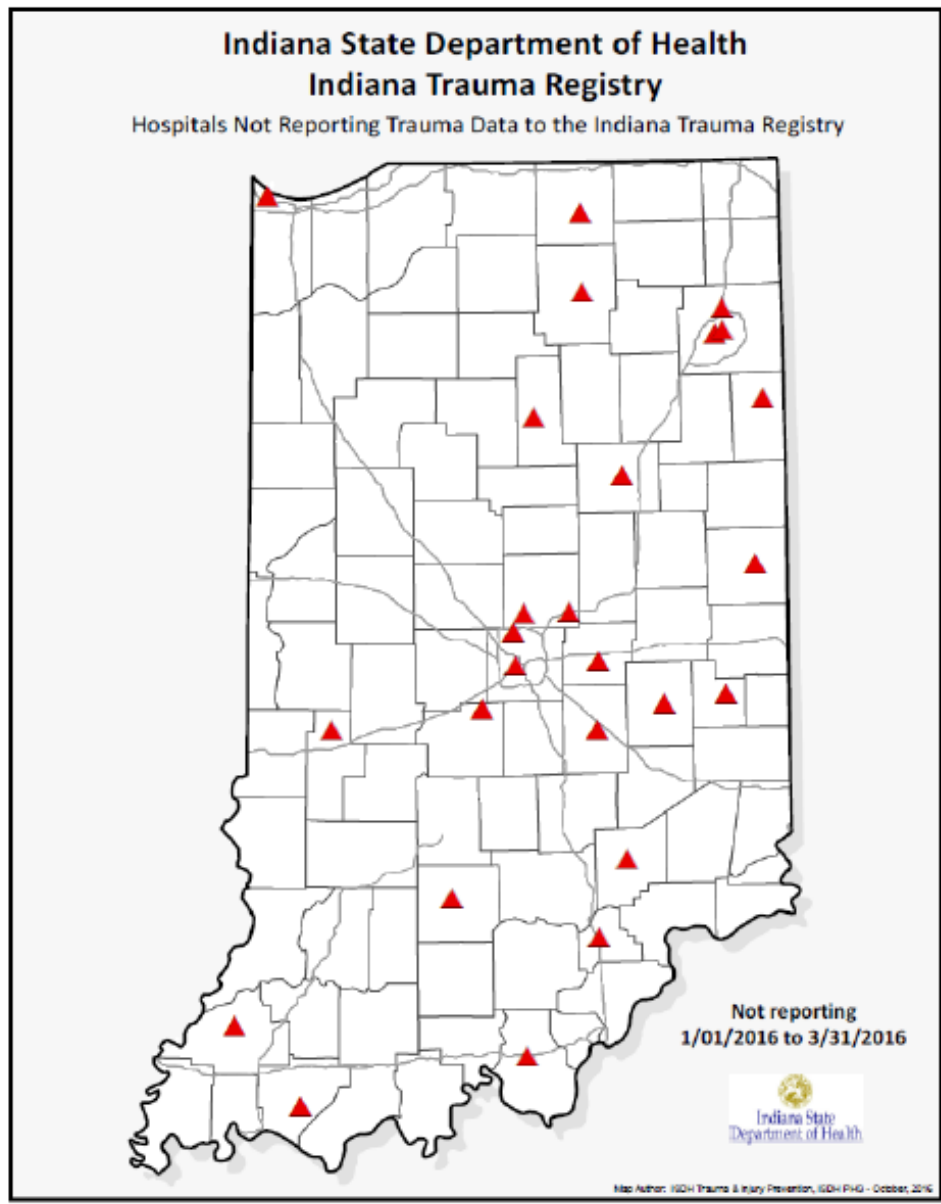
ID 18

ID 26

ID 33

ID 38

ID 46

ID 52

ID 61

ID 63

ID 70

ID 98

ID 102

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Not Reporting Map - Page 16

Indiana State Department of Health
Indiana Trauma Registry
Hospitals Not Reporting Trauma Data to the Indiana Trauma Registry

Not reporting
1/01/2016 to 3/31/2016

Indiana State
Department of Health

Map Author: ISDH Trauma & Injury Prevention, ISDH PHO - October, 2016

Indiana State Department of Health
Indiana Trauma Registry

Hospitals Reporting Trauma Data Quarter 1
January 1, 2016 - March 31, 2016

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
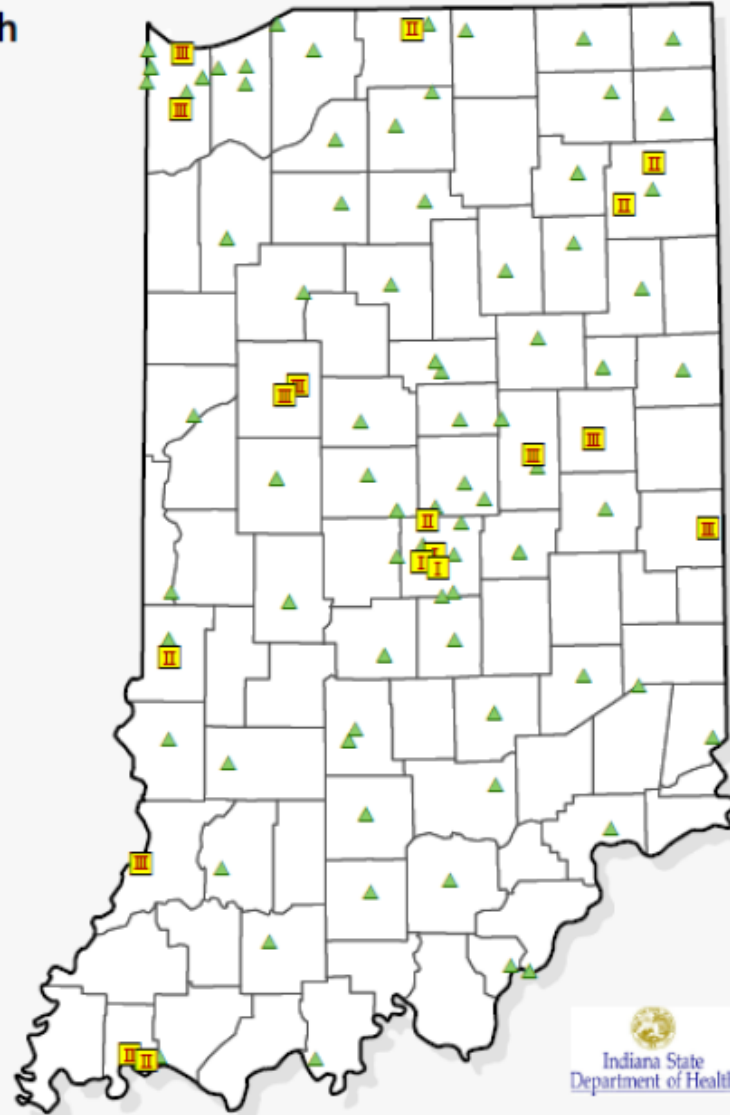Terre Haute Regional Hospital

III **Level III Trauma Centers**

Community Hospital of Anderson & Madison Co.
Franciscan Health - Crown Point
Franciscan Health - Lafayette East
Good Samaritan Hospital
IU Health - Arnett Hospital
IU Health - Ball Memorial Hospital
Methodist Hospitals - Northlake Campus
Reid Hospital & Health Care Services

▲ Non-Trauma Hospitals

77 Non-Trauma Hospitals

Hospital categories include Verified and "In the Process"
Trauma Centers as of December 31, 2015.

Indiana State
Department of Health

Map Author: ISDH Trauma & Injury Prevention, ISDH PHG - October, 2016

Questions?

Indiana State
Department of Health

American College of Surgeons – Committee on Trauma Update

Dr. Scott Thomas, *Trauma Medical Director*

Memorial Hospital of South Bend

Indiana State
Department of Health

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

Other Business

Indiana State
Department of Health

Committee Meeting Dates for 2016

- December 16

Indiana State
Department of Health

Committee Meeting Dates for 2017

- February 17
- April 21
- June 16
- August 18
- October 20
- December 15

Indiana State
Department of Health

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