

Indiana State Trauma Care Committee

December 15, 2017



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

Introductions & approval of meeting minutes



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

Increasing patient satisfaction while decreasing opioid prescribing after surgery

Dr. Chad Brummett, *Associate Professor of Anesthesiology*
University of Michigan



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

The Role of Acute Care Prescribing in the Opioid Epidemic

Chad M. Brummett, M.D.

Associate Professor

Department of Anesthesiology

Division of Pain Medicine

University of Michigan Medical School

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www.michigan-OPEN.org

<http://medicine.umich.edu/dept/pain-research>

Twitter: @drchadb



Funding and Disclosures

- Funding

- NIAMS/NIH: R01 AR060392; P50 AR070600
- NIDA/NIH: R01 DA038261; R01 DA042859
- Michigan Department of Health and Human Services
- SAMHSA
- CDC
- Michigan Genomics Initiative
- Department of Anesthesiology
- Neuros Medical, Inc

- Disclosures

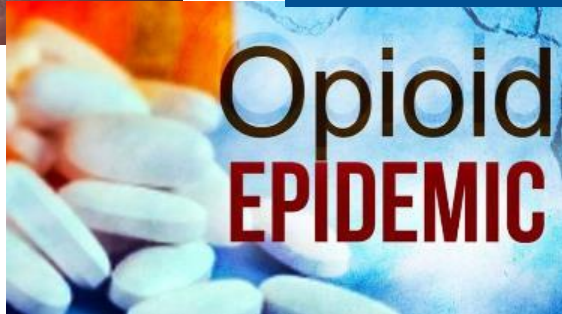
- Patent for the use of peripheral perineural dexmedetomidine alone and in combination with local anesthetics. Application number 12/791,506; Issue Date 4/2/13; Patent Number 8410140
- Consultant- Recro Pharma, Heron Therapeutics

1976 Hoosiers: 32-0





Opioid overdose kills
more individuals than those involved
in fatal motor vehicle accidents.



TIME

They're the most
powerful
painkillers
ever invented.
And they're creating
the worst addiction
crisis America
has ever seen.

By Matthew Galetovic

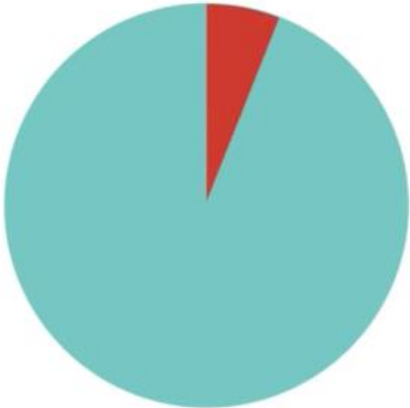


91
AMERICANS

die every day from
an **opioid overdose**
(that includes prescription
opioids and heroin).

Major Public Health Crisis

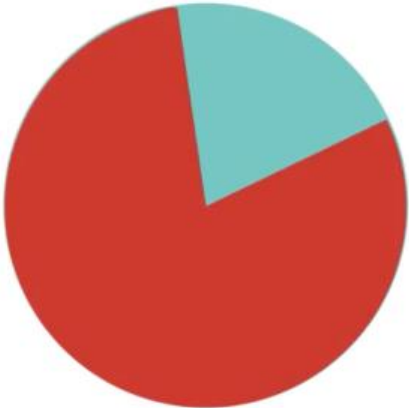
4 %



US share of world population

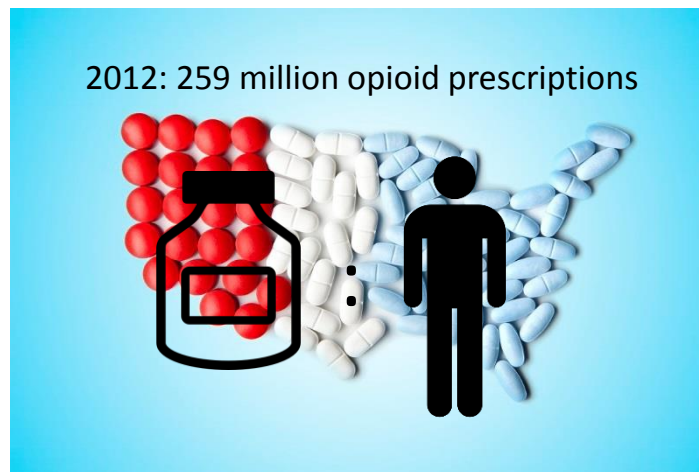


80 %

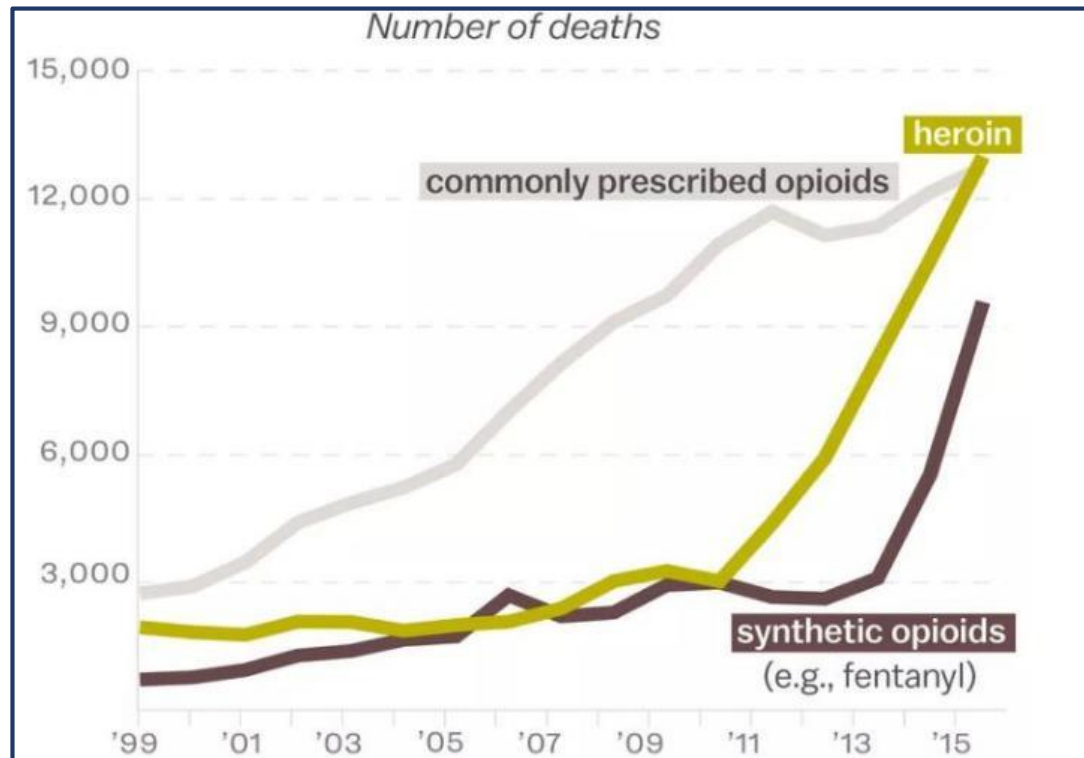


US share of opioid consumption

Prescription Opioids In America



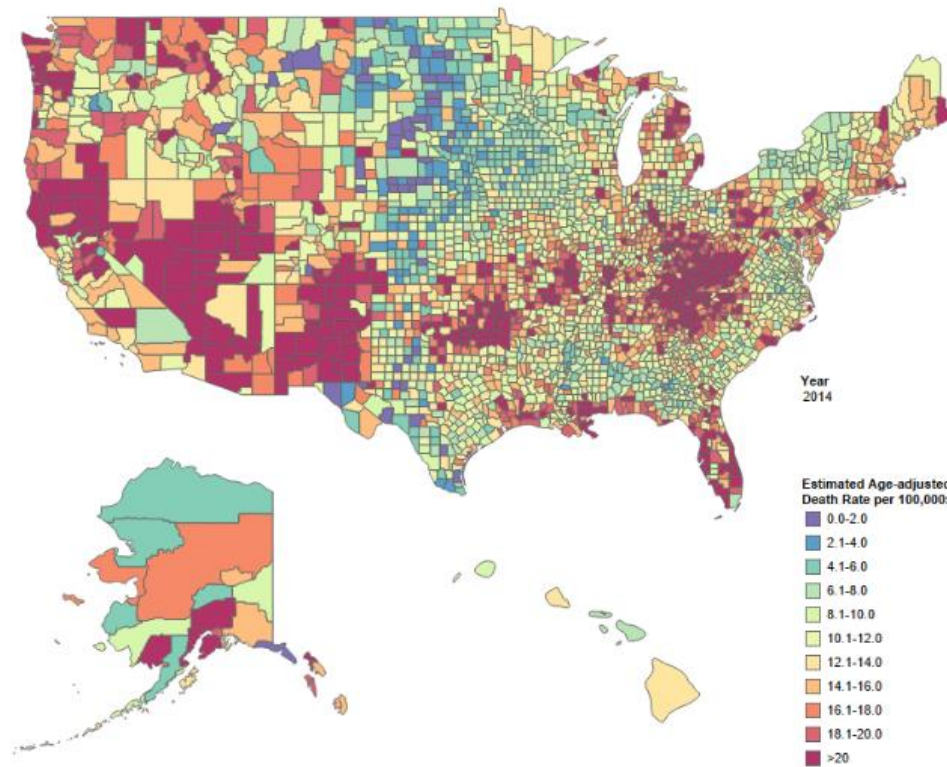
More Drug Overdose Deaths Now Involve Heroin than Prescription Painkillers



CDC WONDER

Dr

Drug Poisoning Mortality: 2014



Designed by L. Rossen, B. Bastian & Y. Chong. SOURCE: CDC/NCHS, National Vital Statistics System.

Obtained from <https://blogs.cdc.gov/nchs-data-visualization/drug-poisoning-mortality/>

How did we get here?



ADDICTION RARE IN PATIENTS TREATED WITH NARCOTICS

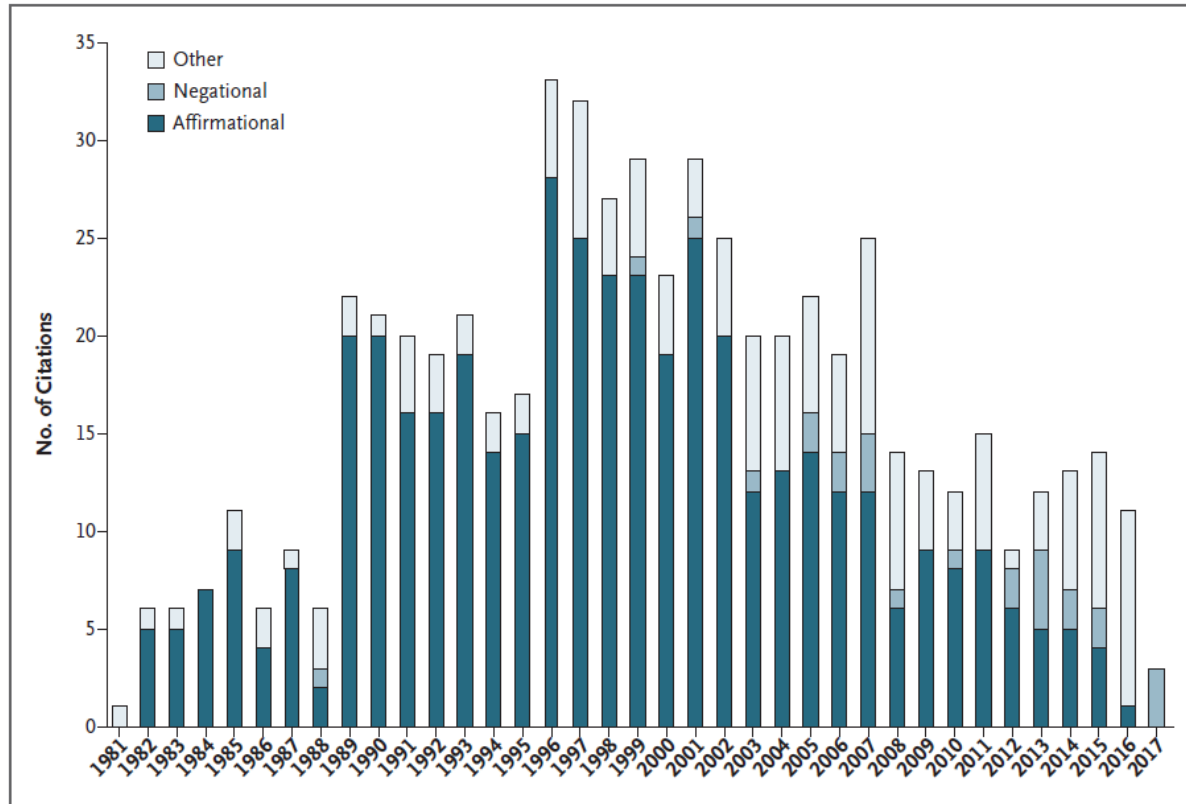
To the Editor: Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients¹ who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,² Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

Waltham, MA 02154

JANE PORTER
HERSHEL JICK, M.D.
Boston Collaborative Drug
Surveillance Program
Boston University Medical Center



NEJM letter regarding opioid addiction misrepresented and heavily cited



Leung A, et al. (N Engl J Med 376;22)

For Whom Do We Prescribe?



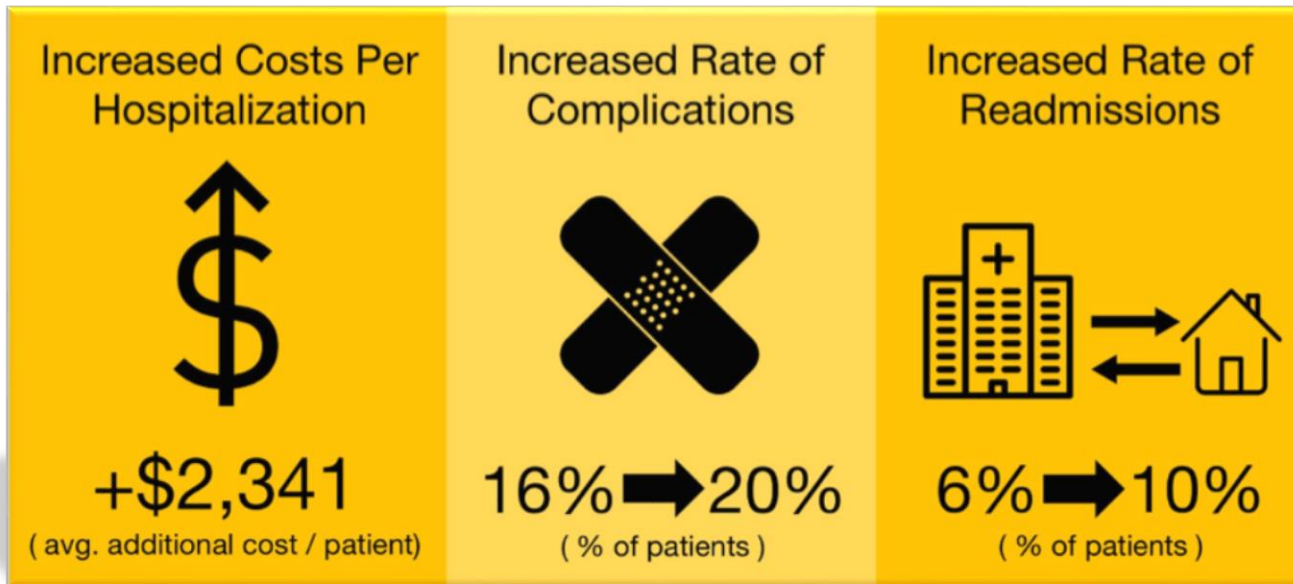
Opioid naive

Chronic 8%



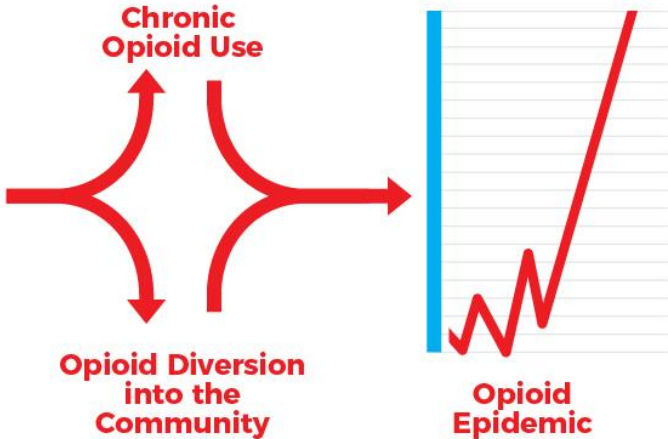
Intermittent 30%

Pre-Operative Opioid Use and Associated Outcomes after Major Abdominal Surgery



Cron DC, Englesbe MJ, Bolton CJ, Joseph MT, Carrier KL, Moser SE, Waljee JF, Hilliard PE, Kheterpal S, Brummett CM. Annals of Surgery 2016.

Preventing Chronic Opioid Use and Abuse Before it Starts



Current Strategic Efforts

Our Role

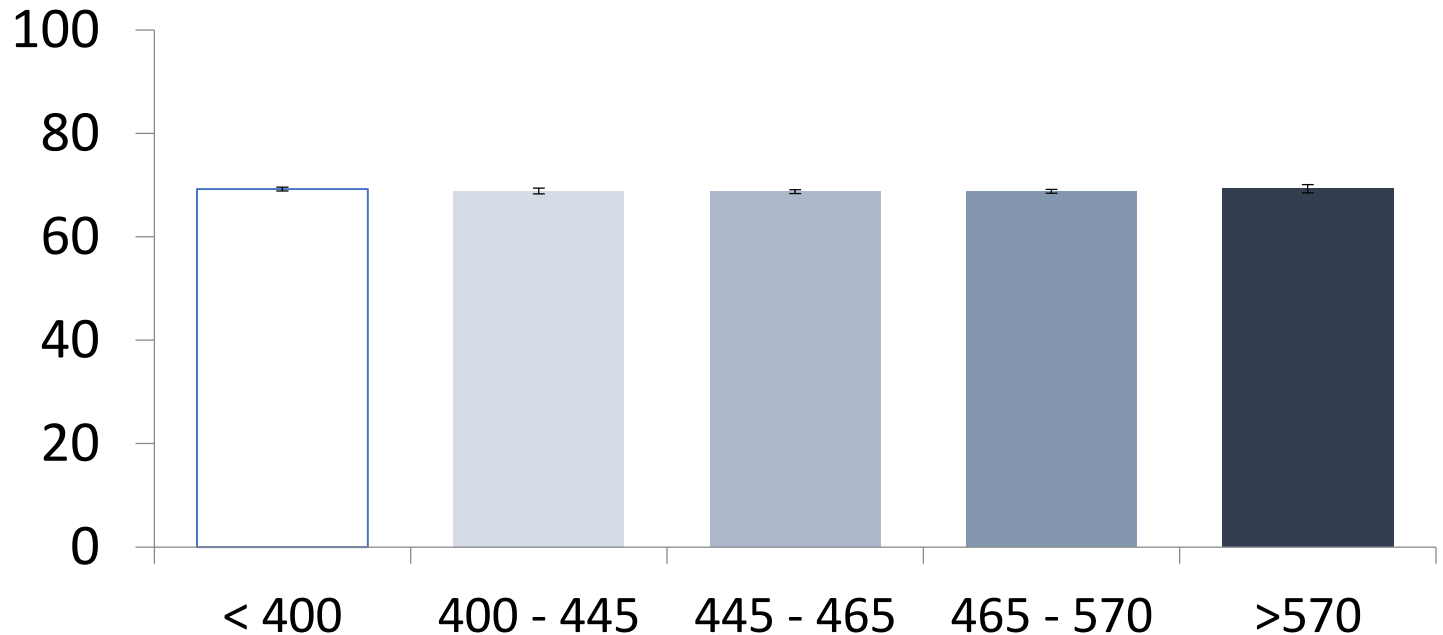


Why do surgeons prescribe too much?



HCAHPS ≠ Prescribing

**HCAHPS Pain
Control
Score**



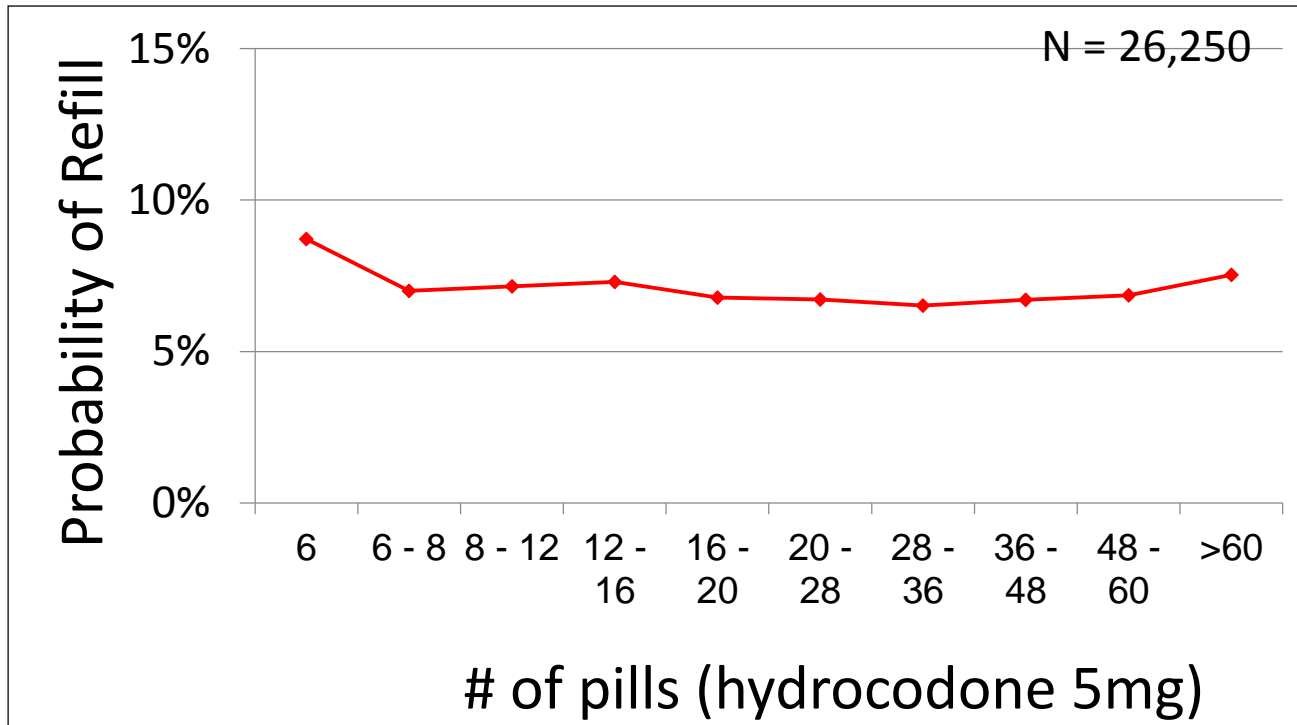
**Hospital Quintiles of Postoperative Opioid Prescribing
(OMEs)**

Lee JS, Hu HM, Brummett CM, Syrjamaki JD, Dupree JM, Englesbe MJ, Waljee JF. JAMA May 16, 2017



Refills?

Quantity Does Not Predict Refill



Sekhri S, Arora NS, Cottrell H, Baerg T, Duncan A, Hu HM, Englesbe MJ, Brummett C, Waljee JF, Ann Surg 2017

Opioid naive

Chronic 8%



Intermittent 30%

New Persistent Use

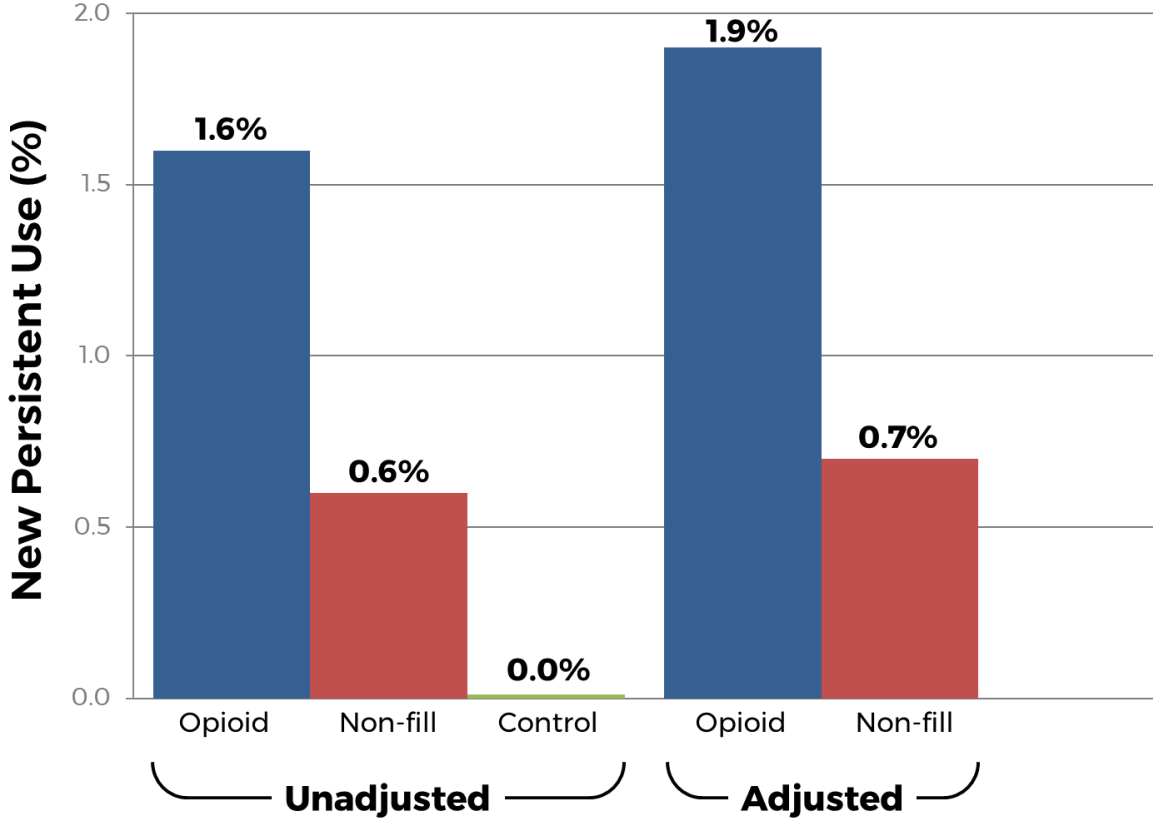
New Persistent Opioid Use



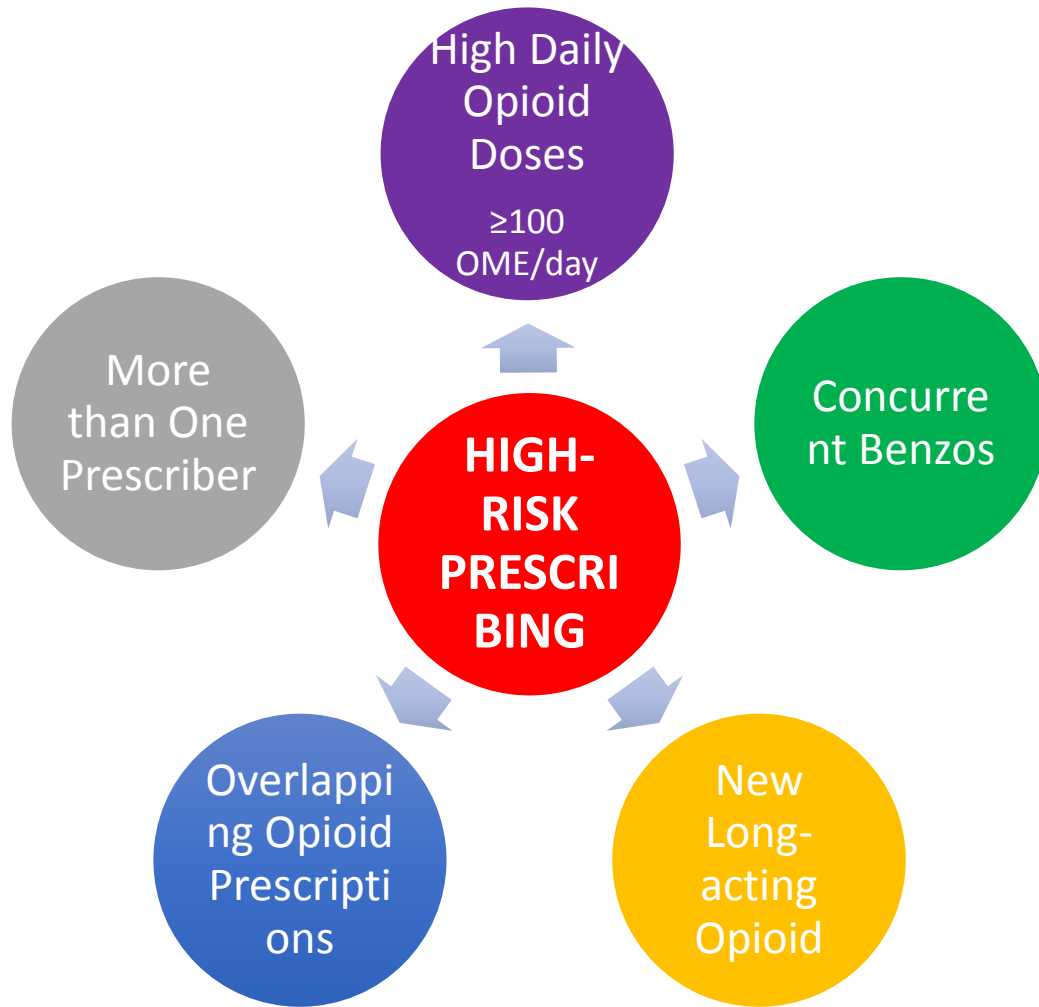
6%

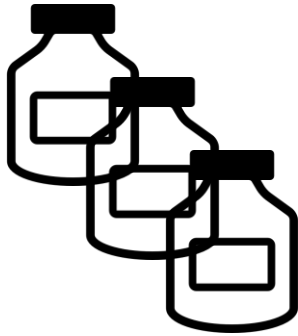
Brummett CM et al. *JAMA Surg.* 2017.

Opioid fill after wisdom teeth extraction is independently associated with new chronic opioid use



Harbaugh C et al, unpublished data





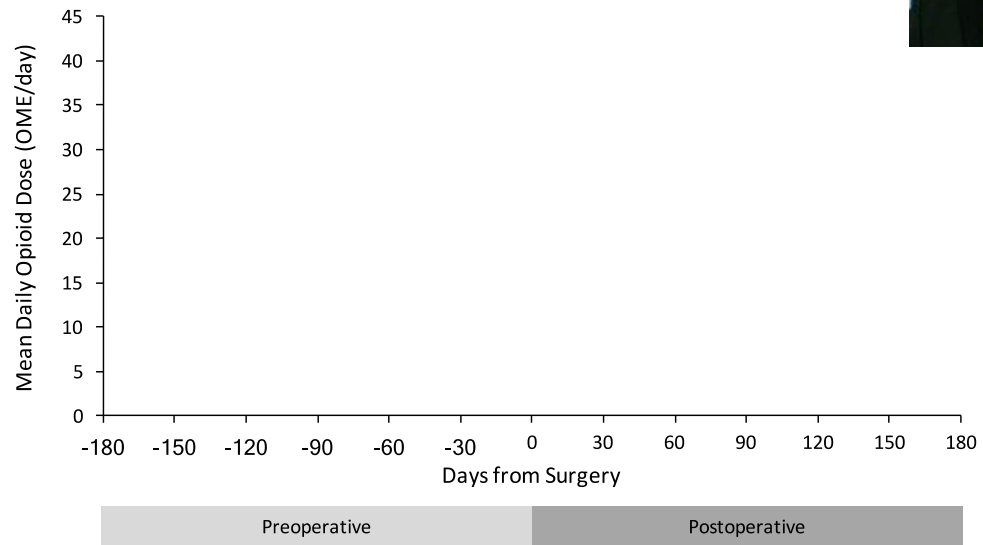
20%

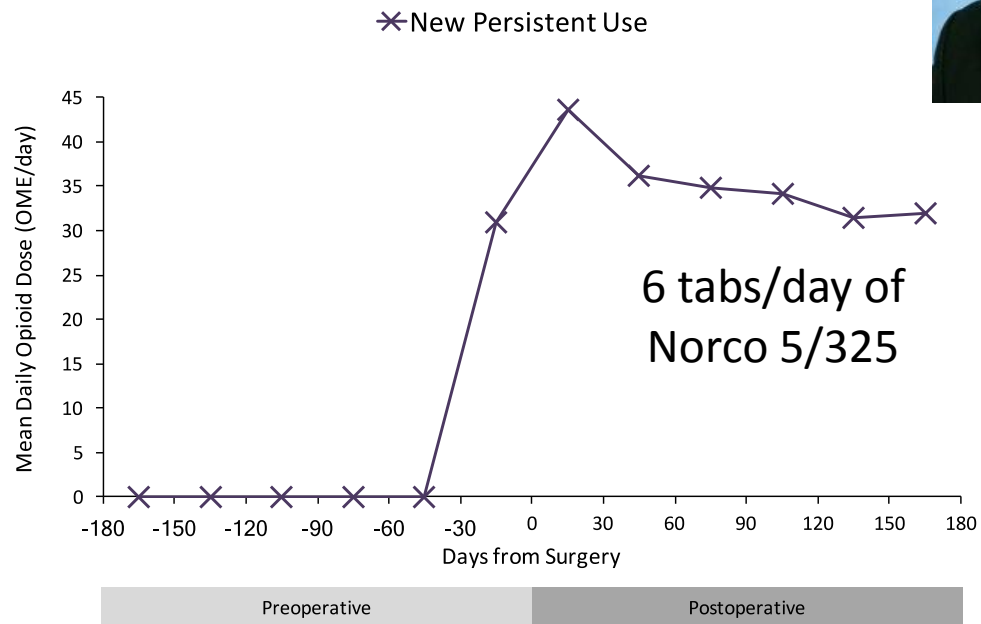


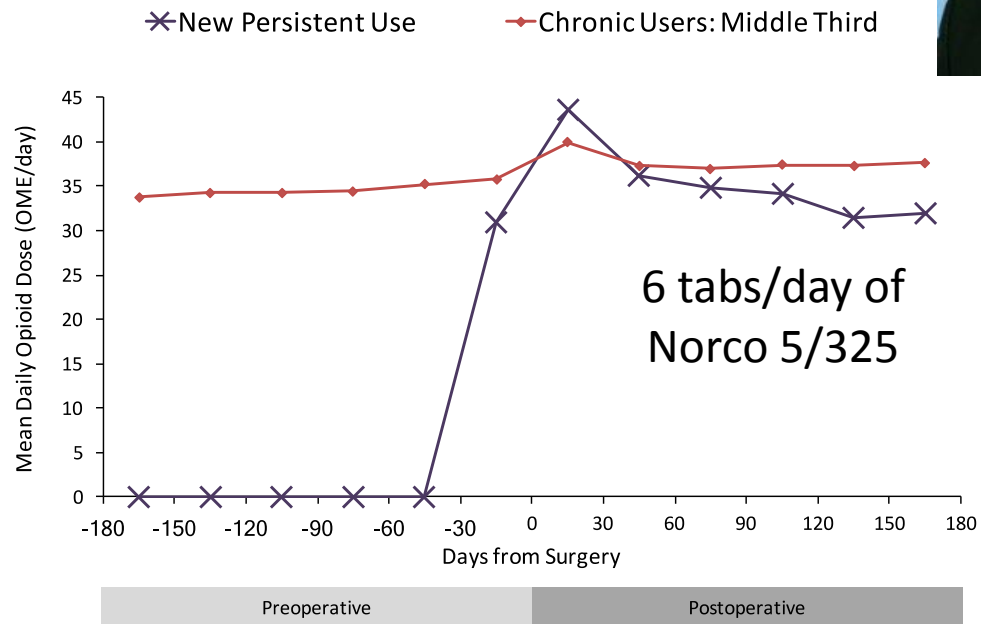
17%



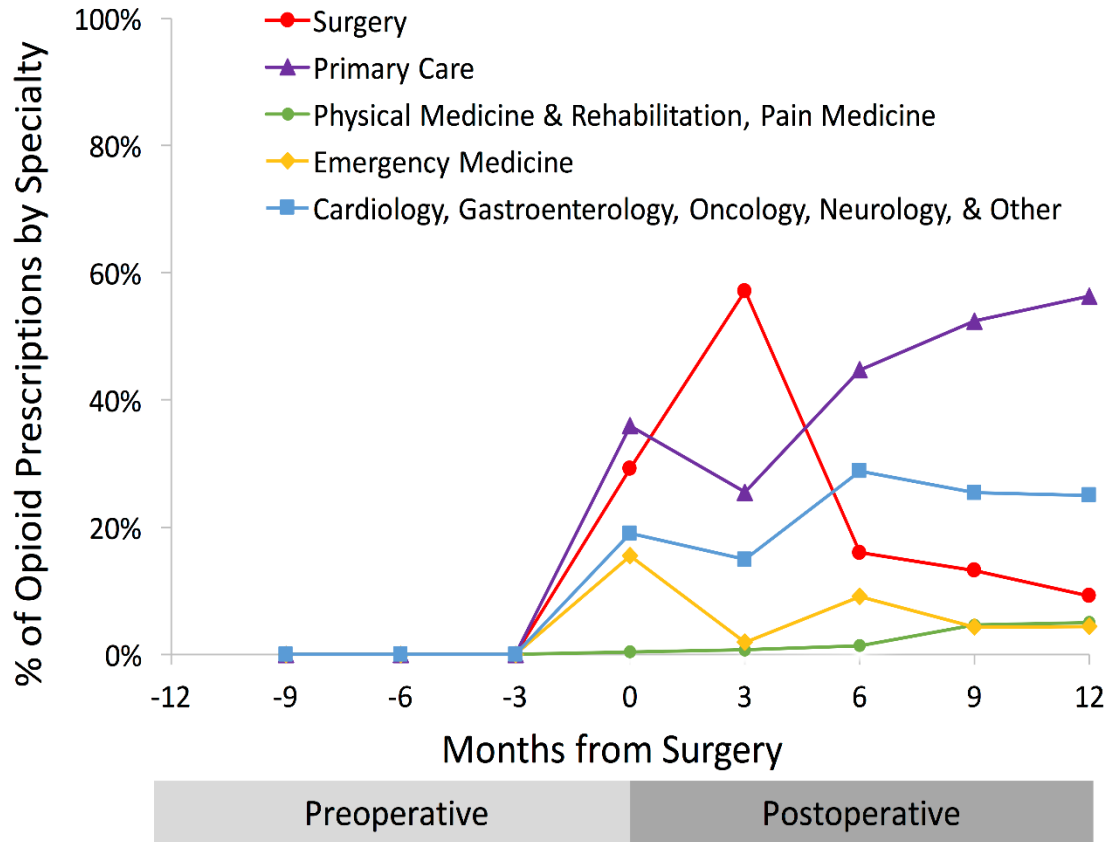
12%







Who Prescribes for New Persistent Users?



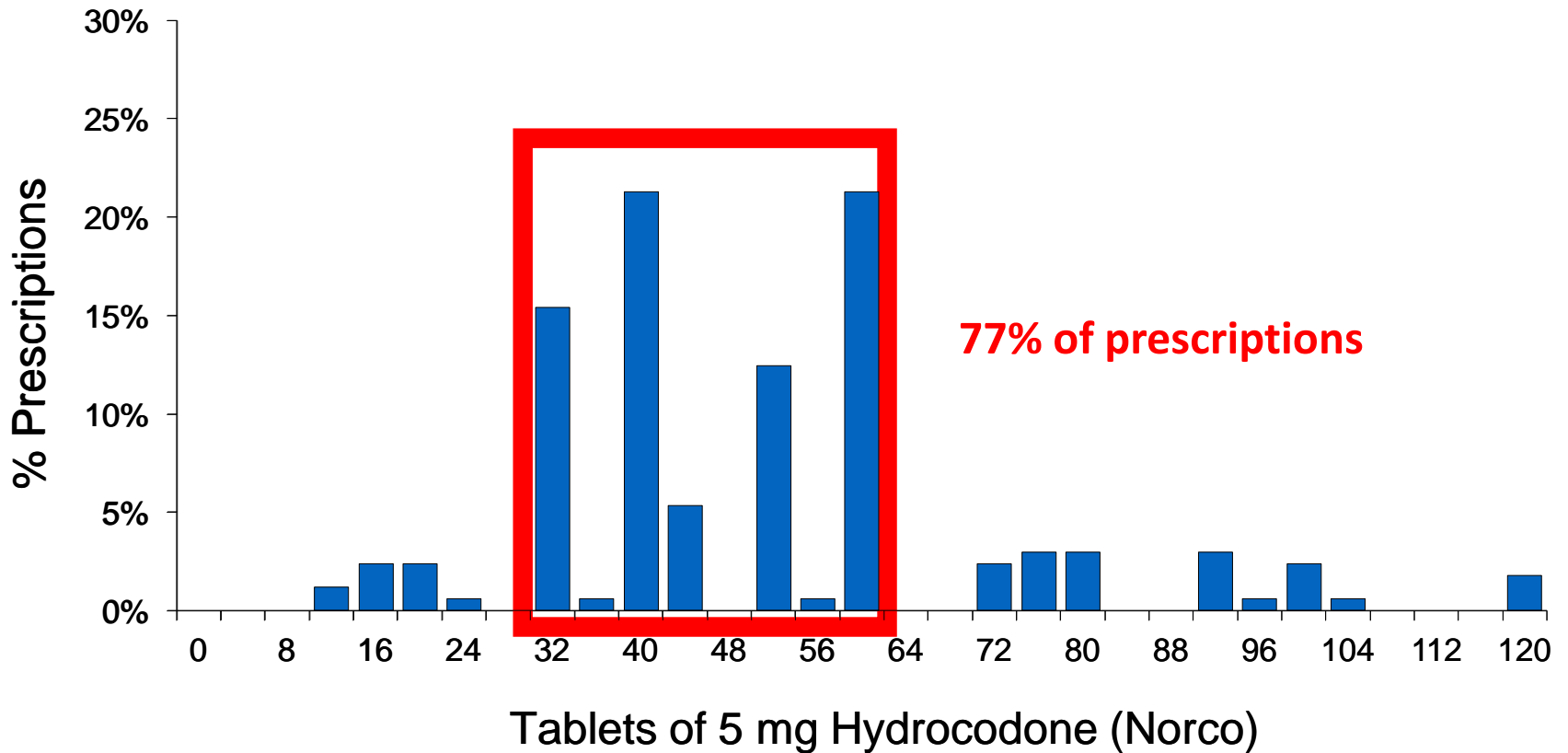
Can we improve prescribing?

Yes



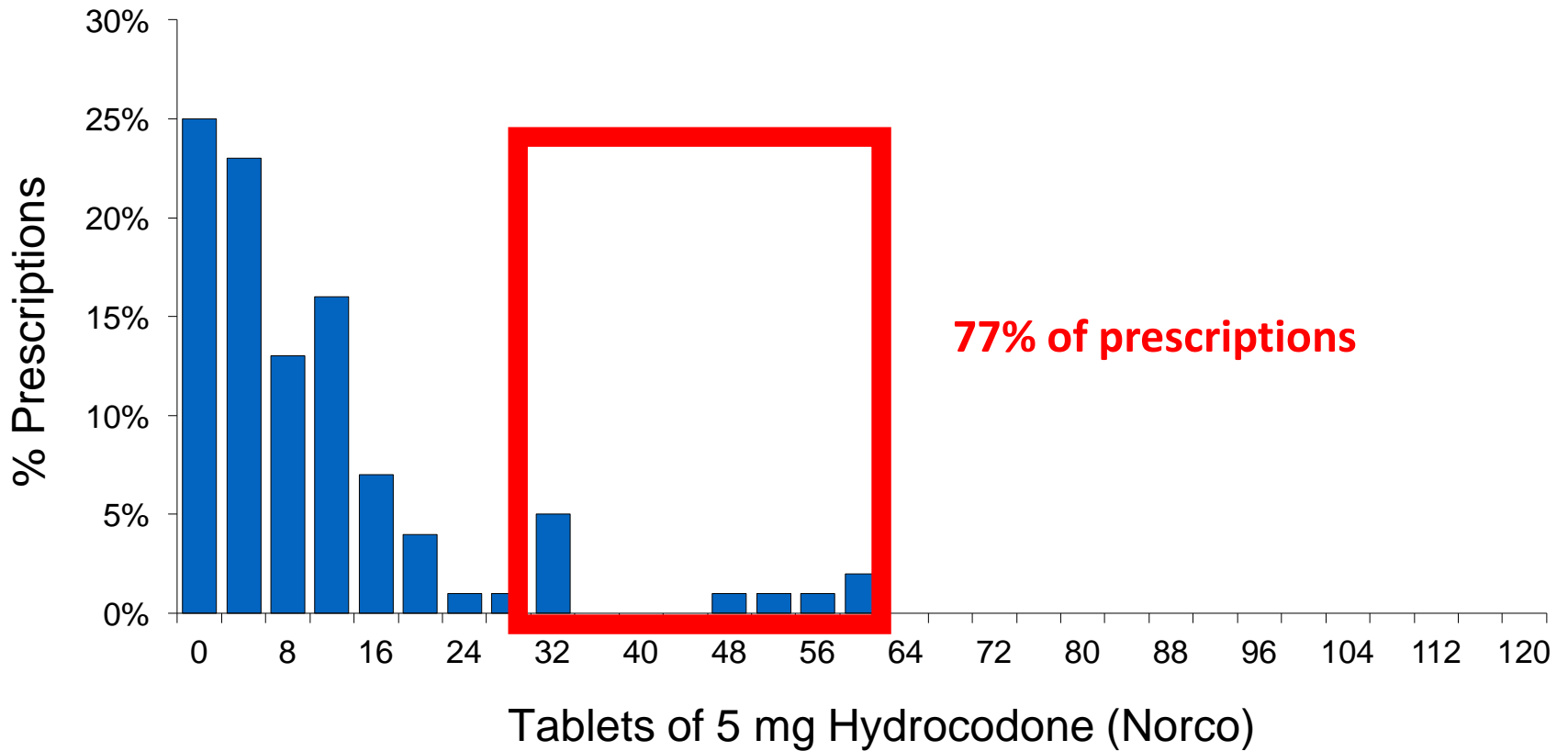
MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

Opioids Prescribed After Surgery



Howard, R, Waljee JF, Lee JS, Brummett CM, Englesbe MJ. 2017. *Reduction in Opioid Prescribing Through Implementation of Evidence-Based Prescribing Guidelines*. JAMA Surgery, In Press.

Opioids **Used** After Surgery



Howard, R, Waljee JF, Lee JS, Brummett CM, Englesbe MJ. 2017. *Reduction in Opioid Prescribing Through Implementation of Evidence-Based Prescribing Guidelines*. JAMA Surgery, In Press.

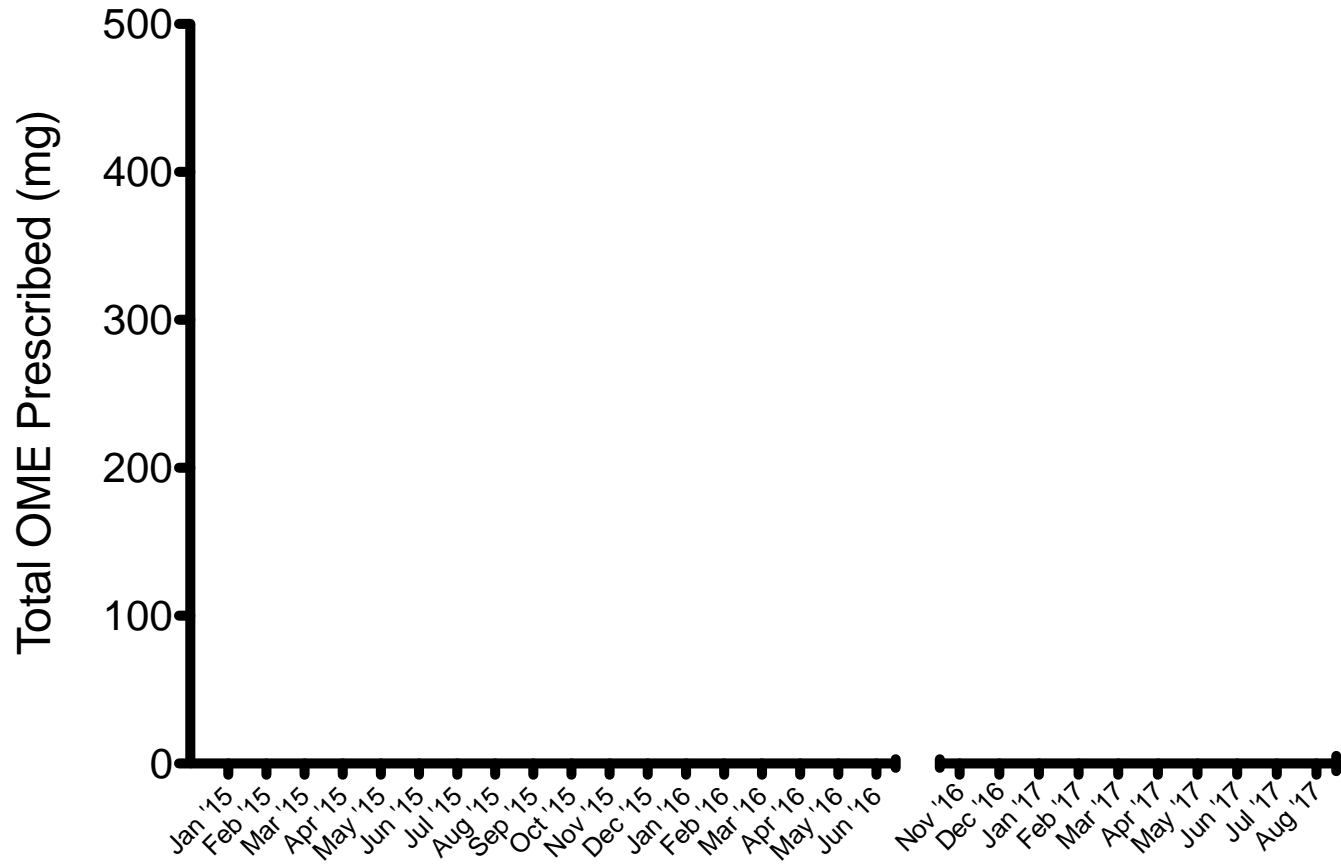
Guidelines

15 Oxycodone 5 mg 1q4-6 PRN

15 Norco 5/325 mg 1q4-6 PRN

+ Tylenol AND Motrin

+ Patient Education



Howard et al, JAMA Surg 2017, In press

Howard, R, Waljee JF, Lee JS, Brummett CM, Englesbe MJ. 2017. JAMA Surgery, In Press.

$$\begin{array}{ccc} 370 & & \downarrow 35 \text{ pills} \\ \text{Patients} & \times & \text{per patient} \end{array}$$

= 13,000 pills kept
out of the community



No change in calls for
refills (3-4%)



No change in patient-
reported pain scores



Patients consumed
fewer pills

Supersize it!



David Marchiori, Esther K. Papies, Olivier Klein, The portion size effect on food intake. An anchoring and adjustment process?, *Appetite* (2014), doi: 10.1016/j.appet.2014.06.018

MSQOC

Michigan Surgical Quality
Collaborative

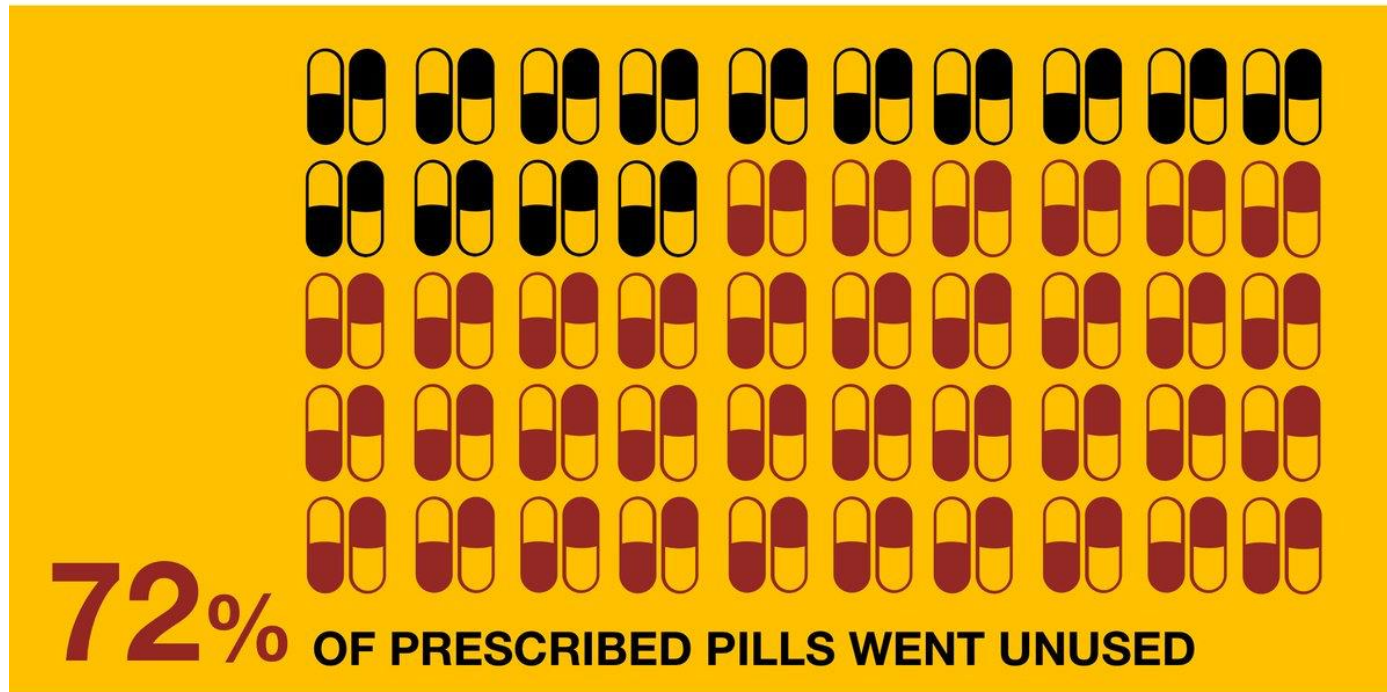




PROCEDURE

| | HYDROCODONE (NORCO) 5 mg tablets | OXYCODONE 5 mg tablets |
|---|---|-----------------------------------|
| | CODEINE (TYLENOL #3) 30 mg tablets | |
| | TRAMADOL 50 mg tablets | |
| Laparoscopic Cholecystectomy | 15 | 10 |
| Laparoscopic Appendectomy | 15 | 10 |
| Inguinal/Femoral Hernia Repair (open/laparoscopic) | 15 | 10 |
| Open Incisional Hernia Repair | 40 | 25 |
| Laparoscopic Colectomy | 35 | 25 |
| Open Colectomy | 40 | 25 |
| Hysterectomy | | |
| Vaginal | 20 | 15 |
| Laparoscopic & Robotic | 30 | 20 |
| Abdominal | 40 | 25 |
| Wide Local Excision ± Sentinel Lymph Node Biopsy | 30 | 20 |
| Simple Mastectomy ± Sentinel Lymph Node Biopsy | 30 | 20 |
| Lumpectomy ± Sentinel Lymph Node Biopsy | 15 | 10 |
| Breast Biopsy or Sentinel Lymph Node Biopsy | 15 | 10 |

Most Opioids Prescribed for Outpatient General Surgery Procedures Go Unused



Hill et al. *Ann Surg.* Sept 2016.

Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved. Published by Lippincott Williams & Wilkins, Inc. A Monthly Review of Surgical Science Since 1885

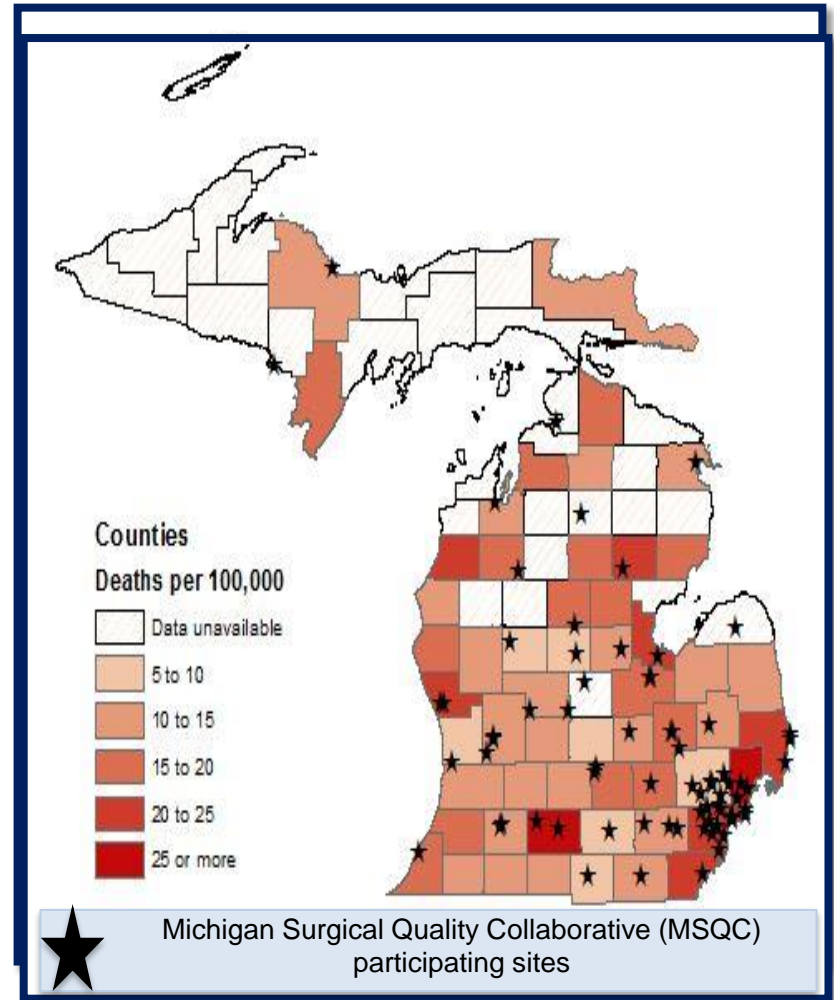
ANNALS OF SURGERY





MSQCC

Michigan Surgical Quality Collaborative





VALUE Partnerships

M·T·C



Shield Association

E

ing Exchange

RI
STY

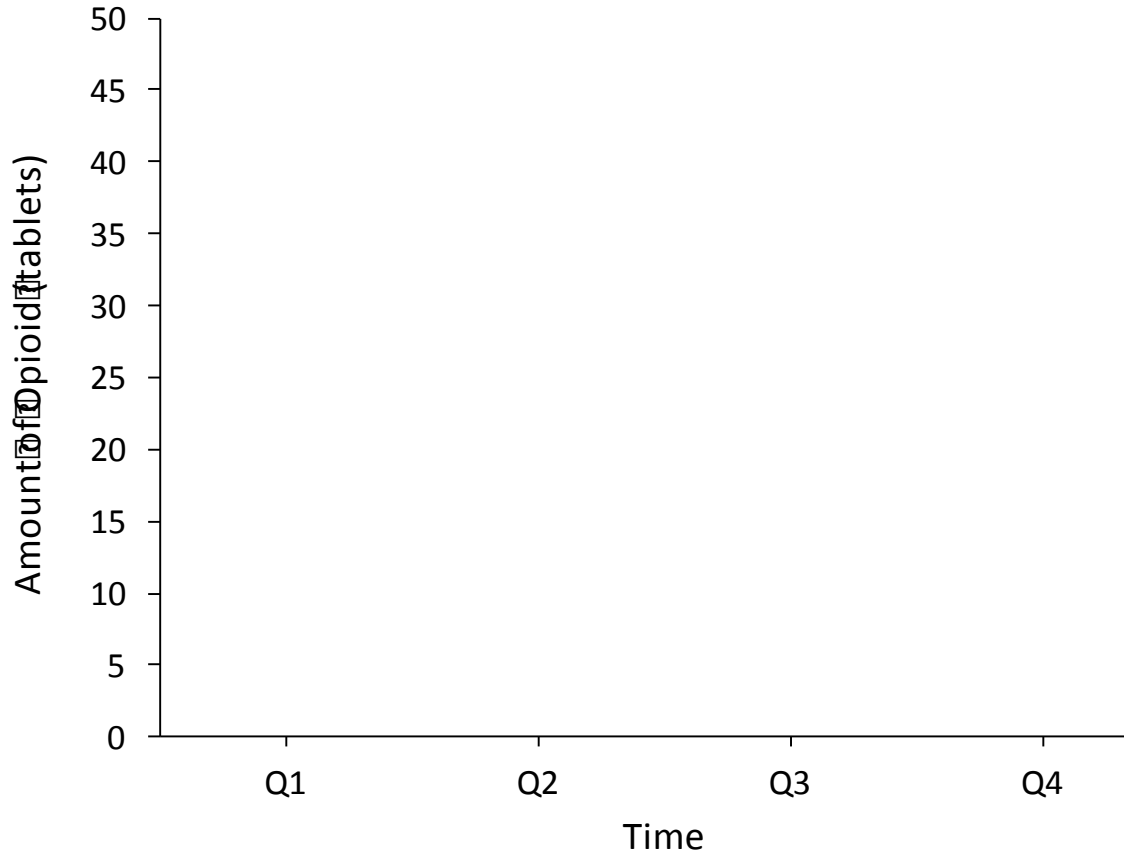
ATIVE

MS

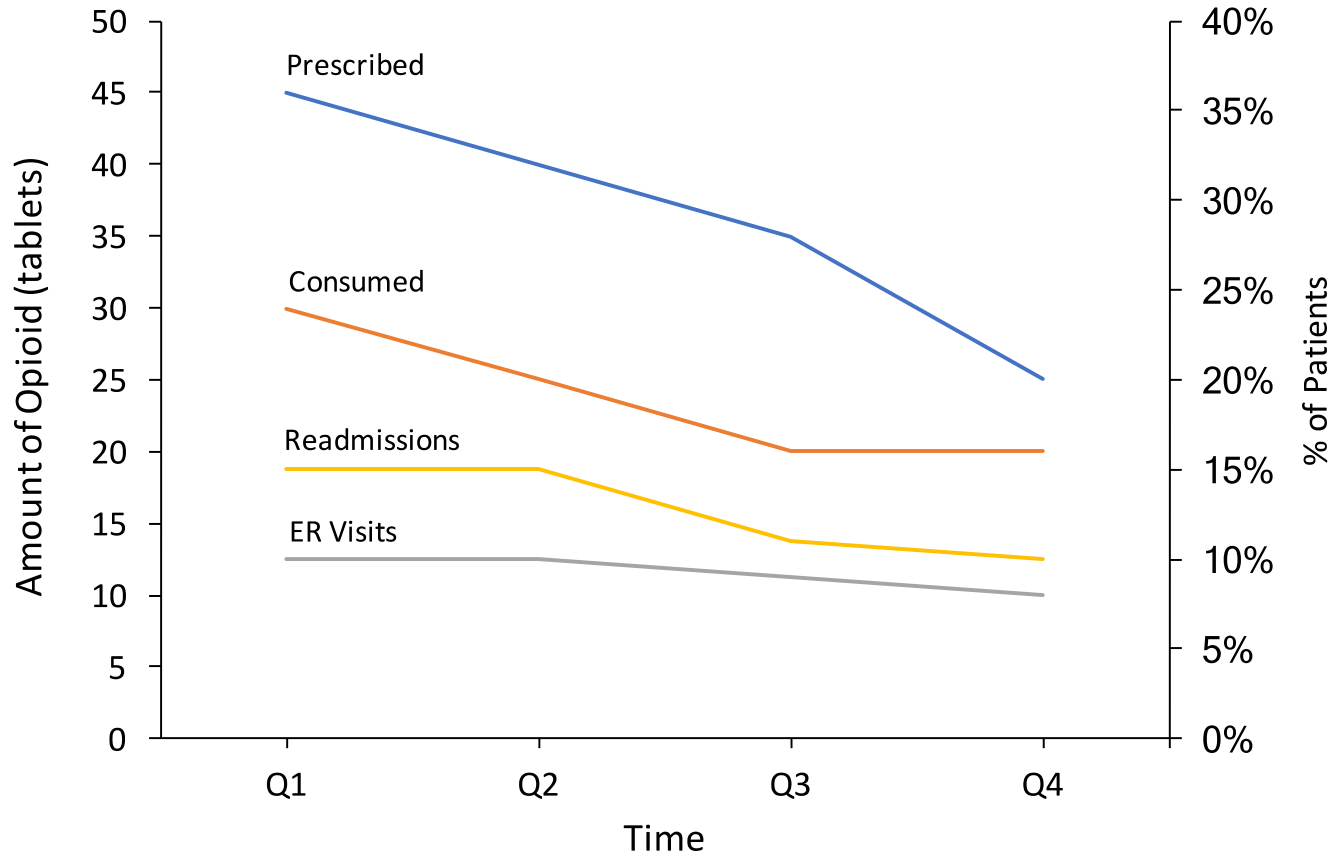
Michigan Surgical Collaborative



Vision for the Future

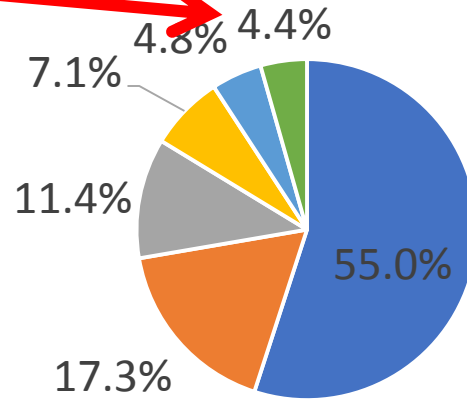


Vision for the Future



Source of Abused Prescription Painkillers

Source: CDC 2011/Drugfree.org



- Obtained free from friend or relative
- Bought from friend or relative
- Took from friend or relative without asking

- Prescribed a MD
- Other
- Got from drug dealer or stranger



Opioid Recovery Drive – September 30

Escanaba – OSF St. Francis Hospital

Gladwin - MidMichigan

Traverse City – Traverse City Police/Munson Medical

Grand Rapids – Dettmann Center

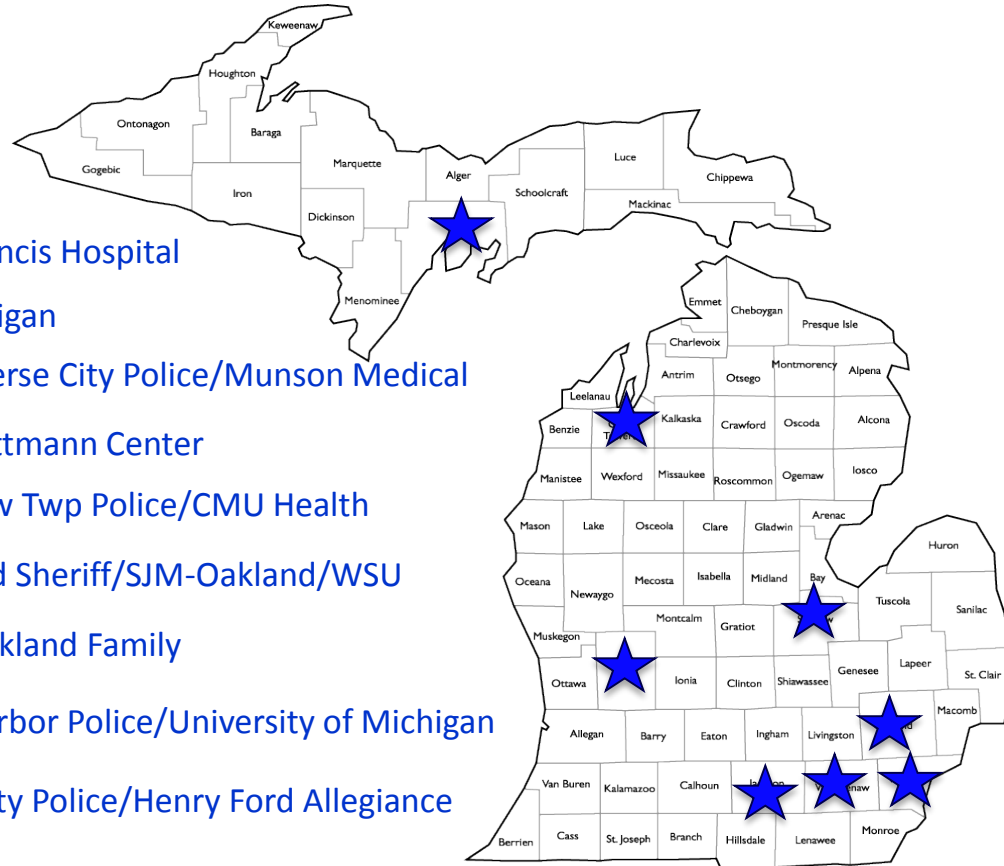
Saginaw – Saginaw Twp Police/CMU Health

Pontiac – Oakland Sheriff/SJM-Oakland/WSU

Livonia – New Oakland Family

Ann Arbor – Ann Arbor Police/University of Michigan

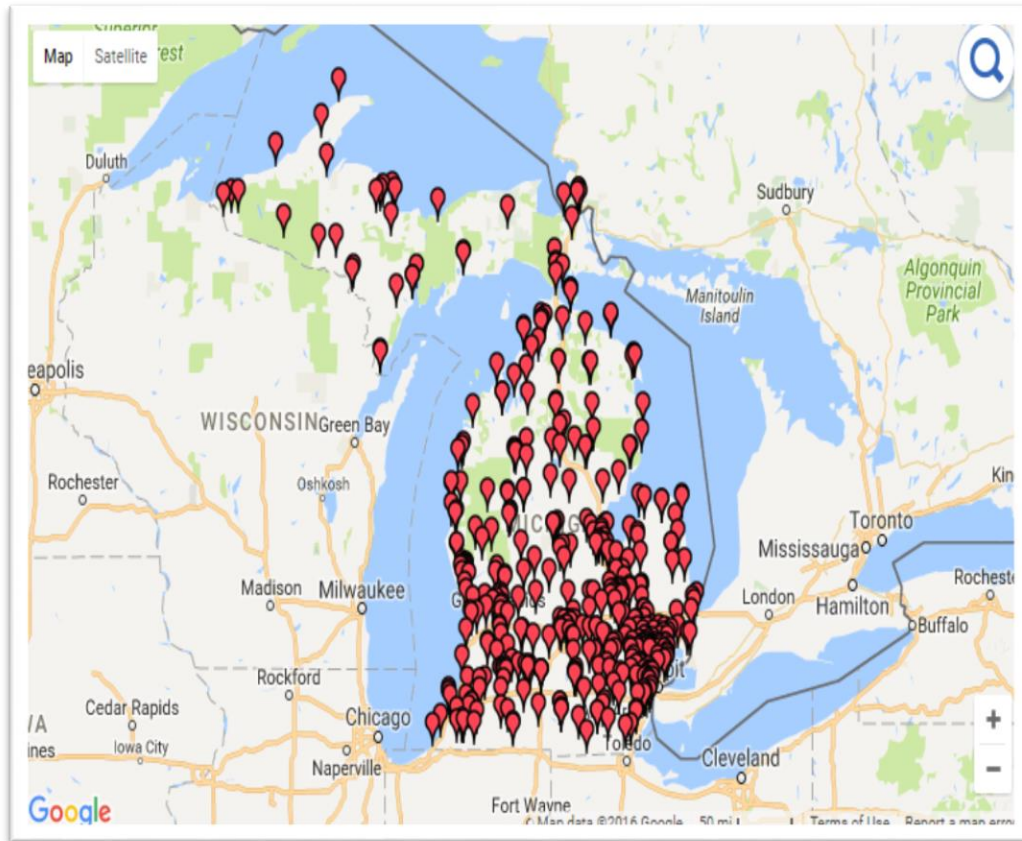
Jackson – Jackson City Police/Henry Ford Allegiance

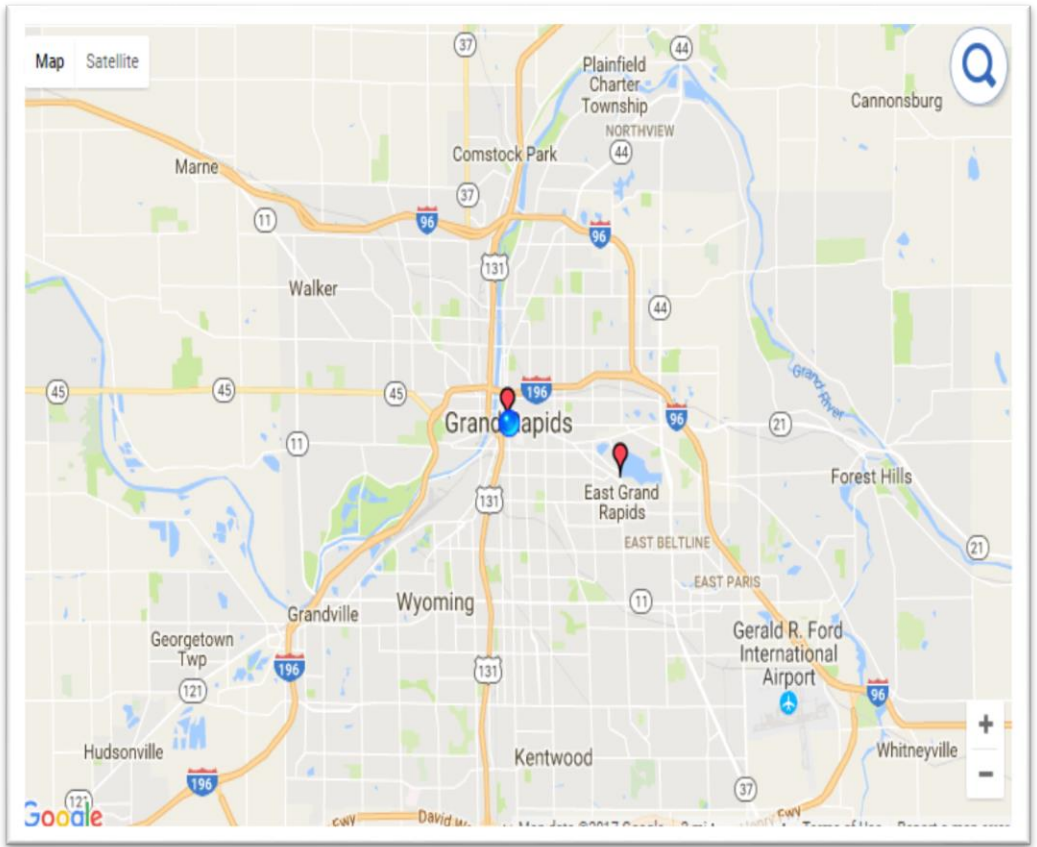


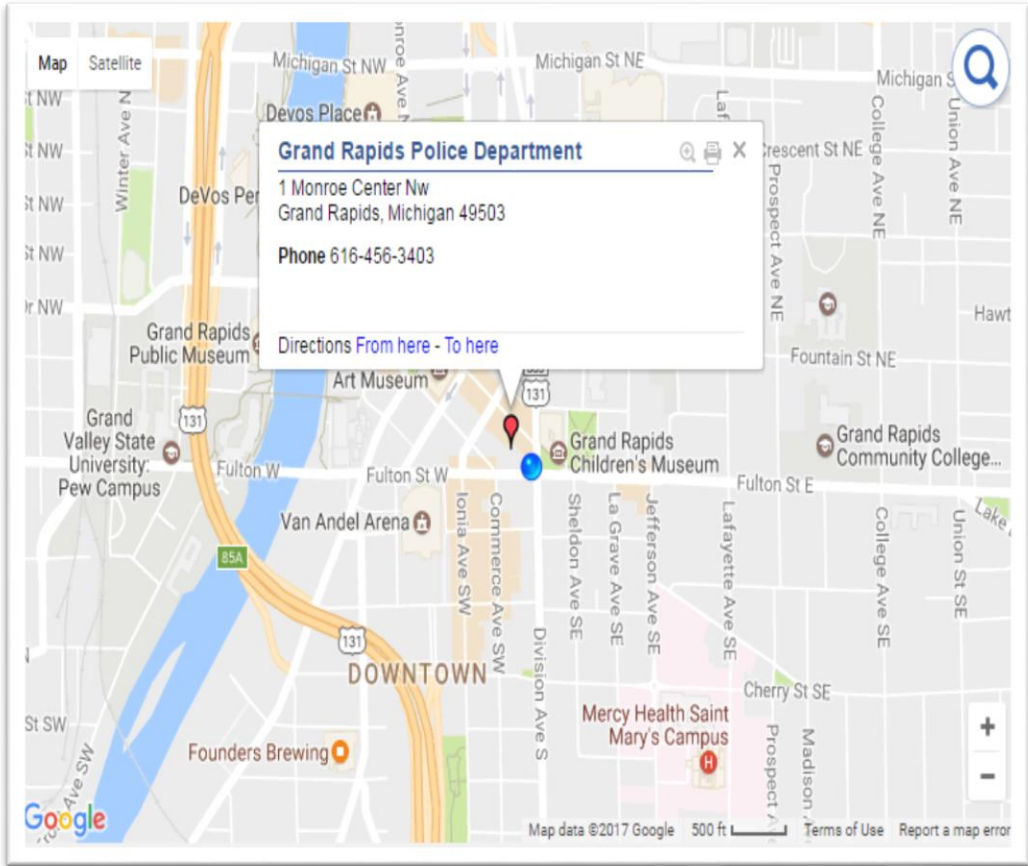


| Total of all sites September 30, 2017 | |
|---|---------|
| Total number of people | 766 |
| Pills | |
| Weight of pills | 900 |
| Estimated total number of medications of interest | 130,000 |
| Opioid pills | 17,500 |
| Other medications of interest | |
| Benzodiazepines and sedatives | 18,000 |
| Anti-depressants | 10,000 |
| Stimulants | 1,800 |
| Additional information | |
| Oldest opioid from all drives | 1976 |
| Oldest opioid from this event | 1984 |
| Most common reason for opioid | Surgery |

www.michigan-OPEN.org







Grand Rapids Police Department

1 Monroe Center Nw
Grand Rapids, Michigan 49503

Phone 616-456-3403

Directions [From here](#) - [To here](#)



A **preventative** approach
to the opioid epidemic.



Areas of Impact

Engaging
providers



Education



Informing
policy



Payment
reform



Local quality
improvement



Innovative
interventions

Community
outreach



At-risk
populations



Arts and
humanities



Patient Resources

Home / Patient Resources

COMING SOON: Ability to customize all brochures with your organization's logo!



Opioid Facts Brochure

Learn the facts about opioid pain medications including:

- What is an opioid
- Using opioids safely
- Opioid addiction
- Safe disposal of opioids

[DOWNLOAD BROCHURE](#)

Recent Articles



Dr. Brummett Awarded the 2017 James E. Cottrell Presidential Scholar Award
November 15, 2017



For 1 in 10 Cancer Patients, Surgery Means Opioid Dependence
November 8, 2017



Statewide drug takeback event nets 900 pounds of opioids & more
October 27, 2017



Dr. Brummett Speaks at U-M Wolverine Caucus
October 15, 2017

Do you know
the facts about
**opioid pain
medications?**



OPEN
OPIOID PRESCRIBING ENGAGEMENT NETWORK

Talking to your doctor about pain control



Talking to Your Doctor about Pain Control Brochure

Ask questions and know the facts before using opioids for your pain.

- What is an opioid
- Questions to ask your provider
- Things to remember after your surgery
- Safe disposal of opioids

DOWNLOAD BROCHURE

Mindful Breathing can help manage pain and anxiety after surgery.



1 Sit in a comfortable position
It may be helpful to close your eyes or to focus on an object.

Pain Management Techniques Brochure

Learn about strategies for managing pain and anxiety after surgery including:

- Mindful breathing
- Positive daily reflection

DOWNLOAD PRINTER-FRIENDLY BROCHURE

October 6, 2017



Michigan OPEN sponsors "Navigating the New and Improved MAPS"

July 19, 2017

Recent Videos



Changing Opioid Prescribing in Surgery

September 28, 2017



The Michigan Opioid Prescribing Engagement Network

May 28, 2016



Surgery and Opioids

May 25, 2016



The Opioid Epidemic

May 25, 2016



Targeting Opioid Abuse via Surgery-Related Prescribing

May 25, 2016

Patient Resources

Home / Patient Resources

Do you have leftover prescription pain medication?

Prescription pain medications (commonly called opioids) are often involved in accidental poisonings and intentional misuse.

It is important to safely dispose of these medications when you are done using them.

This brochure explains some environmentally-friendly options for safe disposal.



Medication Disposal Map Brochure

Learn how to safely dispose of medication using:

- Our interactive online map of Michigan disposal sites
- Other environmentally-friendly alternatives

DOWNLOAD BROCHURE

Recent Articles



Michigan OPEN sponsors "Navigating the New and Improved MAPS"

July 19, 2017



Dr. Waljee featured at PULSE: On the Front Lines of Health Care

June 16, 2017



Four hours. Six locations. 15,000 opioids out of circulation.

May 29, 2017



Michigan OPEN receives funding as part of State Targeted Response to the

Do you have leftover prescription pain medication?

Prescription pain medications (commonly called *opioids*) are often involved in accidental poisonings and intentional misuse.

It is important to
safely dispose of
these medications
when you are
done using them.



This brochure
explains some
environmentally-
friendly options
for safe disposal.

OPEN
OPIOID PRESCRIBING ENGAGEMENT NETWORK

You can return any unuse

To find collectors in your area
Michigan-OPEN
and see steps below...

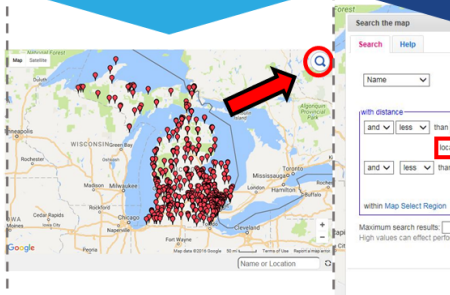
Curious to learn more about us?

Additional resources about safe opioid use, storage, and disposal can be found online at: **Michigan-OPEN.org**

Collector.

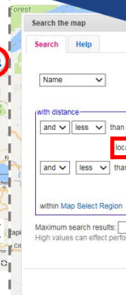
You can also ask your local law enforcement agency about upcoming medication take-back events.

STEP 1



Select the magnifying glass icon

STEP 2



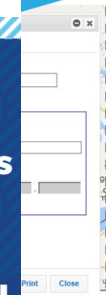
Enter in "local"

-  Education
-  Interventions
-  Guidelines
-  Safe Disposal

Michigan OPEN is partially funded by the Michigan Department of Health and Human Services

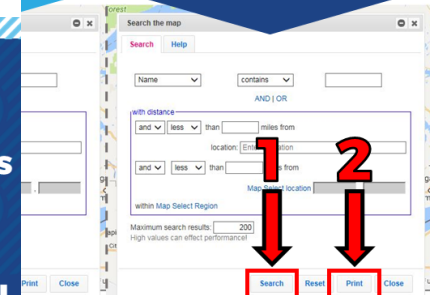
OPEN
OPIOID PRESCRIBING ENGAGEMENT NETWORK

STEP 3



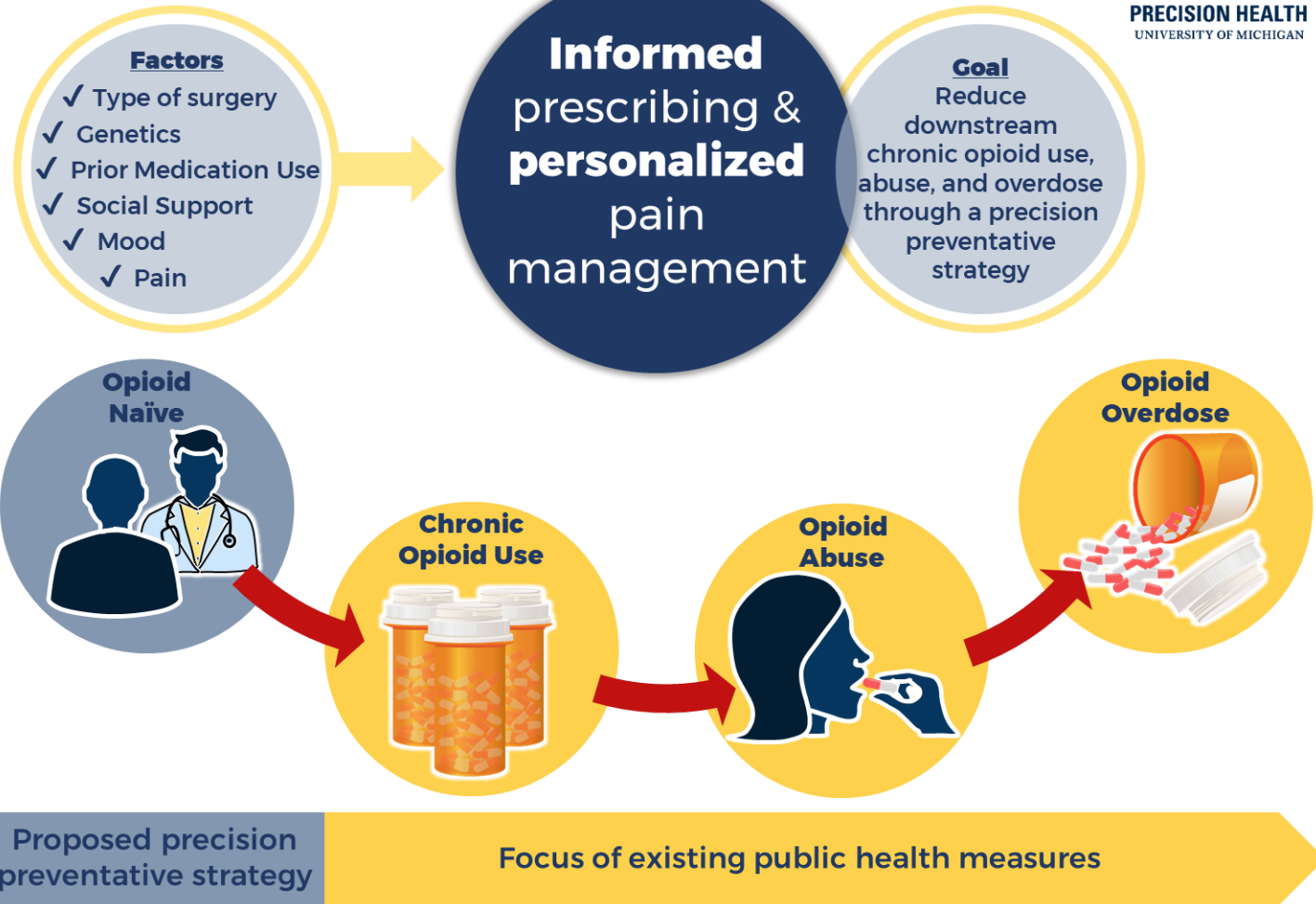
Select "Search"

STEP 4



Select "Search" and then "Print" to create a pop-up window of opioid disposal locations

Precision Opioid Prescribing



Michigan Genomics Initiative

over

50,000

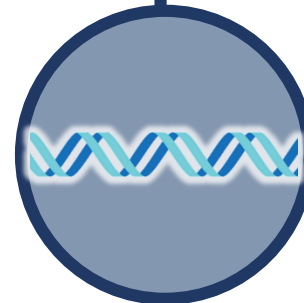
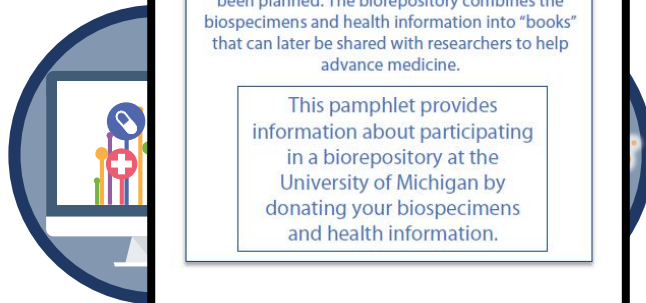
participants

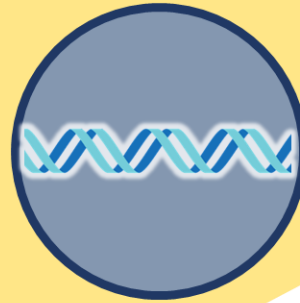
80%

opioid
naïve

The purpose of a **biorepository** is to store bodily materials (biospecimens) and personal health information for research projects that have not yet been planned. The biorepository combines the biospecimens and health information into "books" that can later be shared with researchers to help advance medicine.

This pamphlet provides information about participating in a biorepository at the University of Michigan by donating your biospecimens and health information.







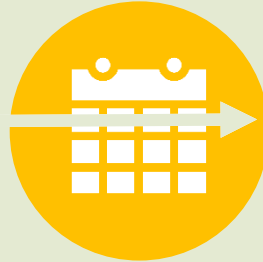
Surgery

- Opioid users vs non-users
- Benzodiazepine use



Acute Pain

- Opioid efficacy
- Opioid side effects
- Opioid likeability



Subacute Pain



Chronic Opioid Use

- New chronic opioid use
- Efficacy of chronic opioid use
- Misuse of opioids
- Opioid abuse
- Overdose



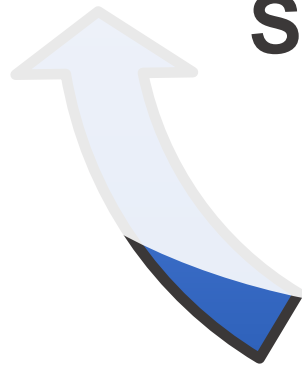
Opioid Misuse & Abuse



Reductions in
patient opioid
consumption

New prescribing
recommendations
based on patient
consumption

Monitor
Satisfaction,
PROs



Reductions in
opioid prescribing

Michigan OPEN Co-Directors



Jennifer Waljee, MD, MPH,
MS
Plastic and Hand Surgery

Michael Englesbe, MD
Transplant Surgery

Chad Brummett, MD
Pain Medicine/Anesthesiology





OPEN



OPIOID PRESCRIBING ENGAGEMENT NETWORK

Learn more about our work:

<http://michigan-open.org/>

History of Indiana's trauma system

Spencer Grover, *Vice President*
Indiana Hospital Association



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

ISDH emergency preparedness division overview

Lee Christenson, *Director*

ISDH division of emergency preparedness



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

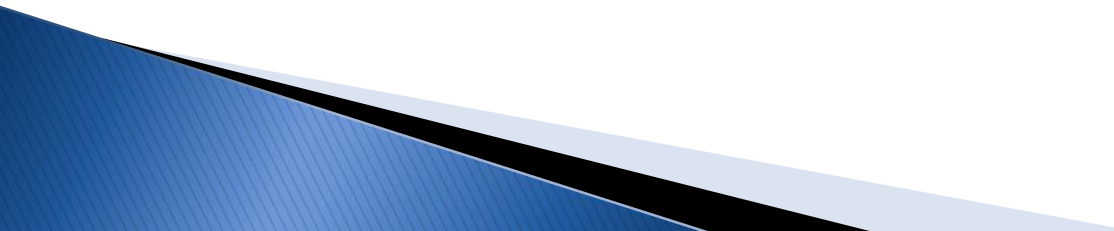
Healthcare Preparedness Program and District Coalition Development

**Lee Christenson, M.S., CEM
Director, Division of Emergency Preparedness
Indiana State Department of Health**



Indiana State Department of Health

Division of Emergency Preparedness

- ▶ Serve as lead for state health and medical emergency preparedness and response efforts
 - ▶ Administer federal funding to local partners for Healthcare Preparedness Program and Public Health Preparedness Program
- 

Healthcare Preparedness Funding

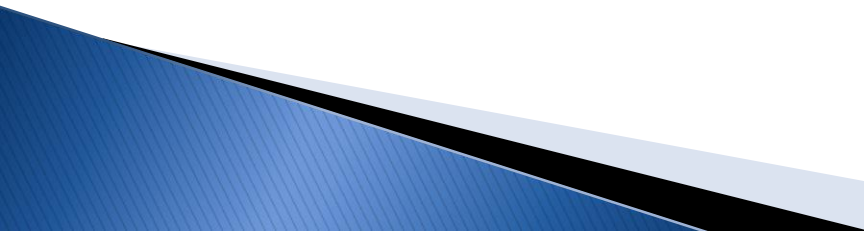
Budget Period 1 (7/1/17 – 6/30/18)

- Total Award = \$3,934,926

10 District 501c3 Hospital Coalition Support

- Total = \$3,212,305
 - \$2,800,000 in direct funding
 - \$412,305 in technical assistance
(communications/field coordinators)

Coalition Development

- Started with 10 District, 501c3 hospital corporations, with representatives from nearly all acute care hospitals in the state
 - Federal grant requiring them to expand through integration of hospitals, public health, emergency management, and EMS by 7/1/18
 - Objective is to incorporate key partners into decision making regarding the efficient use of funds for the betterment of the whole District
- 

Expected Outcomes

- ▶ Strengthen partnerships and awareness regarding jurisdictional capabilities
- ▶ Develop coordinated and standardized plans and protocols
- ▶ Conduct joint training and exercise
- ▶ Fund District events and activities related to information sharing and education. Examples may include:
 - District information sharing platforms/websites
 - Preparedness conferences and Trauma Symposiums
 - Shared resources

Additional Information

**Division of Emergency Preparedness
Coalition Website:**

<http://www.in.gov/isdh/25853.htm>

Lee Christenson, Director

Indiana State Department of Health
Division of Emergency Preparedness
317-234-6279

Lchristenson@isdh.in.gov

Regional Updates



Indiana State
Department of Health

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Email questions to: indianatrauma@isdh.in.gov

Regional updates

- District 2
- District 3
- District 4
- District 7
- District 8
- District 10



Indiana State
Department of Health

Subcommittee Update

Designation Subcommittee

Dr. Lewis Jacobson, *Trauma Medical Director*
St. Vincent Indianapolis Hospital



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

Memorial Hospital & Health Care Center

- **Located: Jasper, Indiana**
- **Seeking: Level III adult trauma center status**
- **The one year review was reviewed and the following issues were identified:**
 - **Lacking external trauma-related CMEs for trauma surgeons – DUE December 1.**
 - **Operational process performance committee and trauma peer review committee meetings had wrong dates.**
 - **Need to address emergency medicine attendance at trauma peer review committee meetings by December 1.**
- **Consultation Visit: May 2017**
- **Verification visit scheduled for: May 2018**

“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 Health Crown Point | Crown Point | III | Adult | 12/18/2015 | February 2017 | 09/26-09/27, 2016 | 12/04-12/05, 2017 |
| | | | | | | | |
| Memorial Hospital & Health Care Center | Jasper | III | Adult | 08/24/2016 | October 2017 | 05/16-05/17, 2017 | May 2018 |

*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. |
|---|

Subcommittee Update

Performance Improvement Subcommittee

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



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov



ISDH Performance Improvement Subcommittee December 2017 update

Meeting November 14, 2017

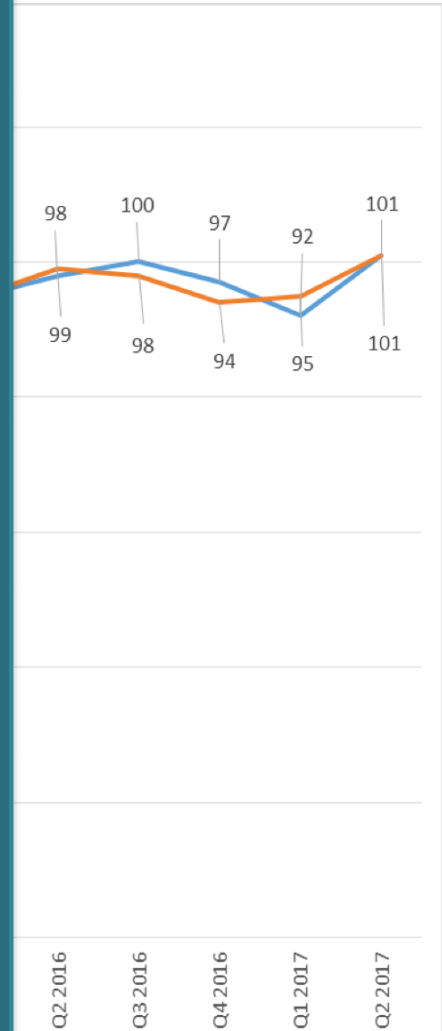
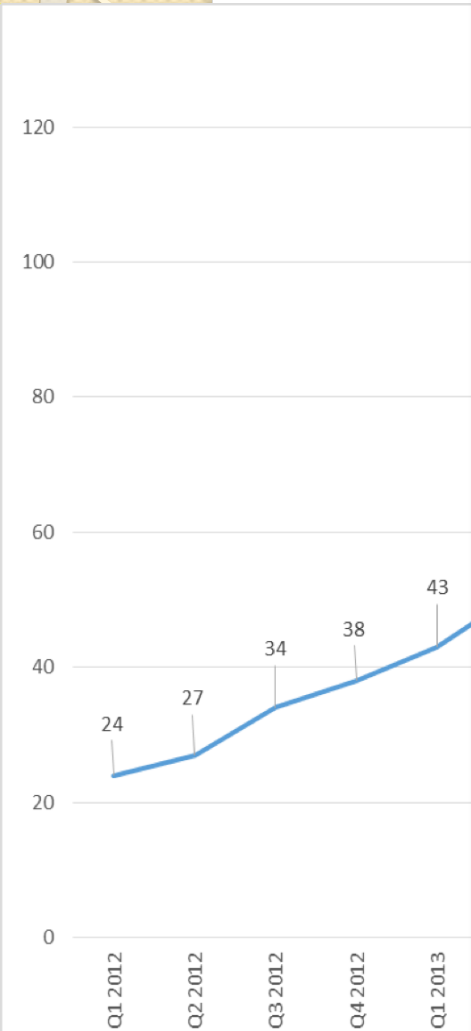
Districts Present : 1, 2, 3, 4, 5, 6, 7, 8 + IHA, ISDH

| Meeting Attendees | | | |
|--------------------------|---------------------|----------------------------------|-------------|
| Amanda Rardon-D4 | Kelli Vannatter-D6 | Michelle Moore-D6 | |
| Amelia Shouse-D7 | Kelly Blanton-D5 | Michelle Ritchey-D7 | |
| Andy VanZee-IHA | Kelly Mills-D7 | Missy Hockaday-D5 | |
| Angela Cox-Booe-D5 | Kristi Croddy-D5 | Olivia Roloff-D7 | |
| Annette Chard-D3 | Latasha Taylor-D1 | Dr. Peter Jenkins-IUH | |
| Bekah Dillon-D6 | Lesley Lopossa-D8 | Regina Nuseibeh-D4 | |
| Brittanie Fell-D7 | Lindsey Hill- | Rexene Slayton-D8 | |
| Carrie Malone-D7 | Lindsey Williams-D8 | Sarah Quaglio-D6 | |
| Christy Claborn-D5 | Lisa Hollister-D3 | Sarah Hoepner-D3 | |
| Chuck Stein-D5 | Lynne Bunch-D6 | Shayla Karlowsky-D1 | |
| Dawn Daniels-D5 | Maria Thurston-D5 | Dr. Stephanie Savage (Chair)-IUH | |
| Dusten Roe-D2 | Marie Stewart-D10 | Tammy Robinson-D7 | |
| Emily Grooms-D2 | Mark Rohlfing-D6 | Tracy Spitzer-D5 | |
| Jennifer Homan-D1 | Mary Schober-D5 | Wendy St. John-D5 | |
| Jennifer Mullen-D1 | Melissa Smith-D5 | | |
| Jill Castor-D5 | Merry Addison-D7 | | |
| Jodi Hackworth-D5 | Michele Jolly-D10 | | |
| ISDH STAFF | | | |
| Camry Hess | Katie Hokanson | Pravy Nijjar | Ramzi Nimry |

PI Update – November 2017

Hospitals that did not report for Quarter 2 2017:

Decatur County Memorial Hospital
 Fayette Regional Health
 Franciscan Health – Dyer
 Franciscan Health – Hammond
 Franciscan Health – Indianapolis
 Franciscan Health – Munster
 Goshen Hospital
 Major Hospital
 Pulaski Memorial
 Riverview Health
 Scott County Memorial Hospital
 Starke Hospital
 St. Catherine Regional – Charlestown
 St. Mary Medical Center – Hobart
 St Vincent – Randolph
 Sullivan County Community

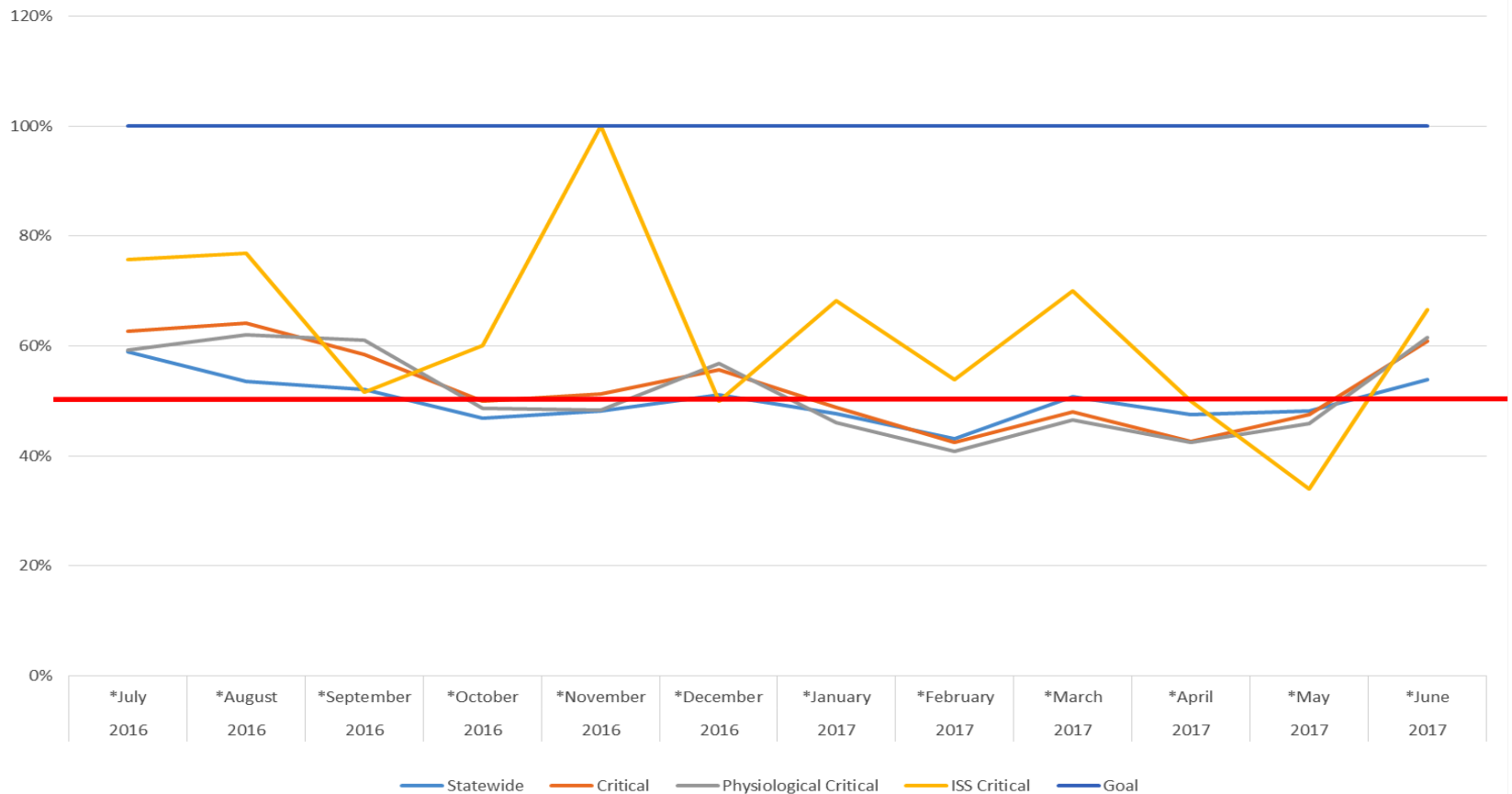


— By Deadline — After Deadline

PI Update – November 2017

ED Length of Stay – Time to Orders Written

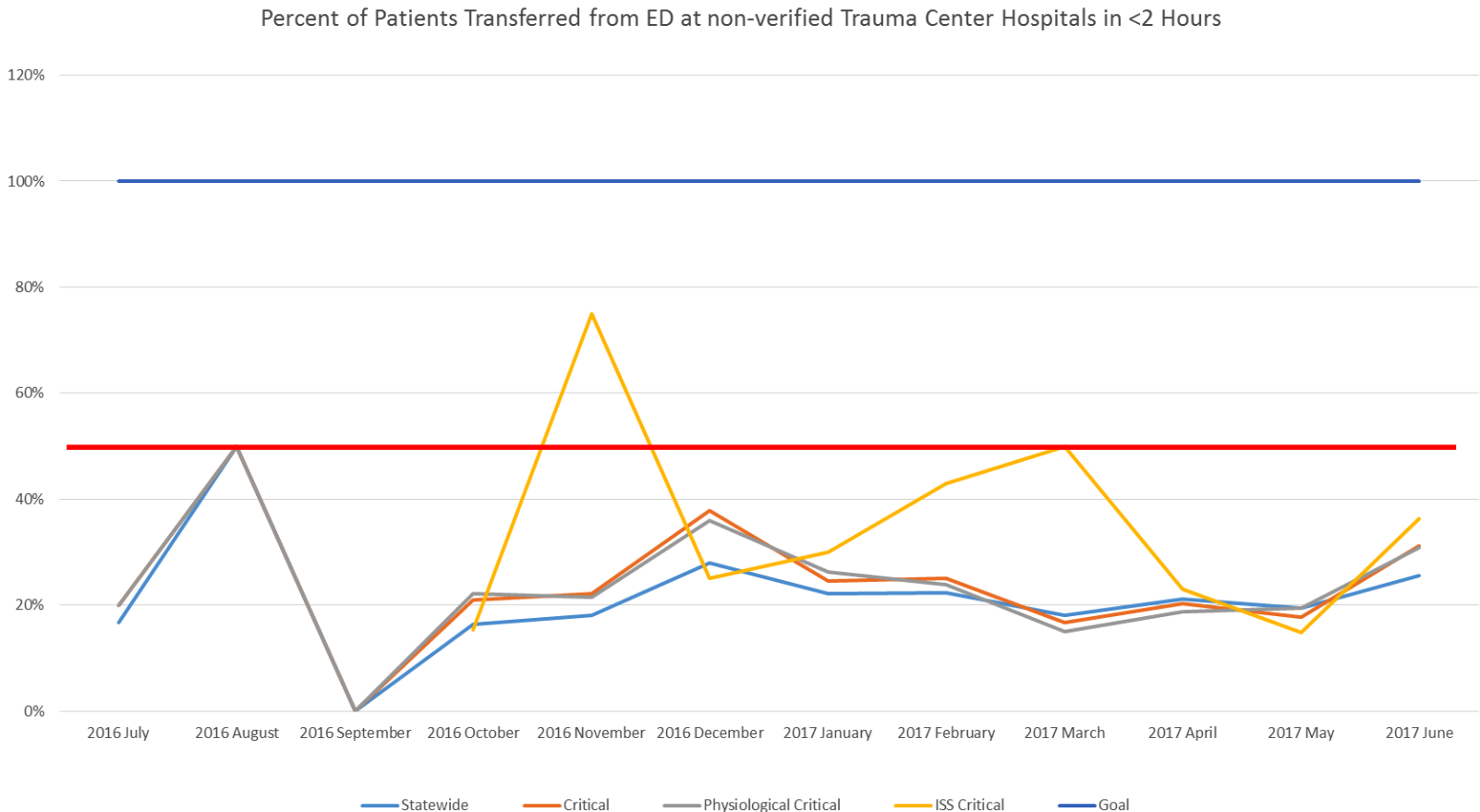
Percent of Patients Transferred from ED at non-verified Trauma Center Hospitals in <2 Hours



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

PI Update – November 2017

ED Length of Stay – Time to ED Departure



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

November 2017

We will enlist the help of the districts to drill-down on their specific delay issues

- ED departure time will be the focus

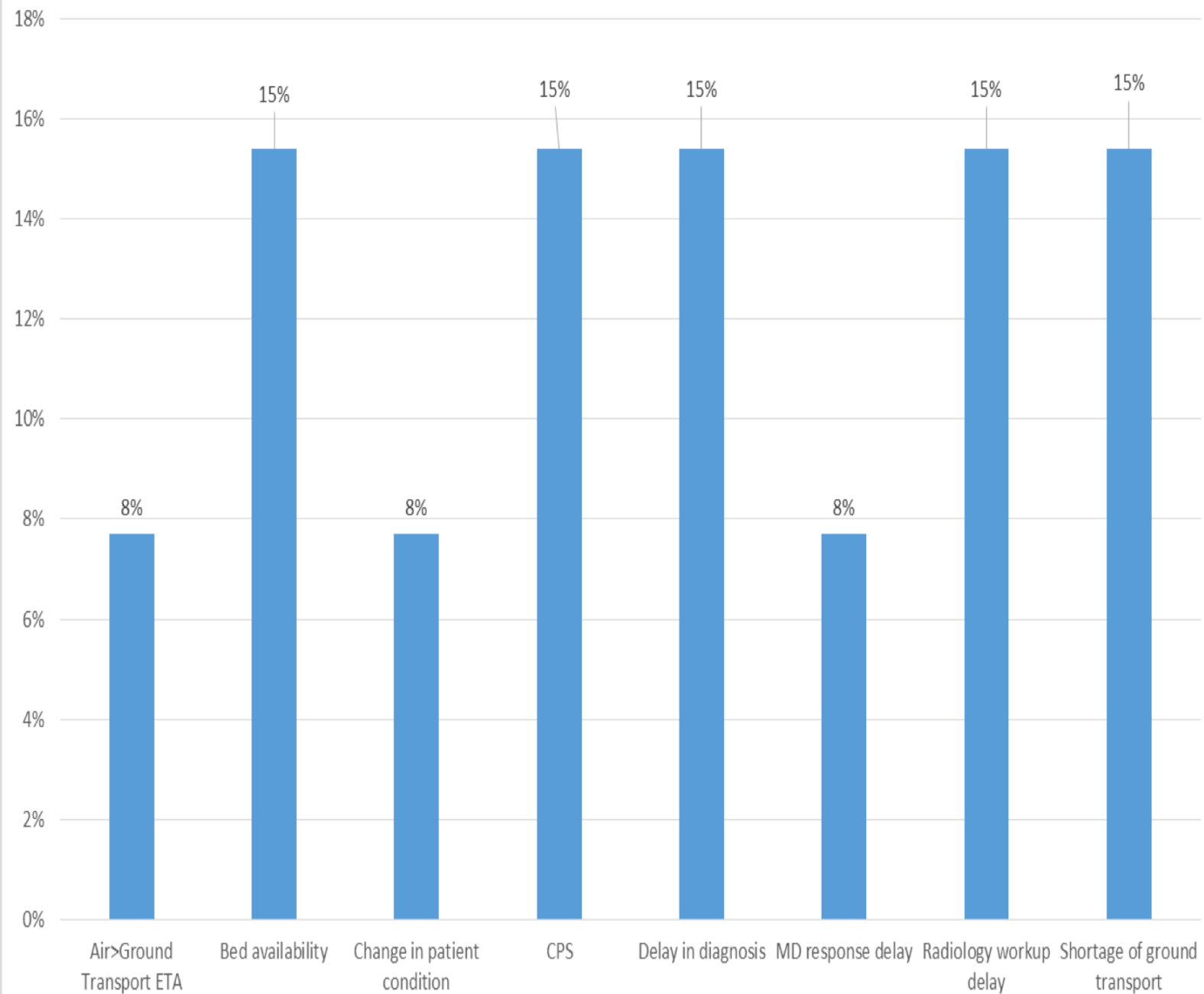
| District | Reason for Delay |
|-------------|------------------------------------|
| District 1 | Receiving hospital issue |
| District 2 | |
| District 3 | Radiology issues/Weather factors |
| District 4 | Receiving hospital issue |
| District 5 | Receiving hospital issue |
| District 6 | Referring MD decision making |
| District 7 | EMS issues |
| District 8 | EMS issues |
| District 9 | Receiving hospital/Weather factors |
| District 10 | EMS issues |

PI Update – November 2017

Pilot Project Data – Transfer Delays

- 5 original facilities continue to enter data using the more robust tool
- 11 new centers have been recruited to use
- will continue to amass data on delays

Transfer Delay Reason



PI Updates – November 2017

New focus : committee will start to focus on patients with high ISS who are not transferred to trauma centers

Reminder : districts should start reminding hospitals to participate in registry quiz

EMS run sheets : email Murray Lawry if you are not receiving run sheets

Mlawry@isdh.IN.gov

Trauma system planning subcommittee update

Dr. Matthew Vassy, *Trauma Medical Director*
Deaconess Hospital



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

Updates

Katie Hokanson, *Director of Trauma and Injury Prevention*



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

Trauma Center Verifications

- Community Hospital Anderson



Indiana State
Department of Health

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Email questions to: indianatrauma@isdh.in.gov

Division staffing updates

- Audrey Rehberg
 - Naloxone program manager
- Opening
 - Injury prevention epidemiologist

2018 EMS Medical Director's Conference



5th annual
EMS
Medical Directors'
Conference

Friday, April 27, 2018

Ritz Charles
12156 N. Meridian Street
Carmel, IN 46032

8am - 5pm

SAVE THE DATE

Get notified when registration opens!

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



Email questions to: indianatrauma@isdh.in.gov

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

Quarter 2 Trauma Registry Data Report

Camry Hess, *Data Analyst*

Paravdeep (Pravy) Nijjar, *Registry Coordinator*

Indiana State Department of Health



**Indiana State
Department of Health**

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2017

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 2 2017

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

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2017

District 3

Adams Memorial Hospital

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 - Frankfort Hospital

IU Health - White Memorial

Memorial Hospital (Logansport)

St. Vincent Williamsport Hospital

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2017

District 5

Community East Health Network

Community Hospital

Community North Health Network

Community Hospital

Community South Health Network

Community Hospital

Eskenazi Health

Franciscan Health – Indianapolis

Franciscan Health – Mooresville

Hancock Regional Hospital

Hendricks Regional Health

IU Health – Methodist Hospital

IU Health – Morgan Hospital

IU Health – North Hospital

IU Health – Riley for Children

IU Health - Saxony Hospital

IU Health – West Hospital

Johnson Memorial Hospital

Major 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

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2017

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

Rush Memorial Hospital

St. Vincent Anderson Regional Hospital

St. Vincent Kokomo

St. Vincent Mercy Hospital

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2017

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

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2017

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

Baptist Health Floyd
Clark Memorial Hospital
Dearborn County Hospital
Decatur County Memorial
Hospital
King's Daughters' Health
Margaret Mary Community
Hospital
Scott County Memorial Hospital

Email questions to: indianatrauma@isdh.in.gov

Hospitals reporting to the Indiana Trauma Registry - Quarter 2 2017

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. Vincent Evansville

St. Vincent Jennings

St. Vincent Warrick

Email questions to: indianatrauma@isdh.in.gov

Summary of Hospitals Reporting Status- Q2 2017

New to Reporting / Started Reporting Again

- Adams Memorial Hospital
- Dearborn County Hospital
- Dukes Memorial Hospital
- Elkhart General Hospital
- Franciscan Health Crown Point
- IU health La Porte Hospital
- Perry County Memorial Hospital
- Rush Memorial Hospital
- St Vincent Fishers Hospital
- St Vincent Jennings Hospital
- Valparaiso Medical Center

Email questions to: indianatrauma@isdh.in.gov

Summary of Hospitals Reporting Status- Q2 2017

Did not Report

- Major Hospital
- St Vincent Clay Hospital
- Woodlawn Hospital

Quarter 2 2017 Statewide Report

- 9,990 incidents
- April 1, 2017 – June 30, 2017
- 100 total hospitals reporting
 - 10 Level I and II Trauma Centers
 - 12 Level III Trauma Centers
 - 78 Non-Trauma Hospitals

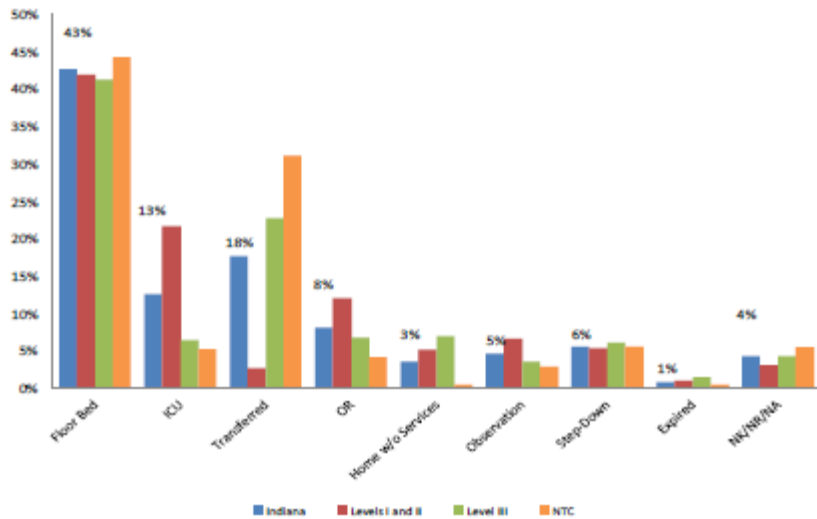


Indiana State
Department of Health

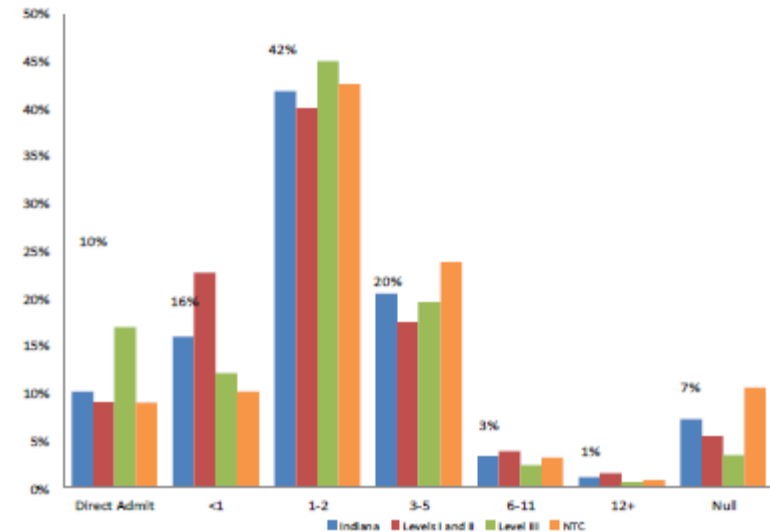
Email questions to: indianatrauma@isdh.in.gov

ED Disposition / Length of Stay - Page 2

ED Disposition by Percentage

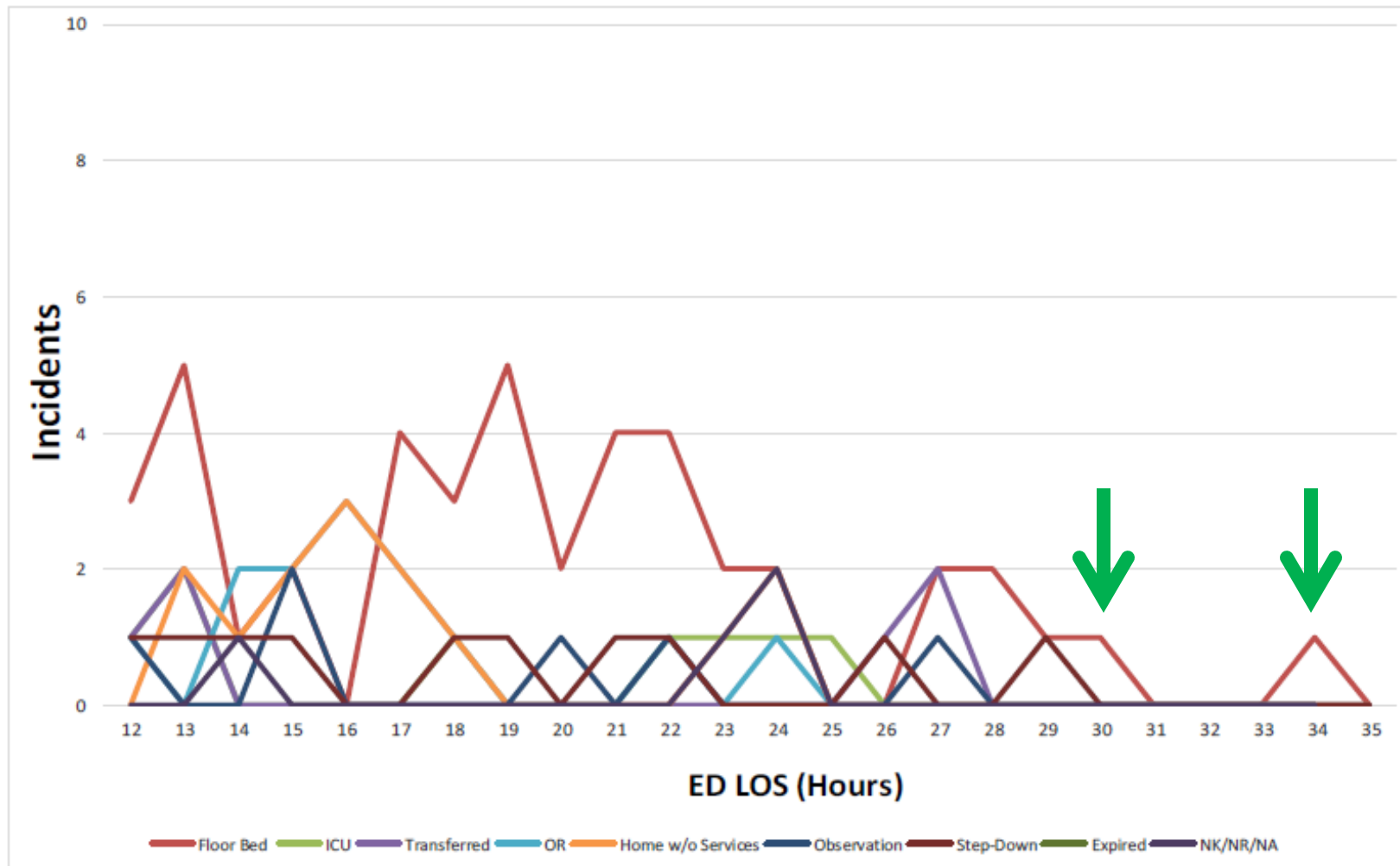


ED Length of Stay (Hours)



ED LOS > 12 Hours - Page 3

ED Disposition for ED LOS >12 Hours



ED LOS > 12 Hours - Page 4

ED LOS > 12 Hours, N=109

| | | | |
|--|--|-------------------------|---|
| Facilities | 76 Level I and II 33 Non-trauma Centers | Region | 14 North; 63 Central; 11 South; 21 Unknown/Out of State |
| Average Distance from Scene to Facility | 22.9 Miles | ISS | 71 (1-8 cat); 29 (9-15 cat); 7 (16-24), 2 (25-44) |
| Transport Type | 80 Ambulance; 22 Private Vehicle; 1 Police ; 6 Unknown | GCS Motor | 1 (2 cat); 1 (3 cat); 48 (4 cat); 59 (unknown) |
| Cause of Injury | 29Transport; 56 Falls; Inanimate mechanical force 5; animate mechanical forces 2, drowning 1 16 Not Identified | RTS—Systolic | 4 (2-3) ;100 (4) |
| Signs of Life | 108 Yes 1 No | RTS—Resp. Scale | 2 (0-1) ;103 (3) |
| Age | 51.83 Years (3-98 Years) | Resp. Assistance | 11 Yes; 94 No; 5 Unknown |
| Gender | 59 Female; 50 Male | ED LOS Hours | 109 (12-35) |
| Interfacility Transfer | 26 Yes; 83 No | ED Disposition | 44 Floor; 14 Home without services; 8 ICU; 6 Observation; 13 OR; 10 Step Down; 6 Transferred; 9 Unknown |

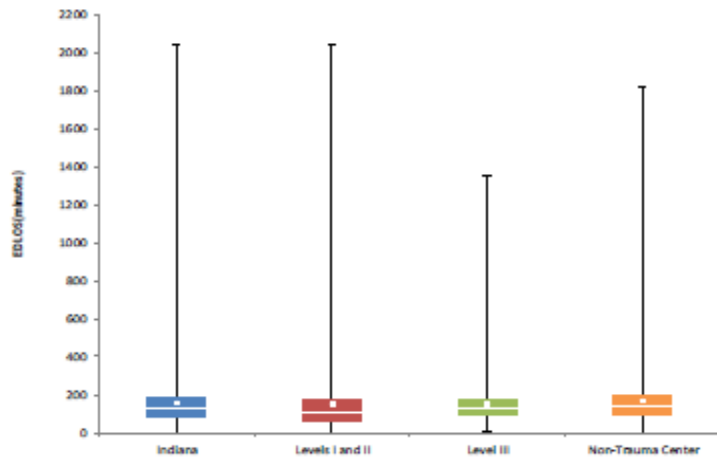
-Region was created from injury zip code. Missing = no injury zip or injury zip from out of state.

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

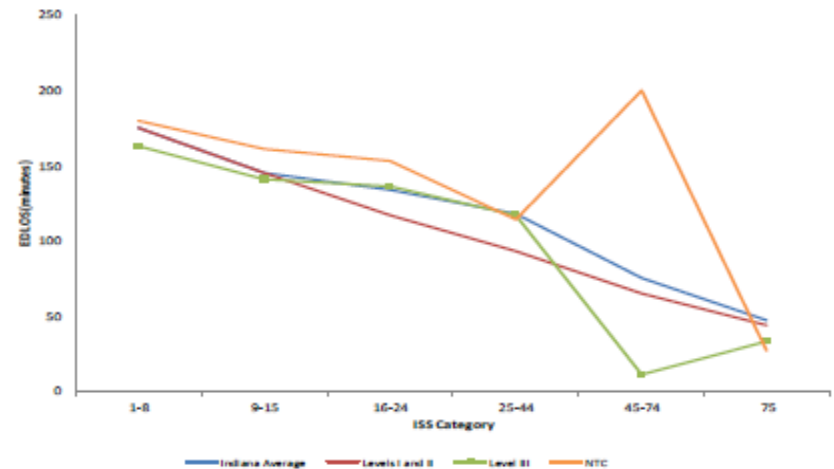
-No signs of life is defined as having none of the following: organized EKG activity, papillary responses, spontaneous respiratory attempts or movement, and unassisted blood pressure. This usually implies the patient was brought to the ED with CPR in progress (2015 Trauma Registry Data Dictionary, page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

ED Length of Stay: Bar & Whisker - Page 5

ED LOS (Minutes) - All Patients



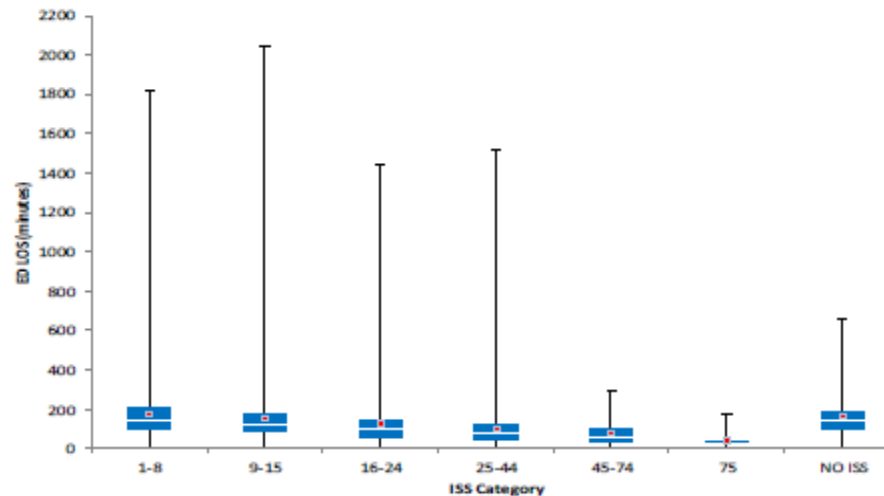
ED LOS (Minutes) by ISS



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

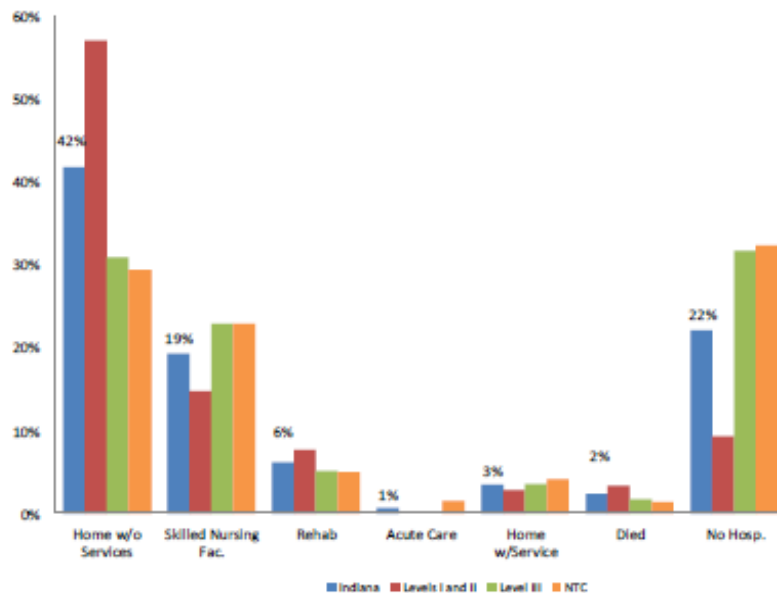
Note for EDLOS by ISS, there were 26 cases with ISS of 75; none were at a non-trauma center.

ED LOS (Minutes) by ISS

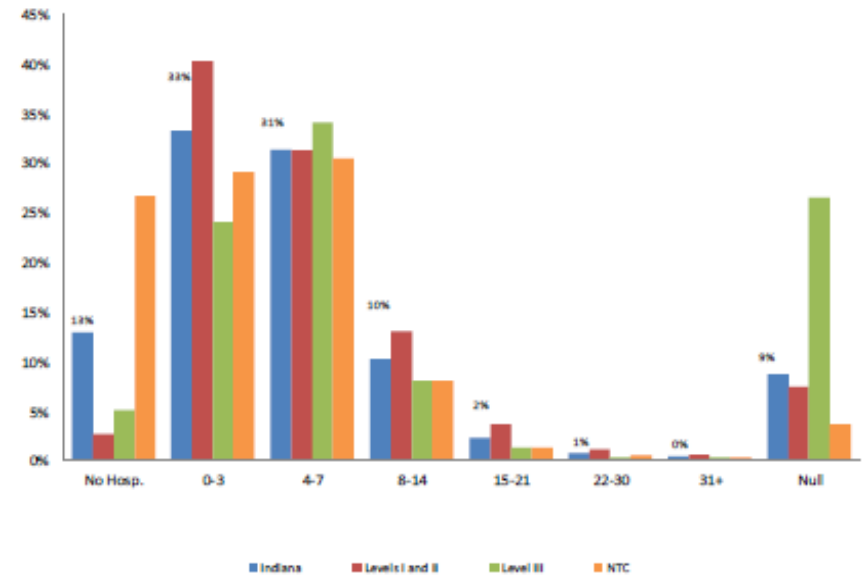


Hospital Disposition and LOS - Page 6

Hospital Disposition



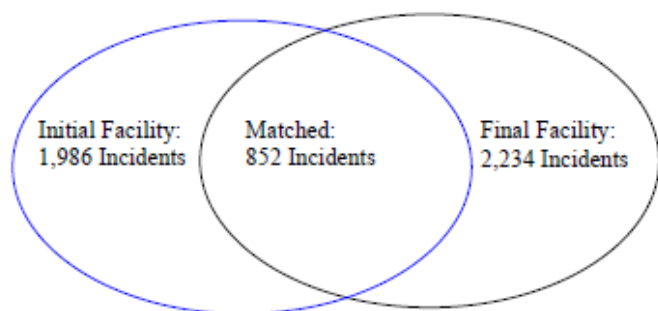
Hospital Length of Stay (days)



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

Linking - Page 7

For Quarter 2 2017, of the 9,990 incidents reported to the Indiana Trauma Registry, 1,986 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, 852 cases were probabilistically matched. The linked cases make up 8.5% of the Q2 2017 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.



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 2016.

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.

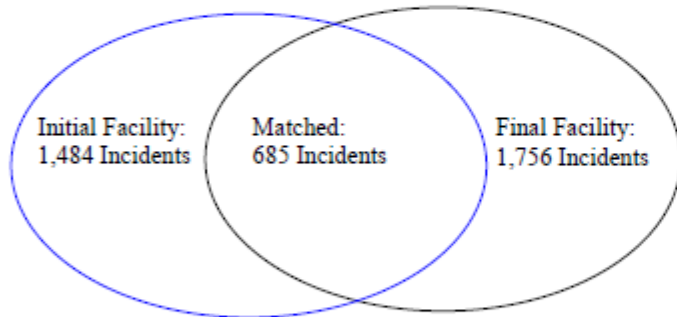
| CAH List | |
|-------------------------------------|---|
| Adams Memorial Hospital | Perry County Memorial Hospital |
| Cameron Memorial Community Hospital | Pulaski Memorial Hospital |
| Community Hospital of Bremen | Putnam County Hospital |
| Decatur County Memorial Hospital | Rush Memorial Hospital |
| Dukes Memorial Hospital | Scott Memorial Hospital |
| Gibson General Hospital | St. Vincent – Clay Hospital |
| Greene County General Hospital | St. Vincent – Dunn Hospital |
| Harrison County Hospital | St. Vincent – Frankfort Hospital |
| IU Health – Bedford Hospital | St. Vincent – Jennings Hospital |
| IU Health – Blackford Hospital | St. Vincent – Mercy Hospital |
| IU Health – Paoli Hospital | St. Vincent – Randolph Hospital |
| IU Health – Tipton Hospital | St. Vincent – Salem Hospital |
| IU Health – White Memorial Hospital | St. Vincent – Warrick Hospital |
| Jasper County Hospital | St. Vincent – Williamsport Hospital |
| Jay County Hospital | Sullivan County Community Hospital |
| Margaret Mary Community Hospital | Union Hospital Clinton |
| Parkview LaGrange Hospital | Woodlawn Hospital |
| Parkview Wabash Hospital | |
| Rural List | |
| Columbus Regional Hospital | King’s Daughters’ Health |
| Daviess Community Hospital | Kosciusko Community Hospital |
| Fayette Regional Health System | Major Hospital |
| Franciscan Health-Michigan City | Marion General Hospital |
| Franciscan Health-Crawfordsville | Memorial Hospital (Logansport) |
| Good Samaritan Hospital | Memorial Hospital & Health Care Center (Jasper) |
| Henry Community Health | Parkview Noble Hospital |
| IU Health – La Porte Hospital | Reid Health |
| IU Health – Starke Hospital | St. Joseph’s Regional Medical Center – Plymouth |
| Schneck Medical Center | |

Historical Links - Page 8

Historical Links



For Quarter 3, 2016, of the 8,916 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 18% of the Q3 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 4, 2016, of the 8,916 incidents reported to the Indiana Trauma Registry, 1,484 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, 685 cases were probabilistically matched. The linked cases make up 21% of the Q4 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.



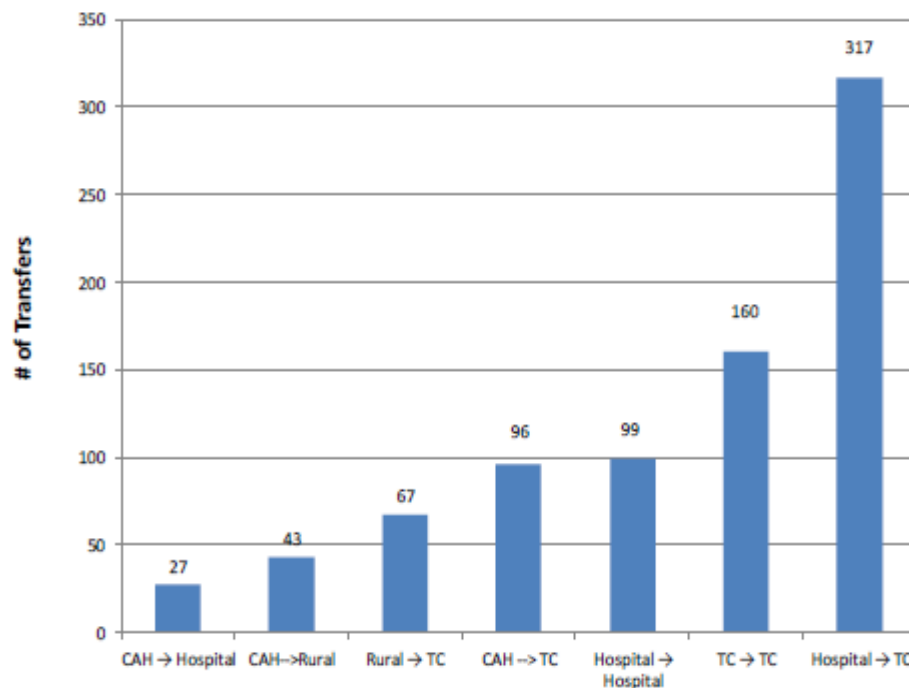
For Quarter 1 2017, of the 7,805 incidents reported to the Indiana Trauma Registry, 1,210 cases that had an ED Disposition of “Transferred to another acute care facility” at the initial facility or that had the Inter-Facility Transfer equal to “Yes” at the Trauma Center. Of those transferred, 600 cases were probabilistically matched. The linked cases make up 21% of the Q1 2017 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 |
| Hospital | Hospital | 99 |
| Critical Access Hospital | Rural Hospital | 43 |
| Critical Access Hospital | Hospital | 27 |
| Critical Access Hospital | Trauma Center | 96 |
| Rural Hospital | Trauma Center | 67 |
| Trauma Center | Trauma Center | 160 |
| Hospital | Trauma Center | 317 |

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

Email questions to: indianatrauma@isdh.in.gov

Linked Transfer Patient Averages - Page 10

For Linked Transfer Patients:

| For Transfer Patients: | | | | |
|--|-------------------------|-------------------------|--------------------------|-------------------------|
| | All Transfer Patients | Critical* | Physiological Critical** | ISS Critical*** |
| Number of Patients | 852 | 308 | 232 | 105 |
| EMS Notified to Scene | 8.2 minutes | 8.02 minutes | 7.4 minutes | 8.6 minutes |
| EMS Scene Arrival to Departure | 16.5 minutes | 15.7 minutes | 14.9 minutes | 16.7 minutes |
| EMS Scene Departure to Initial Hospital ED Arrival | 18.1 minutes | 15.9 minutes | 16.2 minutes | 16.8 minutes |
| Initial Hospital ED Arrival to Departure | 2 hours 2 minutes | 1 hours 57 minutes | 1 hours 52.8 minutes | 2 hour |
| Initial Hospital ED Departure to Final Hospital ED Arrival | 2 hours 3.9 minutes | 1 hours 57 minutes | 2 hours 2.7 minutes | 1 hour 47.4 minutes |
| TOTAL TIME | 4 hours 48.6 minutes | 4 hours 33.6 minutes | 4 hours 33.9 minutes | 4 hours 29.4 minutes |

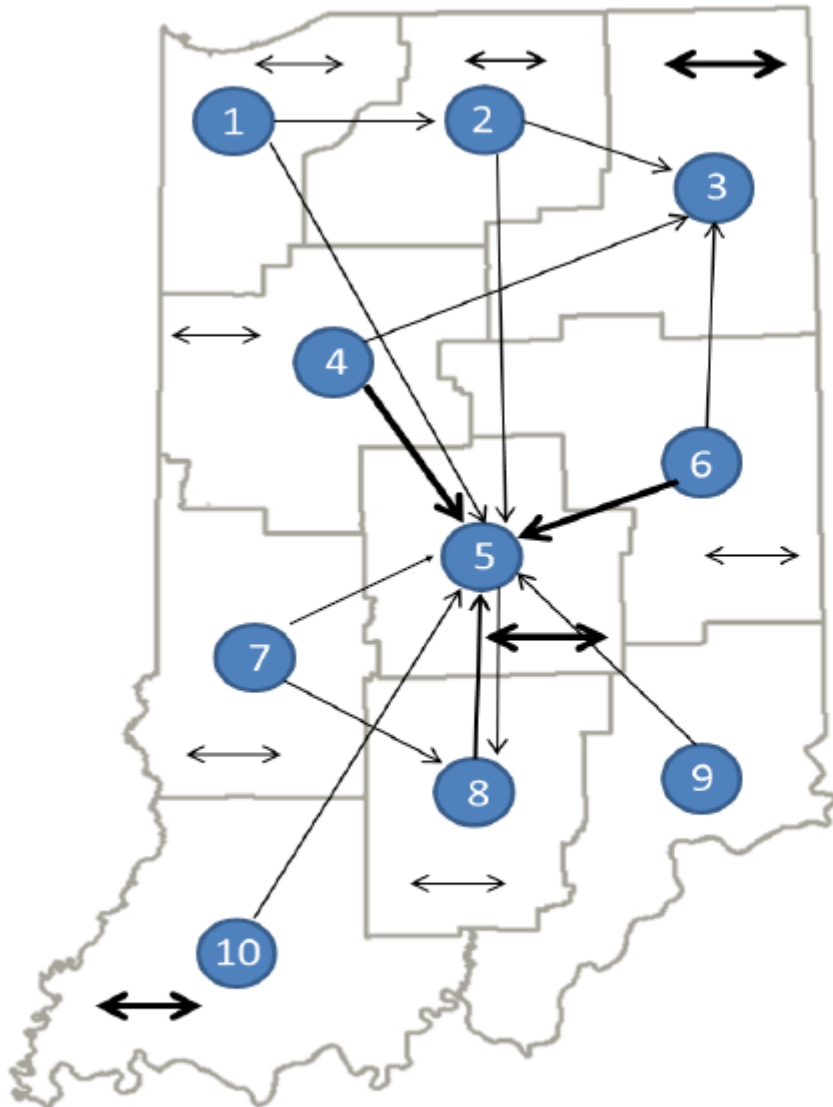
*Critical patient is defined as having a GCS \leq 12, OR Shock Index $>$ 0.9 OR ISS $>$ 15 at the initial hospital.

**Physiological Critical Transfer patient is defined as having a Shock Index $>$ 0.9 OR GCS \leq 12 at the initial hospital.

***ISS Critical Transfer patient is defined as having an ISS $>$ 15 at the initial hospital

Email questions to: indianatrauma@isdh.in.gov

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 | 2 | 17 |
| 1 | 5 | 16 |
| 2 | 2 | 7 |
| 2 | 3 | 1 |
| 2 | 5 | 9 |
| 3 | 3 | 160 |
| 3 | 5 | 1 |
| 4 | 3 | 0 |
| 4 | 4 | 4 |
| 4 | 5 | 30 |
| 5 | 5 | 103 |
| 6 | 3 | 11 |
| 6 | 5 | 64 |
| 6 | 6 | 3 |
| 7 | 5 | 51 |
| 7 | 7 | 7 |
| 8 | 5 | 49 |
| 8 | 8 | 10 |
| 8 | 10 | 0 |
| 9 | 5 | 2 |
| 9 | 9 | 0 |
| 10 | 5 | 14 |
| 10 | 10 | 67 |

Transfer Patient Data - Page 12

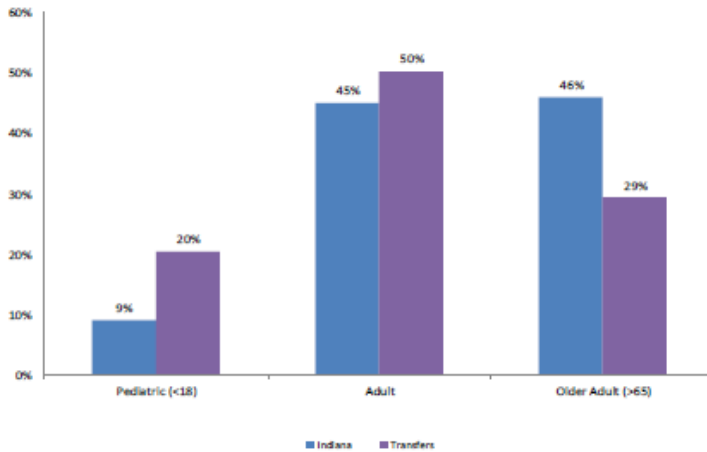
| For Transfer Patients: | | | | |
|---|-------------------------|-------------------------|---------------------------------|-------------------------|
| | All Transfer Patients | <i>Critical*</i> | <i>Physiological Critical**</i> | <i>ISS Critical***</i> |
| Number of Patients | 852 | 308 | 232 | 105 |
| Total Time | 4 hours 48.6 minutes | 4 hours 33.6 minutes | 4 hours 33.9 minutes | 4 hours 29.4 minutes |
| Total Mileage | 53.2 | 56.7 | 58.6 | 55.8 |
| Injury Scene to Initial Hospital Mileage*** | 7.8 | 7.3 | 7.7 | 7.4 |
| Initial Facility to Final Facility Mileage | 45.4 | 49.4 | 50.8 | 48.4 |

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

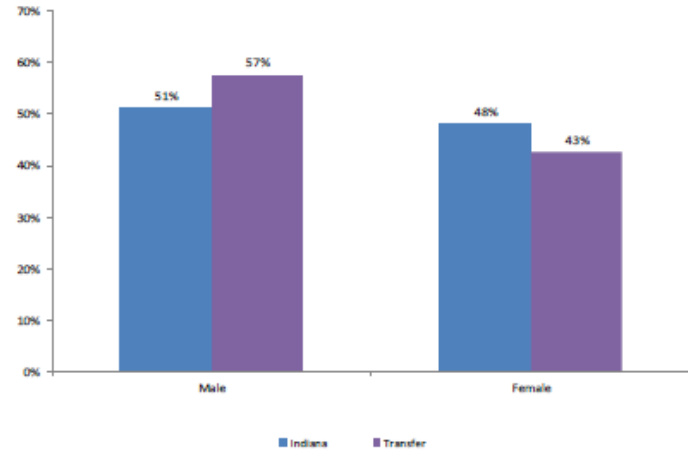
| Region | Injury Scene to Initial Facility Mileage* | Initial Facility to Final Facility Mileage | Total Mileage | Drive Count | Air Count |
|-----------------|---|--|---------------|-------------|-----------|
| Indiana Average | 7.8 | 45.4 | 53.2 | 823 | 29 |
| North Region | 7 | 27.6 | 34.6 | 198 | 5 |
| Central Region | 7 | 55 | 63 | 482 | 24 |
| South Region | 8.4 | 36.3 | 44.7 | 143 | 0 |

Transfer Patient Population - Page 13

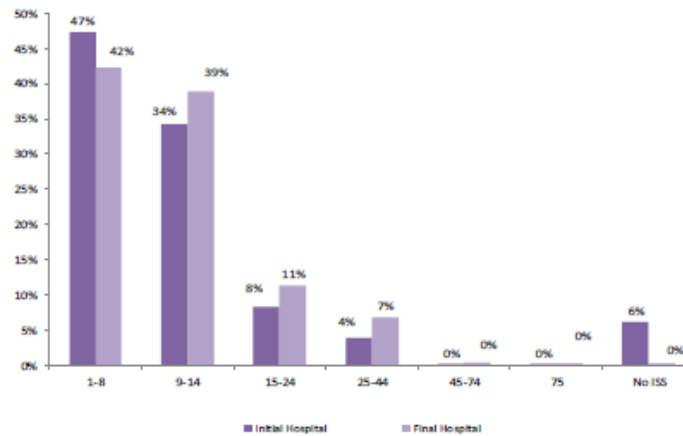
Patient Age Groupings



Patient Gender



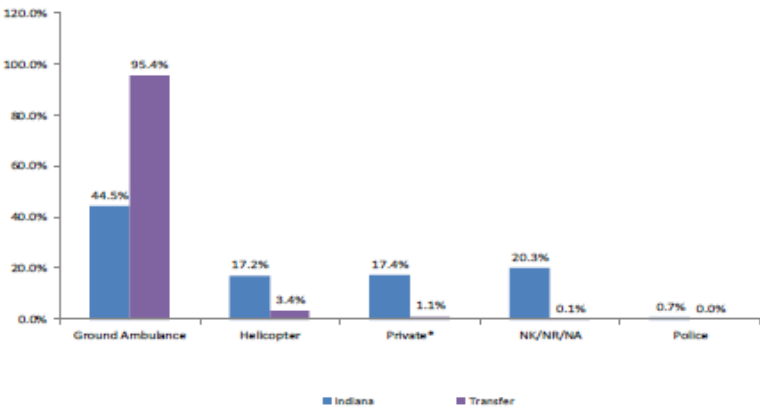
Injury Severity Score (ISS)



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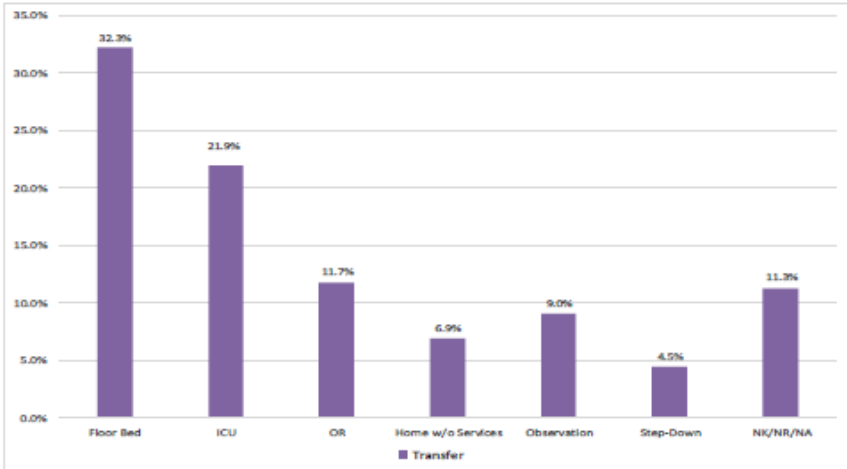
Transfer Patient Population - Page 14

Transport Mode- Final Hospital



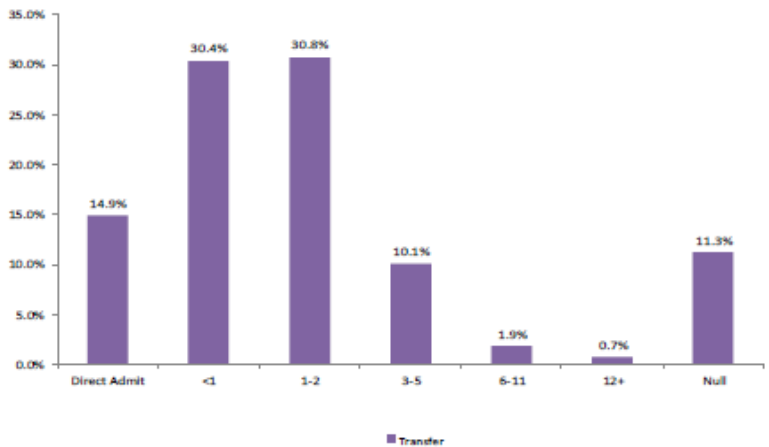
<1% Transport Mode: Police, Other * Indicates Private/ Public Vehicle, Walk-in

ED Disposition by Percentage- Final Hospital

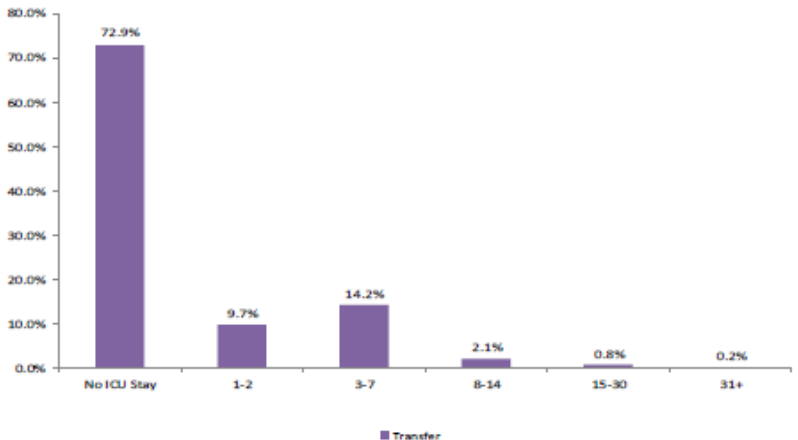


<1% : Transferred, Expired, AMA, Other

ED Length of Stay (hours)- Final Hospital

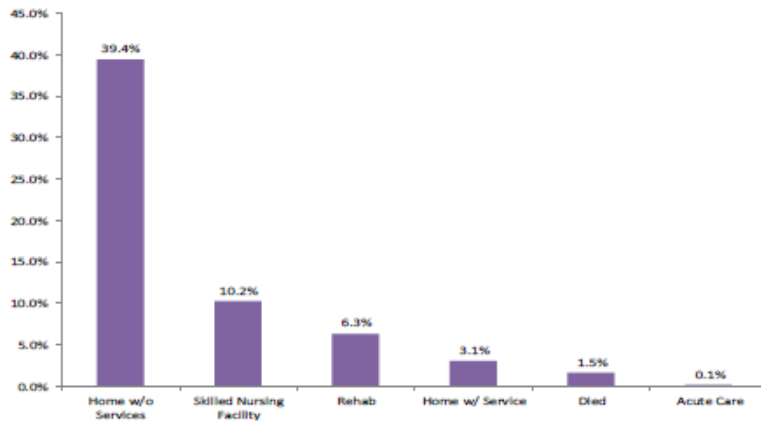


ICU Length of Stay (days)- Final Hospital



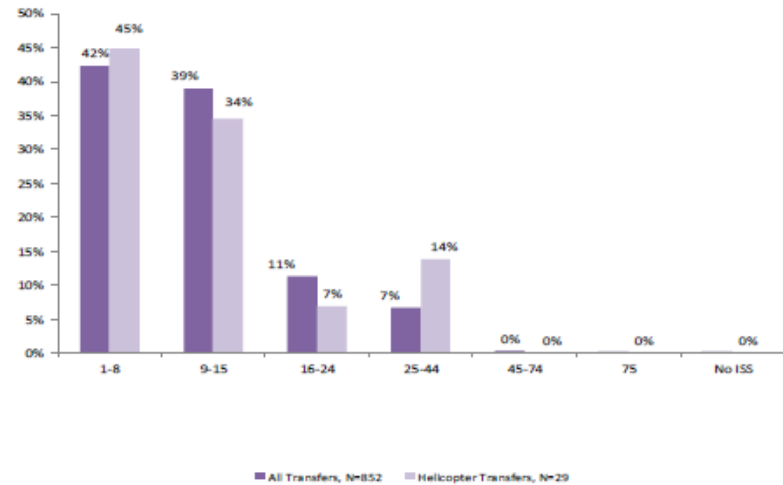
Transfer Patient Population - Page 15

Discharge Disposition- Final Hospital

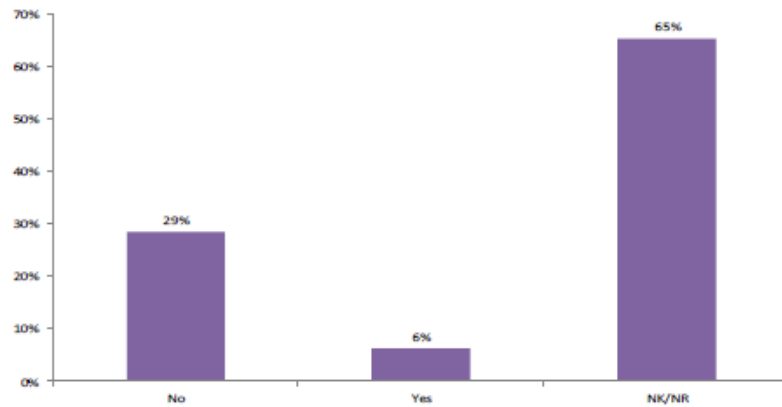


<1%: Acute care, AMA, another inst. Correctional, long-term care, hospice, psych hospital, no hospital stay

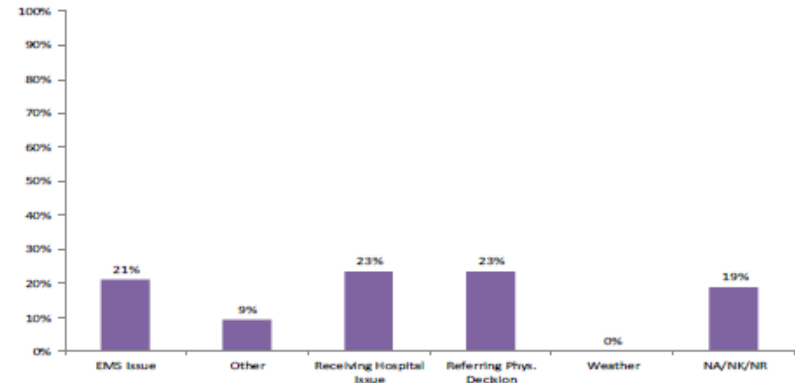
Helicopter Transfers by ISS- Final Hospital



Transfer Delay Indicated- Initial Hospital



Initial Facility Transfer Delay Reason



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Higher than Average ED LOS for Transferred Patients

Hospital ID

ID 7

ID 13

ID 18

ID 21

ID 30

ID 32

ID 38

ID 40

ID 42

ID 45

ID 54

ID 84

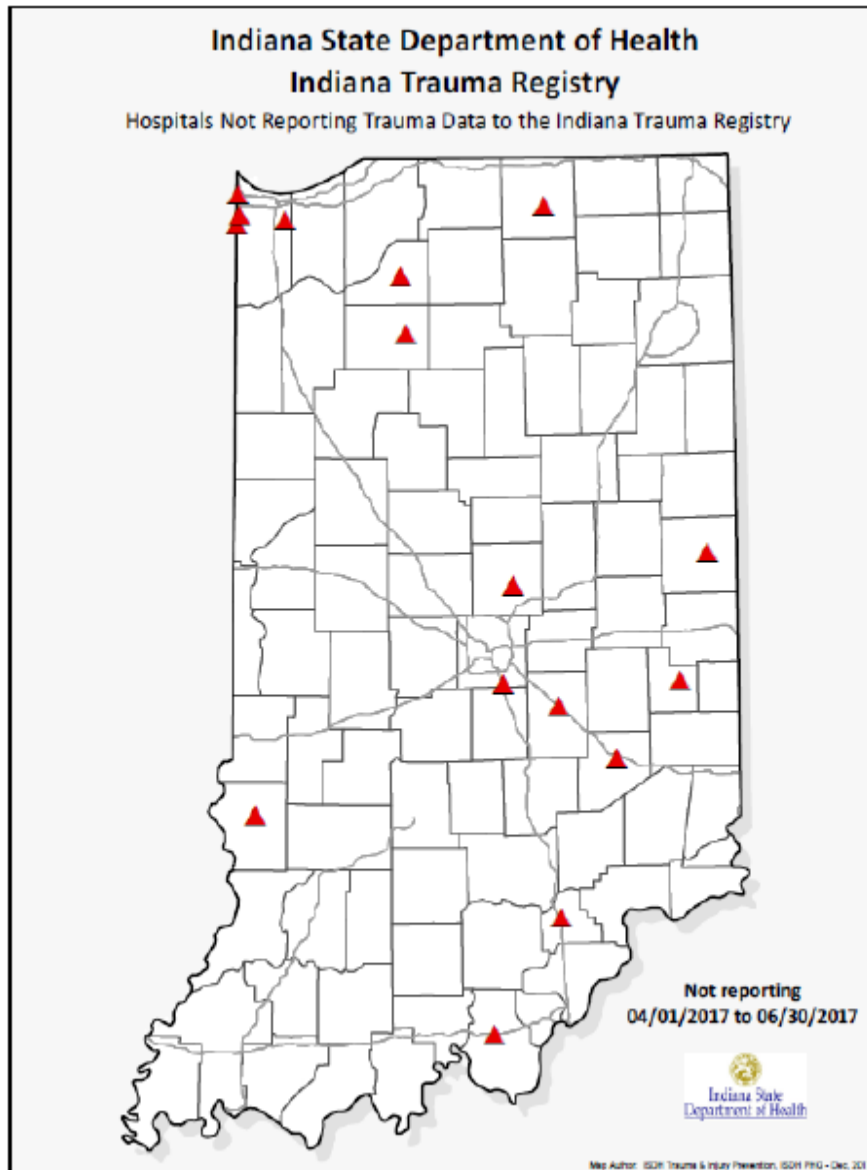
ID 85

ID 100

ID 110

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Not Reporting Map - Page 16



Hospital that did not report during Q2 2017:

- Decatur County Memorial
- Fayette Regional Health
- Franciscan Health Crown Point
- Franciscan Health Dyer
- Franciscan Health Hammond
- Franciscan Health Indianapolis
- Franciscan Health Munster
- Harrison County
- Goshen Health Hospital
- Starke Hospital
- Major Hospital
- Perry County Memorial
- Pulaski Memorial
- Riverview Health
- Rush Memorial
- St. Mary Medical Center—Hobart
- St. Vincent Randolph
- Sullivan County Community
- Woodlawn Hospital

Reporting Map - Page 17

Indiana State Department of Health Indiana Trauma Registry

Hospitals Reporting Trauma Data Quarter 2
April 1, 2017 - June 30, 2017

I II Level I and II Trauma Centers

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

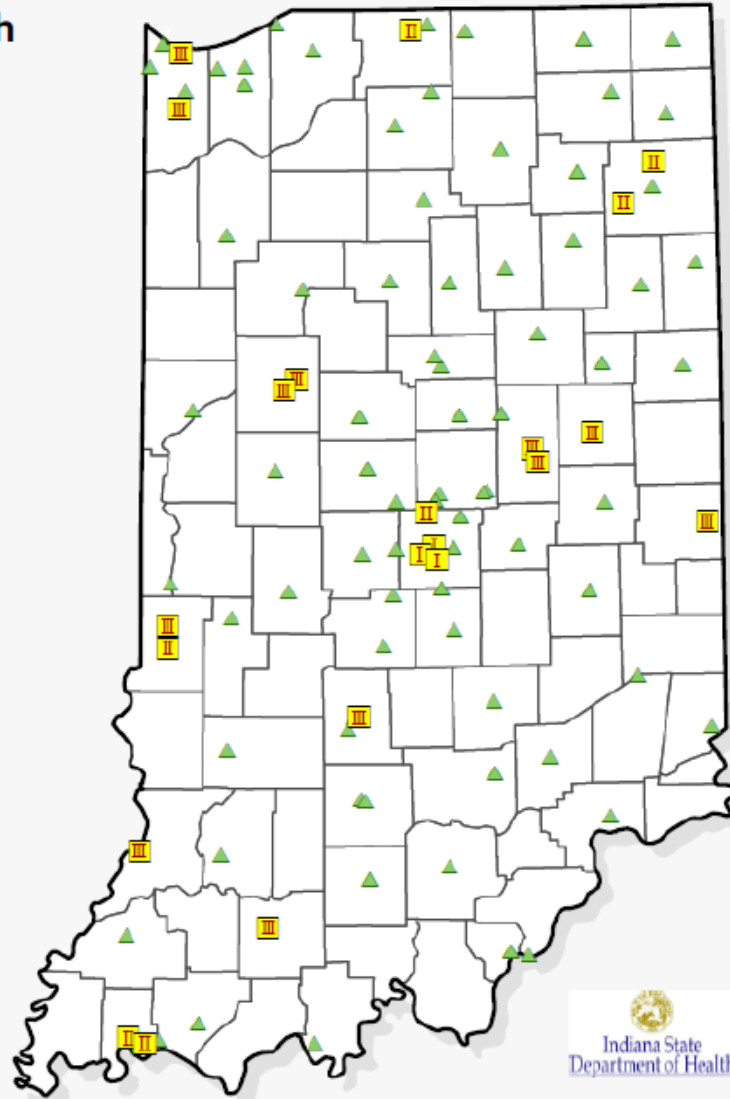
III Level III Trauma Centers

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

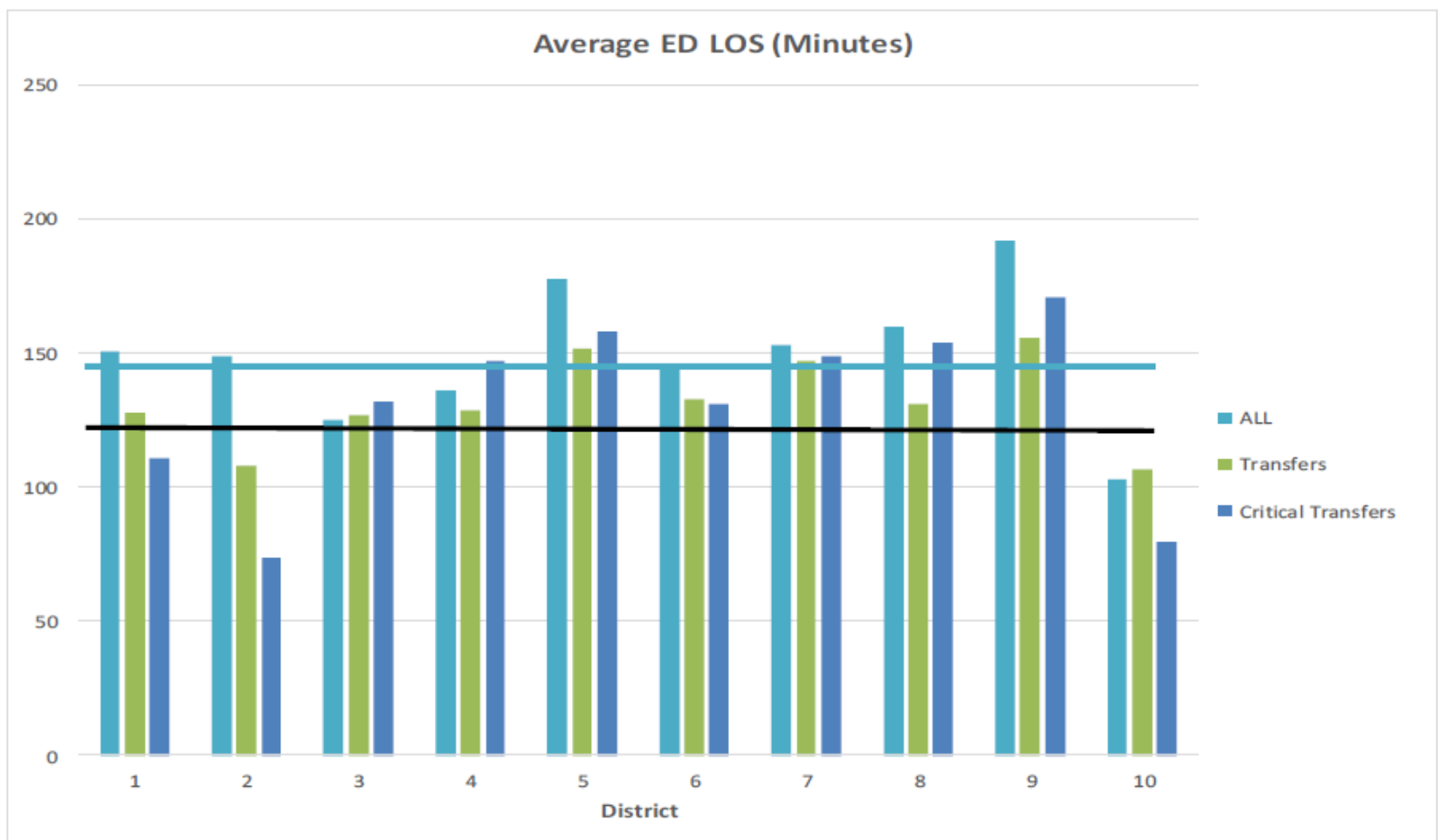
▲ Non-Trauma Hospitals

79 Non-Trauma Hospitals

Hospital categories include Verified and "In the Process"
Trauma Centers as of March 31, 2017.



ED LOS by District- Page 21



*Black line represents the 120 minute performance improvement filter

**Blue line represents the state average

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Questions?



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov

Other Business



Indiana State
Department of Health

Email questions to: indianatrauma@isdh.in.gov