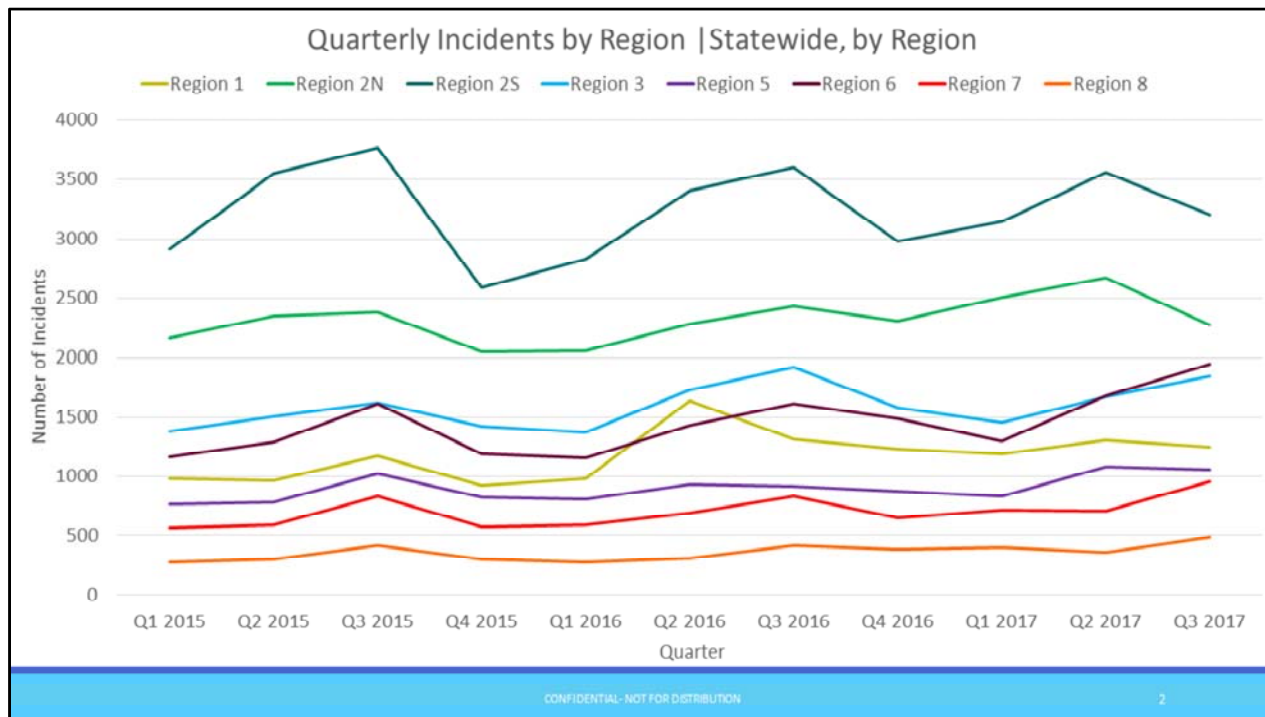# MI Statewide Trauma Report

DATA UPDATE- Q3 2017 (THROUGH SEPTEMBER 30, 2017)

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Quarterly Incidents by Region |Statewide, by Region

Interpretation:
- Shows all incidents meeting NTDB criteria by quarter and Region. This region is represented by the bolded line.
- Regions 2N and 2S represent the bulk of the incidents in the state of MI in each quarter, presumably due to the large population density in these areas.
- Region 6 generally has similar patient volumes as regions 3 and 1.
- Seasonality is present for most regions, with peak incidents occurring in Q3 and least incidents occurring in Q4 and Q1 of each year.

Caveats:
- One patient can account for more than one incident.
- Total N for this graph may not match other figures due to the dynamic addition and subtraction of incidents in the database.
- Does not include incidents with missing incident date, region.
- Designated and anticipated facilities being lumped by level is not optimal, but is intended to give a measure to the size and scope of the facility. These facilities may not be grouped together in the future.

Quarterly Incidents by Region | Statewide, by Level

Interpretation:
- Shows all incidents meeting NTDB criteria by quarter broken down by designation and anticipated designation status. Designated level 3 facilities and those who have applied for level 3 have been included in the same group, for example. Those who have not submitted an application have been labelled "unk"
- There is a steady increase in the number of incidents that were reported by facilities that are anticipated to pursue a level 3 or 4 designation, due to an increased number of facilities reporting
- Incidents show a strong seasonality for designated level 1 facilities, with peak cases in Q3 and fewest cases in Q1 of each year.

Caveats:
- One patient can account for more than one incident.
- Total N for this graph may not match other figures due to the dynamic addition and subtraction of incidents in the database.
- Does not include incidents with missing incident date.
- Designated and anticipated facilities being lumped by level is not optimal, but is intended to give a measure to the size and scope of the facility. These facilities may not be grouped together in the future.

Top 10 Causes of Injury | Q3 2015 | Statewide and by Region
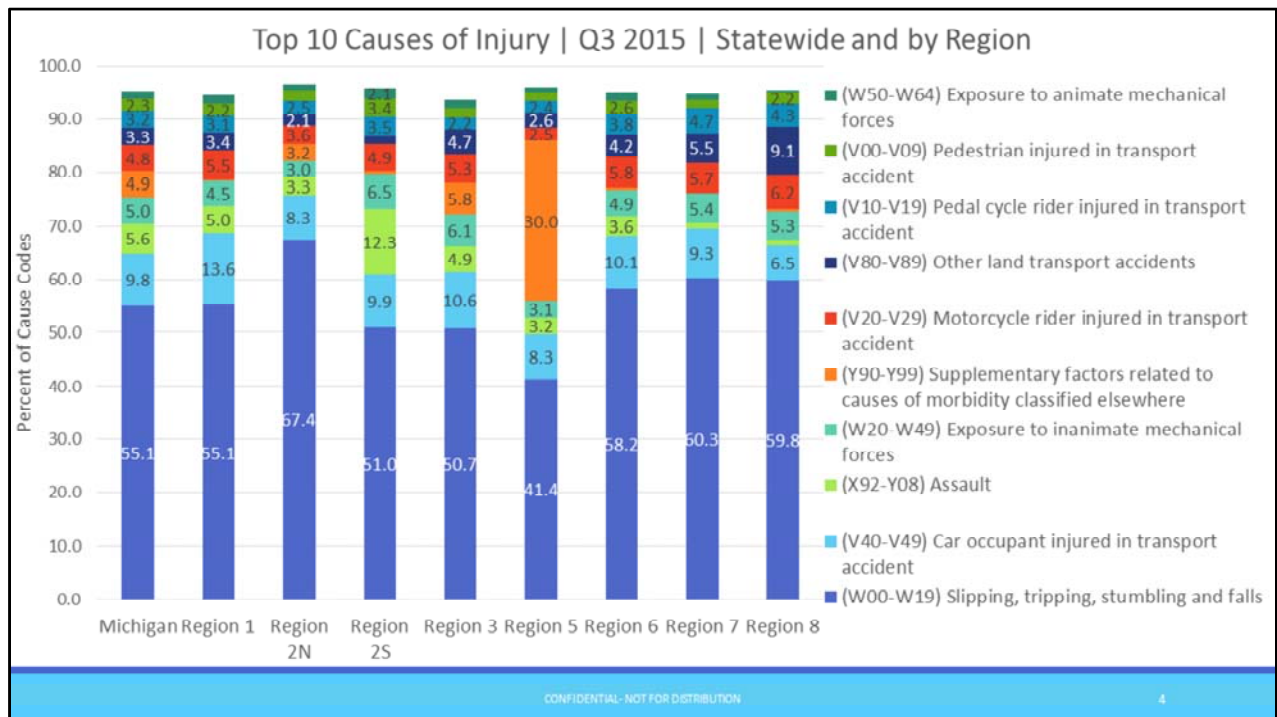
Interpretation:
- Shows the top 10 causes of injury by percentage statewide and within each region, recorded from 7/1/2017 through 9/30/2017.
- Read the key from the bottom- the bottom entry corresponds to the bottom bar
- The most common cause of injury reported in Q3 2017 was slipping, tripping, stumbling, and falls.
- If data point was <2%, the data label was removed
- Gap between the tops of bars and 100% are those causes that were not in the top 10

Caveats:
- Cases meet NTDS inclusion criteria
- Multiple cause codes can be assigned to one incident.
- One patient can account for more than one incident.
- Does not include incidents with missing incident date, ICD-10 cause of injury, or those coded in ICD-9 (if any)

Over/Under Triage

- Level of Activation is NOT a required field, only available for facilities that use ImageTrend for primary data entry.

Hospital Region	Level 1 (Full activation)	Level 2 (Partial Activation)	Level 3	Non-Trauma	Unknown	% Unknown
Region 1	107	337	50	11	20,925	97.6
Region 2N	12	34	21	1	44,877	99.8
Region 2S	1	1	1	1	76,310	100.0
Region 3	81	147	58	5	35,686	99.2
Region 5	25	101	12	118	15,569	98.4
Region 6	272	628	115	1,419	25,327	91.2
Region 7	6	3			12,715	99.9
Region 8	80	230	221	5	7,757	93.5

For all incidents in the MI Trauma Registry:

Reminder that requested over and under triage are not available data points due to missing the level of activation
Over triage would be #cases ISS<15 and level 1 activation / all ISS<15
Under triage would be #cases IS>=15 and level 2 activation / all ISS>=15
We are unable to calculate this due to lack of activation level in database. Will try to look at transfer status by level within major and minor traumas in the future.

ISS Scores | Q3 2017 | Statewide and by Region

Interpretation:
- Shows proportion of all incidents in each region at each ACS IIS score group
- Q3 2017 and cases met NTDB inclusion criteria.
- Most incidents were scored between 1 and 9, the least severe category. .
- If data point was <2%, the data label was removed.

Caveats:
- One patient can account for more than one incident.
- Total N for this graph may not match other figures due to the dynamic addition and subtraction of incidents in the database.
- Does not include incidents with missing incident date, IIS score.
- Score is calculated automatically by ImageTrend from AIS scores.

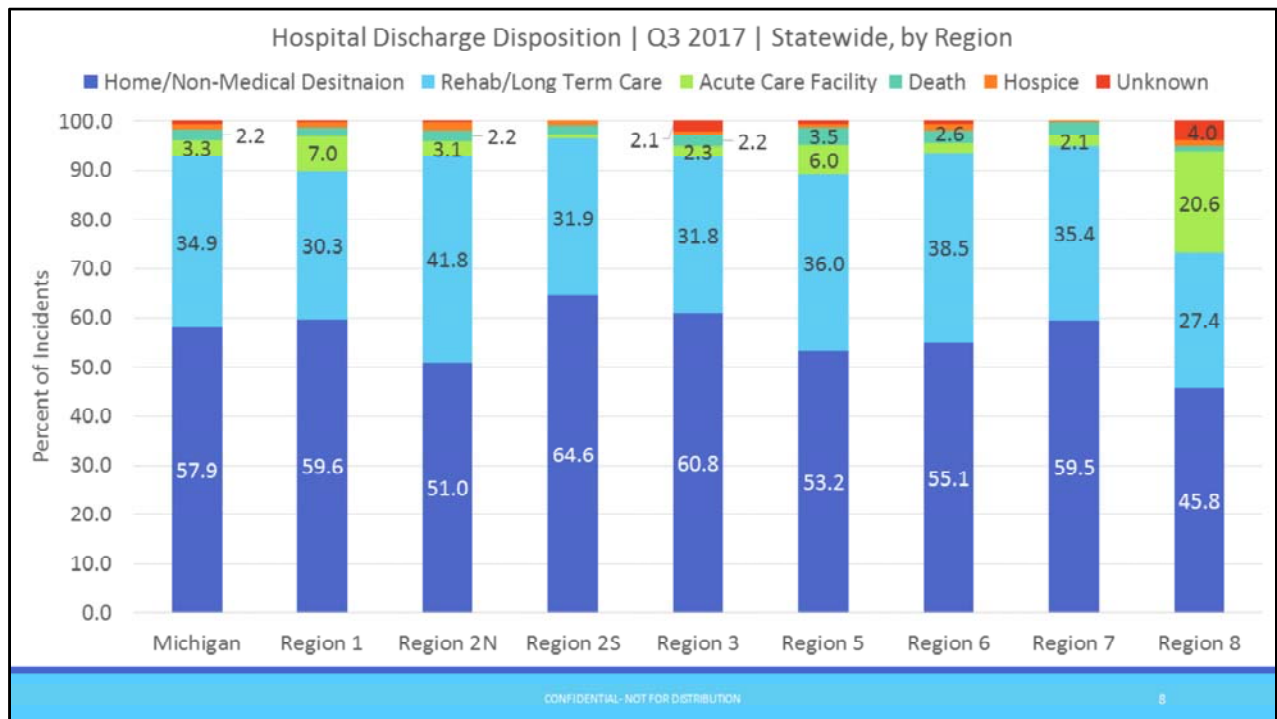ED Disposition | Q3 2017 | Statewide and by Region
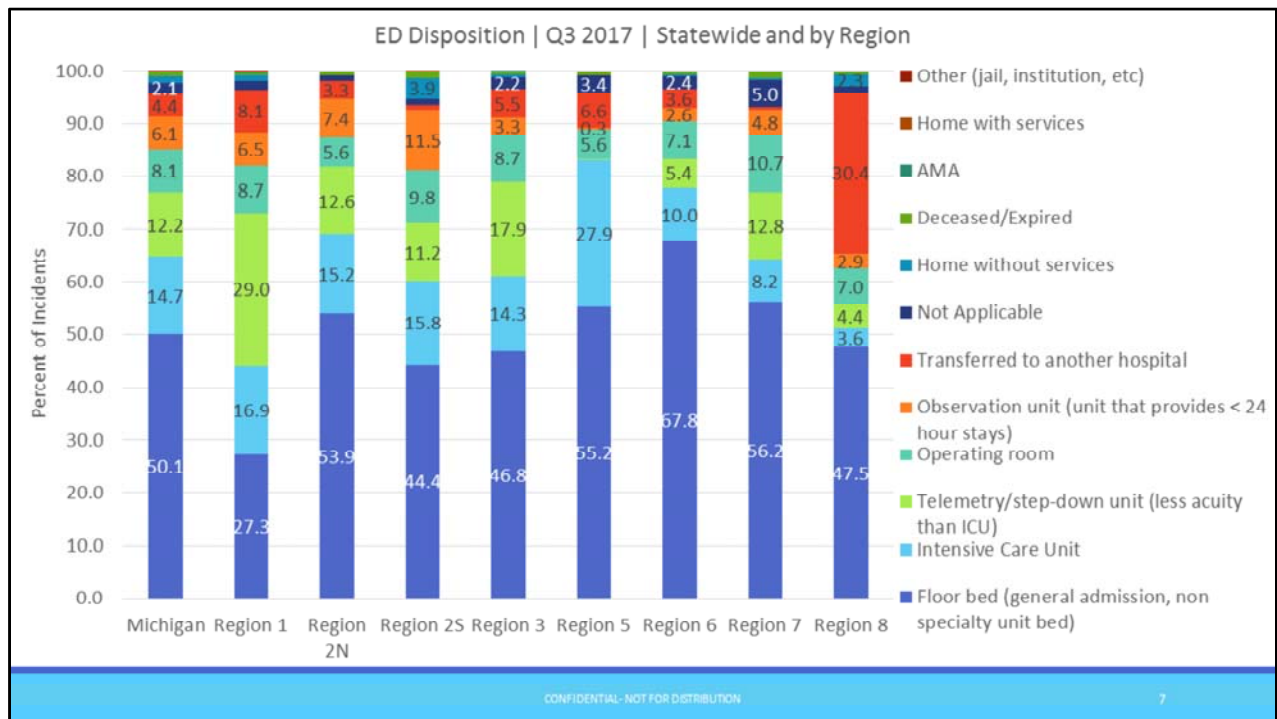
Interpretation:
- Shows the number and percentage of each ED Disposition for all incidents meeting NTDB criteria and occurring in Q3 2017 by region.
- In Q3 2017, the large majority of patients seen in the ED were admitted to the hospital (floor bed, ICU, obs unit, OR, or telemetry– everything through orange).
- If data point was less than 2%, data label was removed

Caveats:
- Total N for this graph may not match other figures due to the dynamic addition and subtraction of incidents in the database.
- One patient can account for more than one incident.
- Home or Other institution includes categories Home without services, home with health services, and other institution (prison, etc).

Interpretation:
- Shows the number and percentage of each hospital discharge disposition for all incidents meeting NTDB criteria and occurring in Q3 2017 by region. Dispositions reported as "Not applicable" were excluded, since this response typically indicates patients who were not admitted to the hospital at all.
- In Q3 2017, the patients went home after hospital admission most often and to rehab the second most often.
- If data point was less than 1.5%, data label was removed

Caveats:
• Total N for this graph may not match other figures due to the dynamic addition and subtraction of incidents in the database.
• One patient can account for more than one incident.
Categories:
• "Transfer to Acute Care Facility" includes
  • Acute Care hospital
  • Burn Care hospital
  • Discharged/Transferred to a short-term general hospital for inpatient care
• "Rehab/Long term care" includes
  • Detoxification facility

- Hospice care
- Inpatient rehab or designated unit
- Intermediate care facility
- Long term care hospital
- Psych visit
- Rehabilitation or long-term facility
- Skilled nursing facility
- "Non-medical destination" includes
    - AMA
    - Correctional facility or law enforcement custody
    - Deceased/expired
    - Deceased full code
    - Discharged to home or self care (routine discharge)
    - Home with health services
- "Other" includes
    - Other
    - Another type of institution not defined elsewhere

Timeframes Data Availability

- Physical discharge times are not required by the NTDB.
- Distributions are very skewed due to data entry errors.

For all incidents in the MI Trauma Registry, Q3 2017:

Timeframe	Definition	Exclusions	N with Both Timepoints	Percent Missing
ED Order LOS	ED Admit to ED Discharge Orders	Negative, Zero, and ≥31d	11681	10.1
ED Physical LOS	ED Admit to ED Physical Discharge	Negative, Zero, and ≥31d	1047	91.9
Hospital Order LOS	Hosp Admit to Hosp Discharge Orders	Negative, Zero, and ≥365 d	11161	14.1
Hospital Physical LOS	Hosp Admit to Hosp Physical Discharge	Negative, Zero, and ≥365 d	480	96.3

Median ED Order LOS | Q3 2017| Statewide and by Region
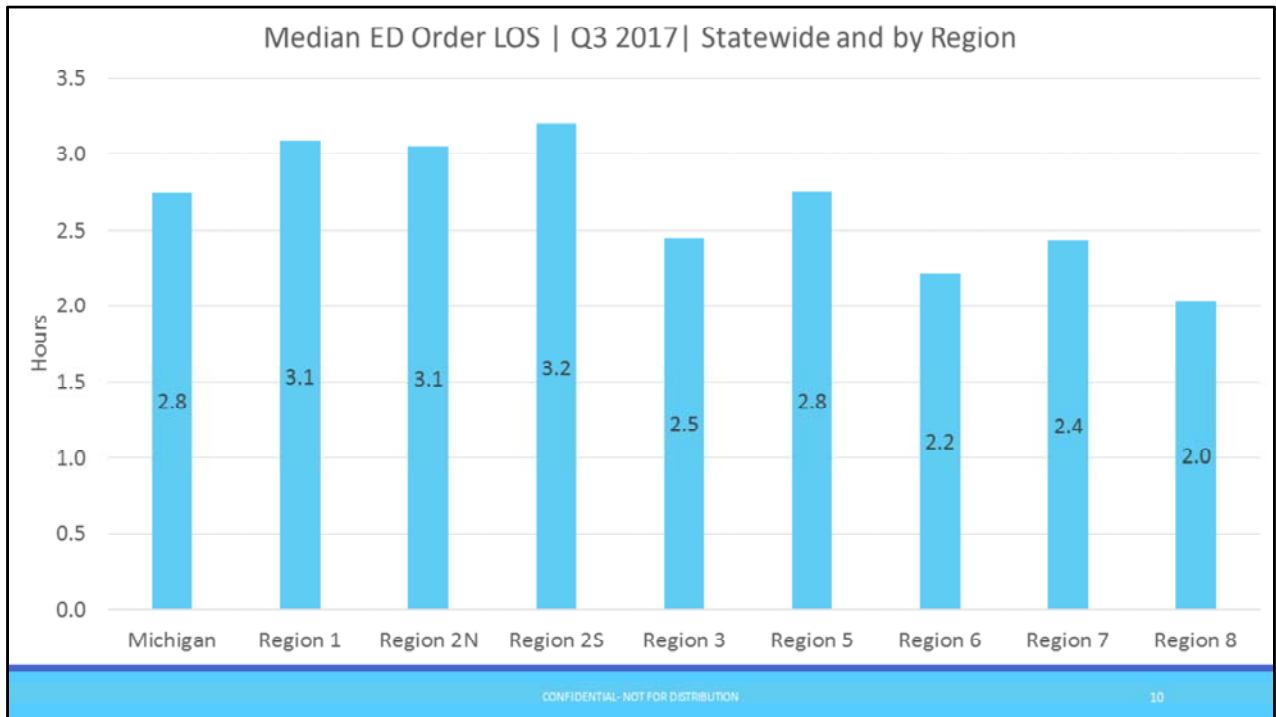
Shows the median ED Order lengths of stay in hours for all Regions (bars) and in Michigan overall (line) for this quarter.

Order LOS=Time from admission to time of discharge orders written.

All incidents met NTDB inclusion criteria. ED LOSs over 31 days were excluded.

Medians were used here instead of means with 95% confidence intervals due to the skewed distribution of the data. Hospital LOSs over 365 days were excluded. Statistical comparisons will be available when data becomes cleaner.
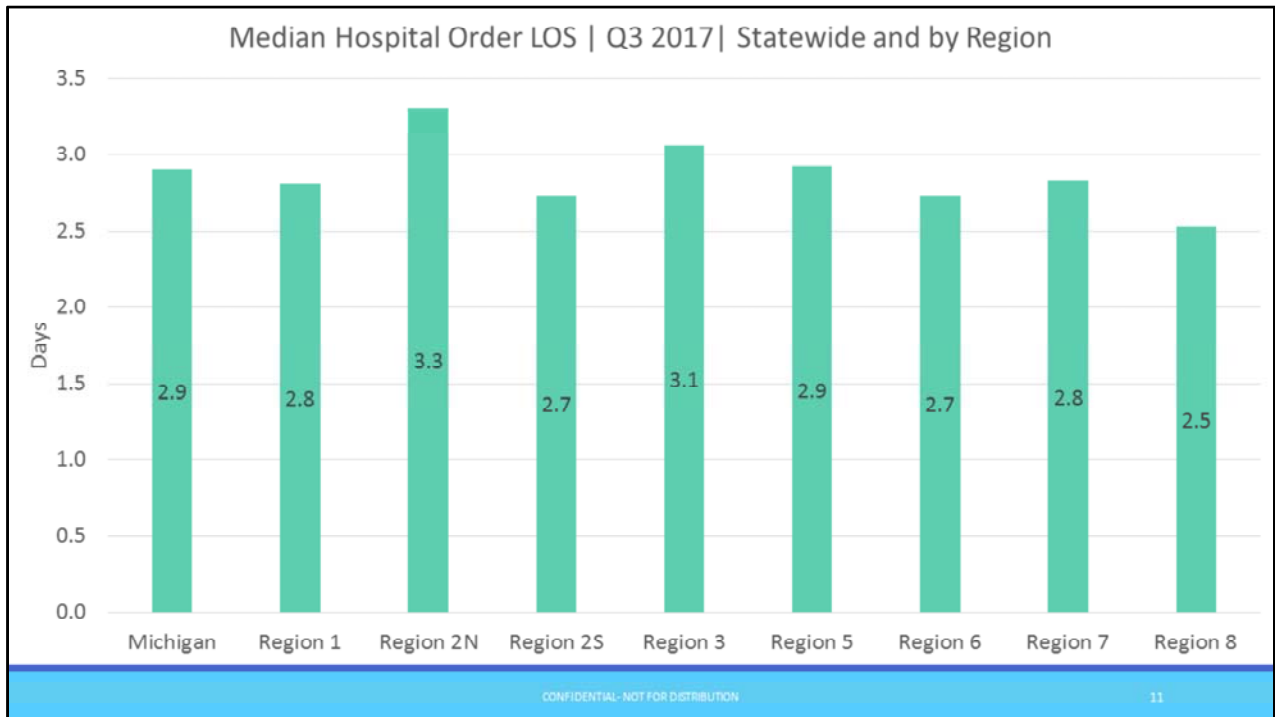
Shows the median hospital order length of stay in days for this region in this quarter.
Order LOS=Time from admission to time of discharge orders written
All incidents met NTDB inclusion criteria. Hospital LOSs over 365 days were excluded.
Medians were used here instead of means with 95% confidence intervals due to the skewed distribution of the data. Statistical comparisons will be available when data becomes cleaner.

Other News

- Plans to add graphs for:
  - ISS Scores by Facility Level and transfer status,
  - ED Discharge dispo by hospital discharge dispo
  - ED Order LOS by ED Discharge Disposition, and
  - Hospital Order LOS by Hospital Discharge Disposition.
- Discuss suggestions for report expansion with RTC. For questions about specific points, contact StateTraumaRegistrar@Michigan.gov and copy your RTC.

- Plan to create an analytics manual to go with these presentations (instead of descriptions in notes box).
- New Policy for Data Submission and Missed Deadlines (link)- please read!
- New Facility Administrator Guide, to aid facilities with password resets and other account management (link)
- Calendar with NTDS, MTQIP due dates has been added to the MI Trauma Registry Submission Timelines document (link- 2nd page)

Next data due date is 3/15/2018 (Thursday)