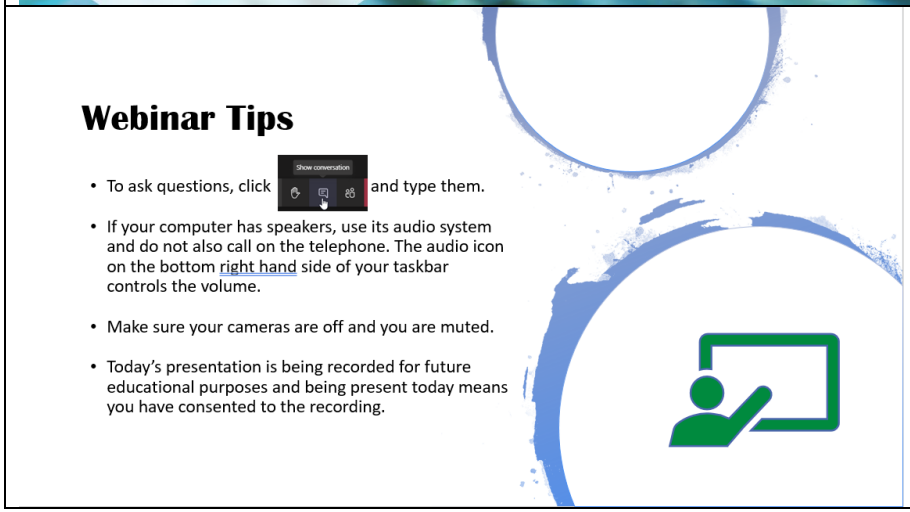
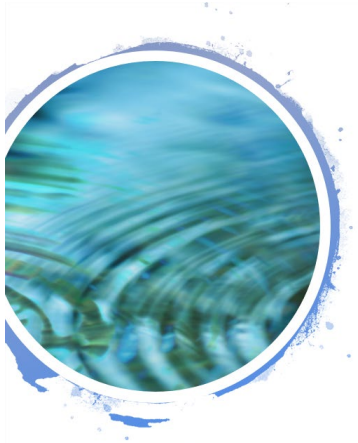
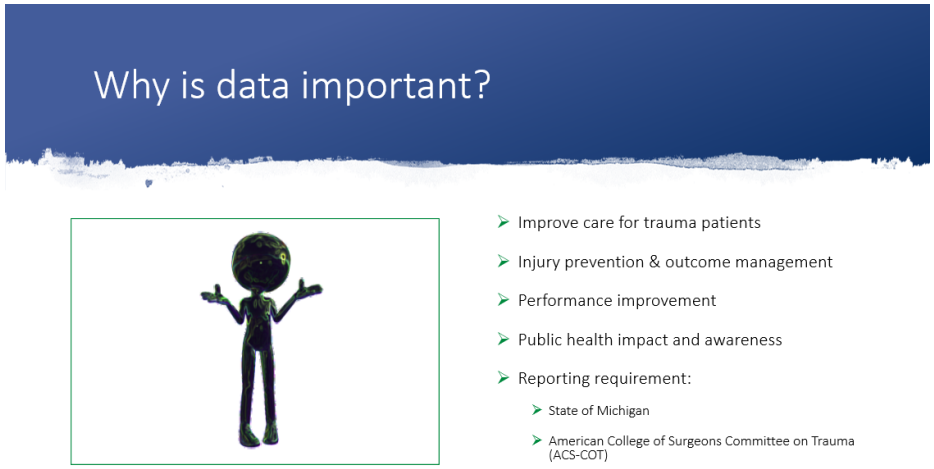
	Hello everyone, this is Jill Jean, State of Michigan Trauma Registry Administrator. Thank you for joining our Back 2 Basics Trauma Registry Review. This may be entirely new to you or it will be a review. It is our desire to provide at least one and hopefully more items that will help you with efficiency or clarity in your role as a trauma registrar. Moderating today's webinar is Lyn Nelson, Region 8 Trauma Coordinator. Lyn will be assisting me with the TEAMS viewer access and monitoring the Q&A chat box.
	Let us get started. Just a few housekeeping tips for today's presentation. (read bullets) I will pause at certain times to answer accumulated questions in the chat box. If there are questions that I'm unable to answer, I will make note of them, and get back to you via email after the presentation.

 A bit of background… **Jill Jean, RHIT** State Trauma Registry Administrator statetraumaregistrar@Michigan.gov	For those of you who do not know me, I'd like to give you some insight into my professional background. I've been in a healthcare related field for the past twenty-nine years. I was introduced into Trauma Registry world sixteen years ago, at Munson Medical Center in Traverse City. In 2017 I relocated and took a position with Ascension Providence Hospital – Novi campus, and in March of this year, I accepted the position as State Trauma Registry Administrator with the State of Michigan. I currently manage the data collection and oversight of the Image Trend patient registry for 129 facilities. It is a privilege for me to work with you in this role, as an advocate, resource, and mentor for both new and seasoned registrars.
 **OBJECTIVES** Describe: • why trauma data is important • where to find it • and what to do with it Gather resources and tools List Registrar roles & responsibilities Locate data reporting guidelines	Today's objectives are: Describe: • why trauma data is important • where to find it • and what to do with it Gather resources and tools List Registrar roles & responsibilities Locate data reporting guidelines With the information provided in today's webinar, I hope to give you a better understanding of how vital data quality is to the registry and to give you the tools that will help you to collect better data to monitor completeness, consistency, accuracy, and relevancy.



Why is data collection important? First and foremost, we collect data to improve care in our trauma patients. Decisions are data driven.

Data collection is used to identify local, community injury patterns or other high-risk groups where an injury prevention opportunity is identified. The registry is essential to the PIPS (Performance Improvement Patient Safety) process in identifying patient outcomes, provider, or system of care related issues that may cause a variation in patient care. The trauma registry drives the PIPS process and should demonstrate that documentation to impact performance improvement activities on multiple levels. Documentation including registry data is essential to ensuring that the actions taken to address an issue have resolved it.Trauma Registry data is used as a comprehensive tool that impacts public health and awareness by identifying aggregate data which serves state legislative and regulatory efforts.Lastly, we collect the data because we have to for designation by the State of Michigan and American College of Surgeons.

These entities understand that data drives programs.

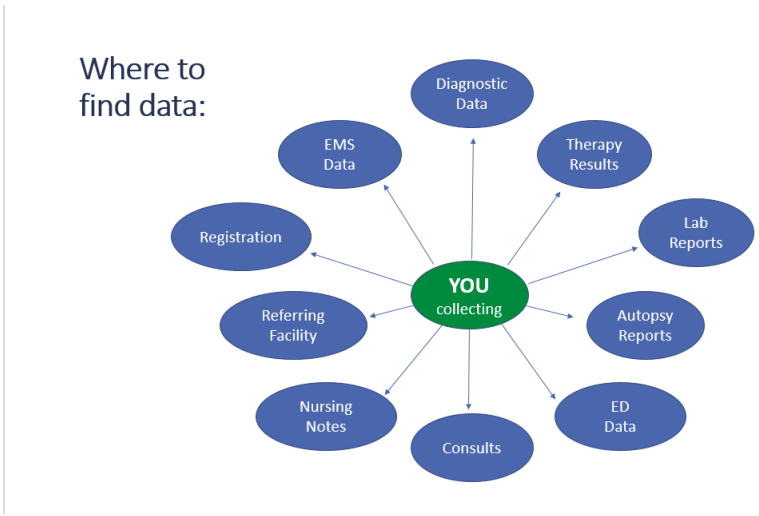
ACS and MTQIP here in Michigan have devoted resources to ensuring data collected is quality data and used to drive quality care.

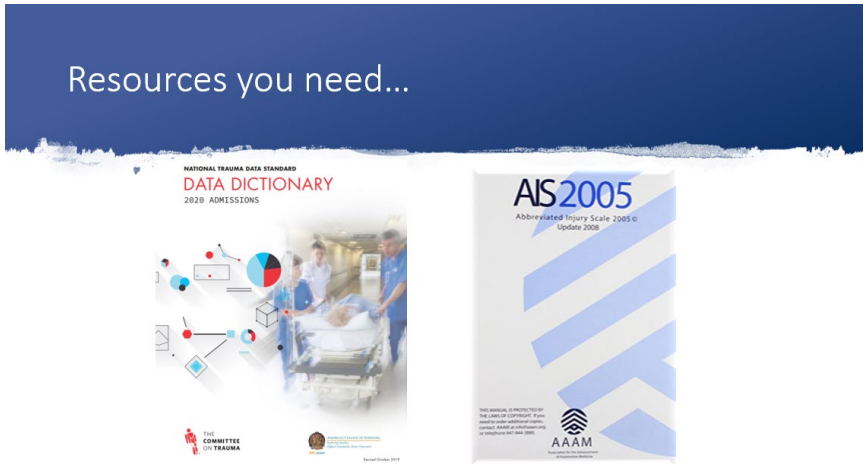
	Congratulations, you are now a Trauma Registrar, now what? Many of you work in a facility where you wear many hats. Maybe you are not only a Registrar, but you are also the program coordinator, a night supervisor, a unit clerk or a nurse who also has a responsibility to enter data in the Trauma registry. Whatever the case may be, I'd like to point out a few resources within your facility that may be helpful in obtaining the information you need make your job a little easier. My motto is, don't re-invent the wheel, work smarter, not harder.

If you do not come from an HIM(Health Information Management) background or have not had the benefit of taking an ICD10 Trauma coding class, I encourage you to contact your Medical Records coder(s). These folks can generate reports from their data base and pull diagnosis and procedure codes on your trauma patients. Keep in mind coders code for reimbursement, while Trauma Registrars follow the data dictionary definitions and AIS coding rules, but you can always use their codes as a guide to help with your own code assignment. Most Medical Records departments use the 3M encoder product, this is also an application worth checking to see if you are able to access as an additional method of diagnosis and procedure code assignment.

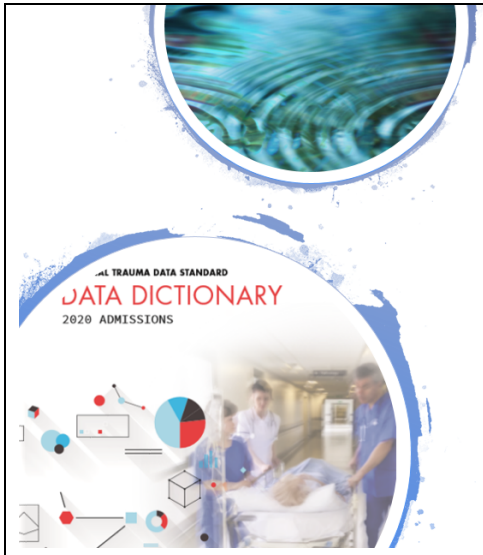
Know who your IT specialists are in your facility. These people can be instrumental in helping to identify your trauma patient population with an auto generated report, or a case list of patients seen in the emergency room or admitted to your facility with an injury diagnosis. This report could be generated daily, weekly, or monthly depending on your facility volume. This helps to ensure you are not missing any patients that should be included in your trauma patient population.

Lastly, trauma team integration and communication is essential to the data quality and abstraction process. Regular meetings with your Trauma Program Manager, Medical Director or any other trauma patient care providers, will ensure quality data collection.

	There are many sources within the EMR to collect data points required for registry abstraction. Please remember to refer to your current version of the NTDS data dictionary for data definitions and hierarchy sources. This will ensure clean and consistent data collection which is imperative for outcome measures, benchmarking and other analytical reporting across our statewide trauma system. Please keep in mind, you can only report diagnoses documented by your providers at your facility. If you are a part of a larger healthcare system and routinely transfer your patients, you cannot enter additional diagnoses or more specific diagnoses based on their documentation. The only exception, is if a patient dies at your facility and receives an autopsy, then reporting more specific injuries or additional injuries, identified by the medical examiner are reportable and should be updated in the registry.
	To be successful as a Data Registrar, you need to know why it is important, where to find the data and what to do with the data once found. But before answering what to do with the data, let's first review places and tools that can help you stay current on what data is needed.

	On the next couple of slides, I'm going to show you covers of books to help you identify what you should be using for reference in your data collection.
	Here you see a picture of the National Trauma Data Standard Data Dictionary. This is a yearly publication that is available online for download. It is crucial for Registrar's to refer to this Dictionary often! The AIS 2005 is the current version the State of Michigan is requiring for AIS code assignment. Like most Trauma registry software systems, Image Trend does have a built in ICD10 diagnosis/AIS code look up feature for the ease of its users; however, it is recommended to look up the automated code assignment in the book, to confirm accuracy.

	Some of you may have taken a trauma ICD10 diagnosis and procedure coding class, if you have not, I highly recommend taking one. The class will provide instruction on navigation through the ICD10 diagnosis and procedural books for correct code assignment and also detailed instruction on reporting guidelines. Pomphrey Consulting is a well known resource, who provides a variety of classes for trauma registrars, now available online. Just to reiterate, these coding resources are used as an additional source to confirm accuracy for code assignment. Sometimes, you may find a more specific code than what has been generated by your registry software system. The Resources for Optimal Care Of The Injured Patient is a publication of the American College of Surgeons-Committee on Trauma. This book, also referred to as the orange book, is the most recent version available on their website. This tool is used as a guide to assist health care providers and facilities to improve the care of trauma patients. All centers ACS verified or state designated are reviewed and evaluated based on the standards in this book.
	The National Trauma Data Bank represents voluntary participation of the largest aggregation of trauma registry data (in the US). Their data dictionary is a key source of providing standardized operational definitions, (NTDS) for trauma registry data collection on a national level. This data is then used for benchmark reporting, data validation, quality reports and research. Just to clarify, ACS verified facilities must submit data to the NTDB, Administrative Rules do not require in-state verified/designated facilities to report as part of the terms of participation but may do so voluntarily.



Why is the National Trauma Data Standard (NTDS) important?

- The National Trauma Data Bank (NTDB)
- Patient inclusion criteria
- Data definitions
- Hierarchy sources
- Additional information that will help clarify data collection questions

The **2021** Data Dictionary is available **NOW**!

https://www.facs.org/quality-programs/trauma/tqp/center-programs/ntdb/about

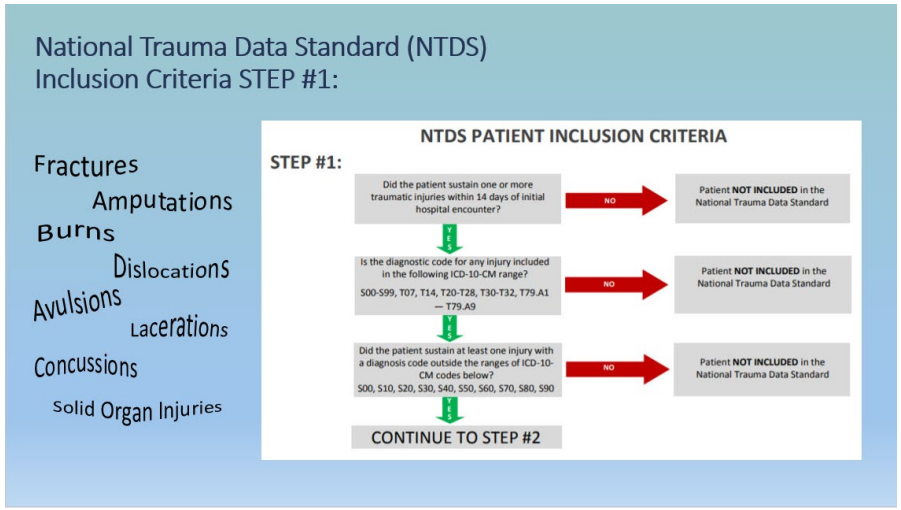
Just to clarify, the NTDB, or National Trauma Data Bank is the national data repository where the data is stored, NTDS, or National Trauma Data Standard are the standardized operational definitions used for data collection to be used nationally to optimize clear, consistent quality data collection.

The 2021 Data Dictionary was released in July. It is strongly recommended that you download the new dictionary to familiarize yourself with the 2021 data collection changes.

The NTDB provides a Change Log that details all the new changes for patient admissions beginning January 1st. It is located on the same website where the NTDB Data Dictionaries are accessed. This is a great quick reference guide that highlights these changes on one document.

Please be aware there may be adjustments in the Change Log or Data Dictionary by NTDB between July and October, I would encourage you to periodically visit the website to make sure you have the most up to date version of both the Change Log and Data dictionary.

The Data Dictionary you are using should directly correlate with the patients you are entering of the same admission year.

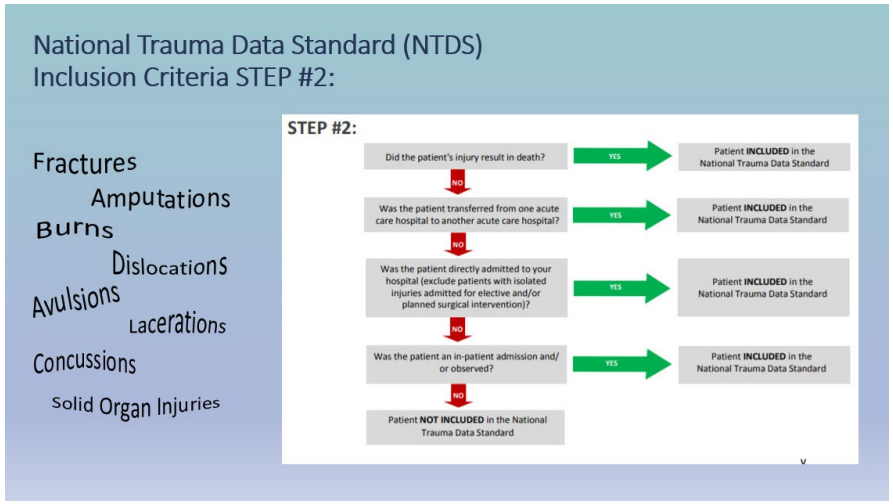


The NTDS patient inclusion criteria is housed in the beginning of the yearly published NTDS data dictionary. Many people struggle with the never-ending question of "Does this patient go into the registry?" Most questions are answered by simply following the flow chart guide to decipher whether to include or exclude a patient in the registry.

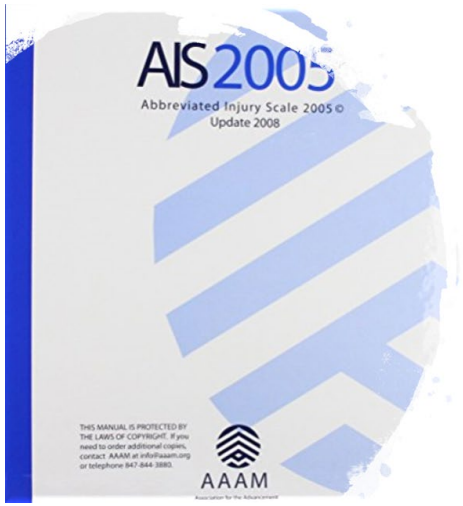
Injuries/superficial injuries seen, treated and discharged home from the emergency room are not included in the registry. Example, Contusions, abrasions, lacerations, strains, sprains, non-admissions/non-observation patients.

I'd like to clarify, your registry can be customized to your facilities needs, you may enter what you feel is necessary to collect if your program is tracking and trending a specific issue, and data is needed to help identify tracking and trending for a performance improvement related opportunity.

At this time, the state only requires those patients meeting NTDS patient inclusion criteria displayed in these two steps.



New criteria update for 2020, patient arrival via ambulance ***OR*** private vehicle from another acute care facility/ED is considered a transfer in, to your facility and should be identified as such in your registry.
Also, criteria change, patient must have sustained the injury within 14 days of arrival to hospital.



Why is the Abbreviated Injury Scale (AIS) important?

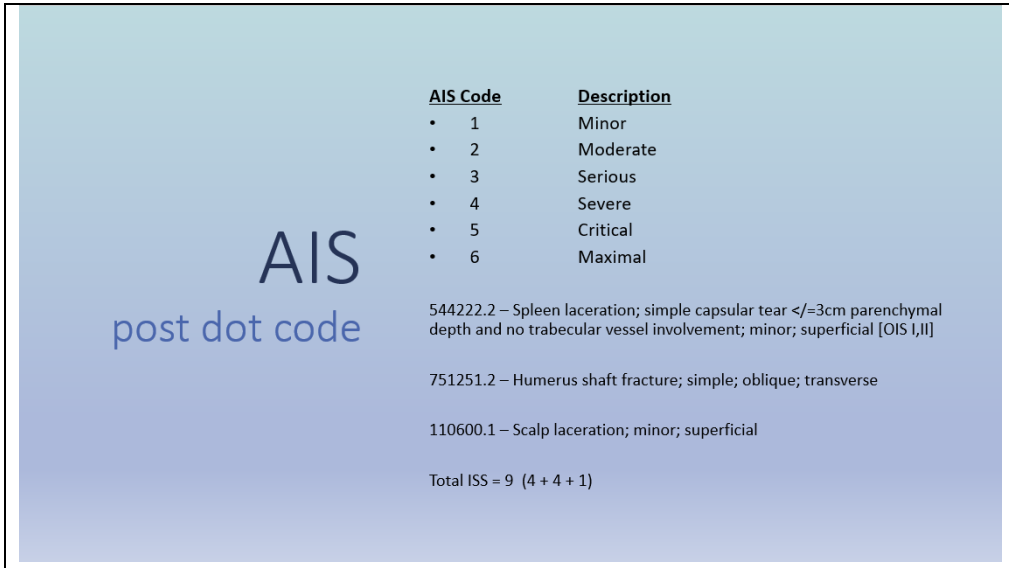
- The Association for the Advancement of Automotive Medicine (AAAM) is dedicated to the elimination of road traffic injuries worldwide
- Classifies each injury by body region according to its relative importance on a 6-point ordinal scale

The Association for the Advancement of Automotive Medicine (AAAM) is a global multi-disciplinary professional organization dedicated to saving lives and eliminating road traffic injuries through scientific research, authoritative educational programs, and public policy recommendations. The AAAM was founded in 1957 and is known for its publication of the AIS injury coding dictionary. This resource has profoundly impacted trauma professionals ability to monitor patient outcomes and share data on MVC's and injury prevention.

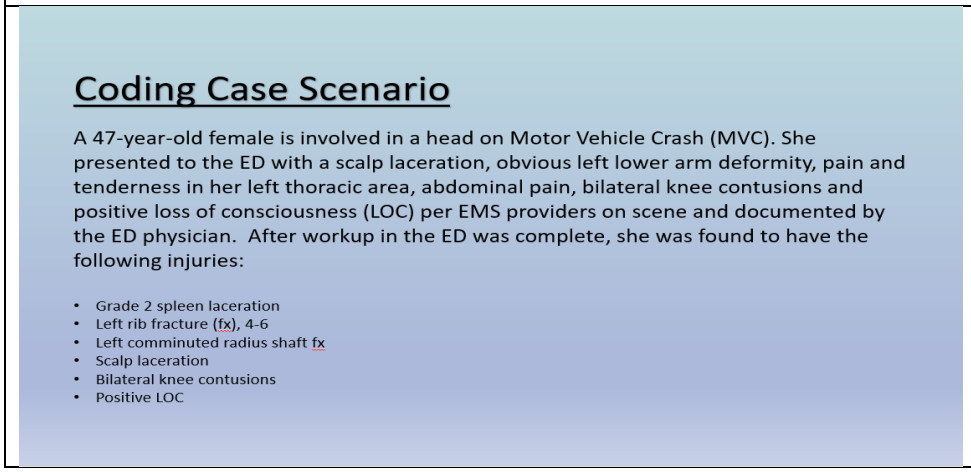
The AIS is an anatomically-based, consensus-derived, global severity scoring system that classifies each injury by body region according to its relative importance on a 6-point ordinal scale.

*Coding resource tip - The AAAM clarification document is a publication that can be accessed on their website. This contains further clarifying information on diagnosis discussions and proper AIS code assignment, for your reference.

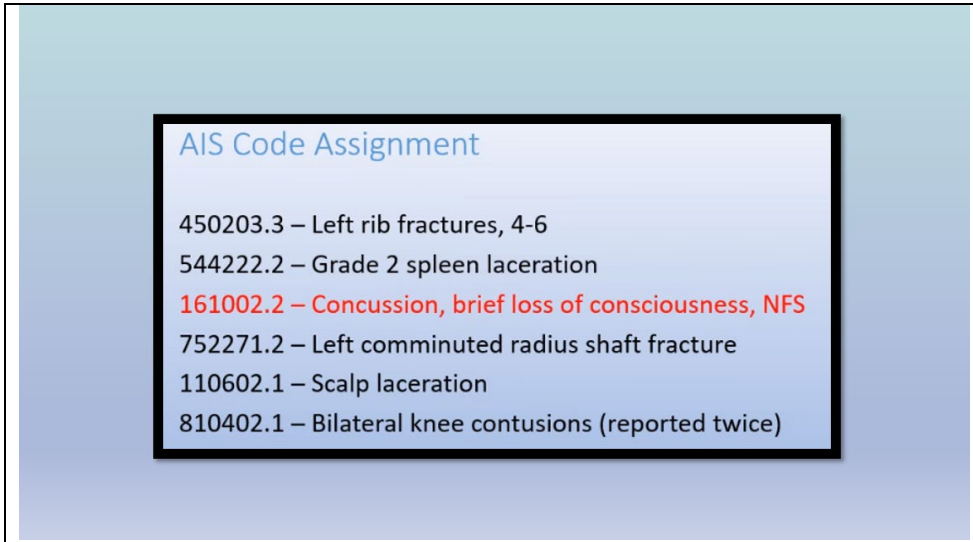
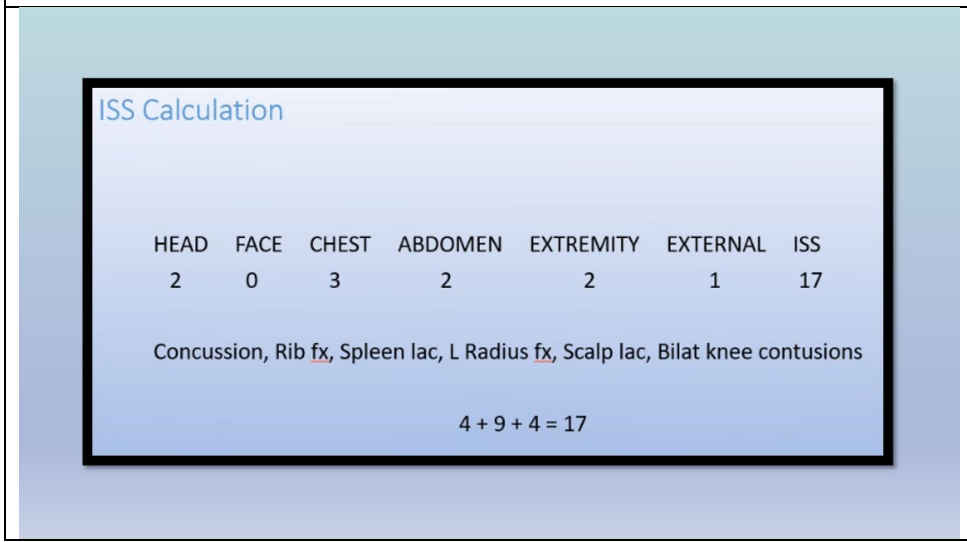
Again, the AIS 2005 is the current version the State of Michigan is requiring for AIS code assignment, which is currently built into your auto generated diagnosis fields within Image Trend. I'd like to provide you with an overview and better understanding of the ISS scoring system and how those scores are generated.

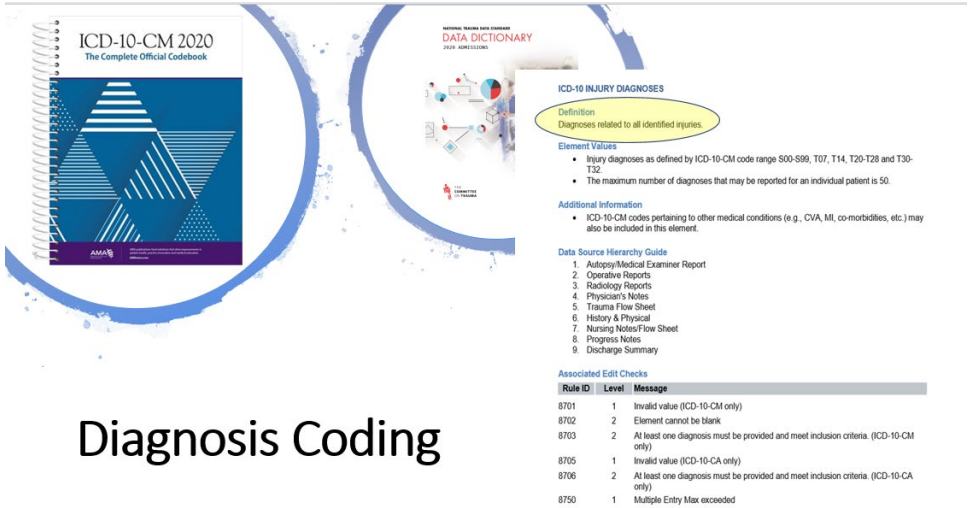


As most of you know, each injury diagnosis receives an AIS code. This is a 6 digit pre-dot number, with one digit post dot number ranging from 1-6. The ISS score is calculated by taking the highest AIS severity code in each of the three most severely injured body regions, squaring them, then adding together. There are six body regions. Head and Neck, Face, Chest, Abdominal or pelvic contents, Extremities or pelvic girdle and External. ISS scores range from 1-75. A score of 75 is derived from either three AIS post dot 5 injuries or from one AIS 6 post dot injury, as this is an automatic ISS score of 75, regardless of any other additional injuries. Additional injuries should still be reported regardless of the automatic score. This is very important for research. There are AIS codes with a post dot of 9, which document the occurrence of an injury, but are very non-specific and will not generate an ISS score.



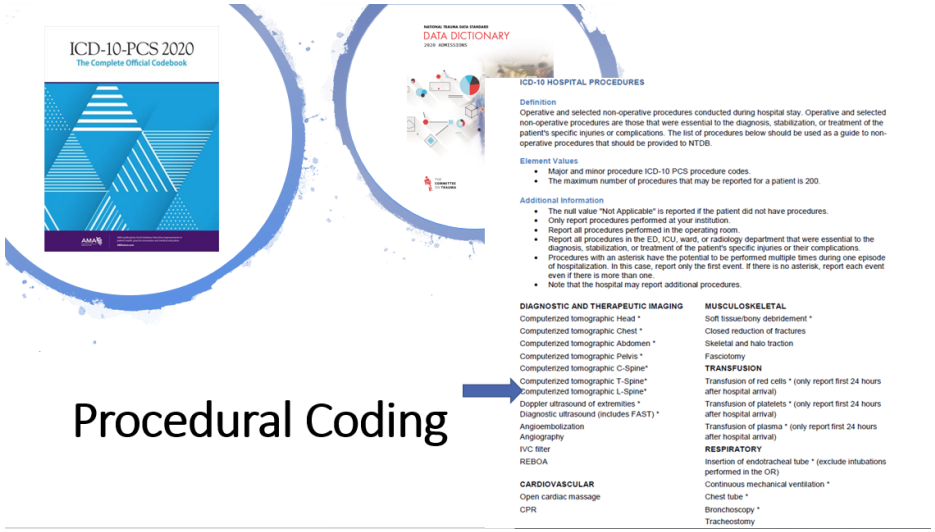
Let's review a case coding scenario:
(read scenario)

	In this scenario, these are the AIS codes assigned. I'd like to point out the concussion diagnosis reported, according to the AAAM coding guideline outlined in their clarification document that I mentioned on a previous slide. LOC diagnosis may be coded even in the absence of stated "concussion" within the EMR, as long as the LOC is documented by a physician, NP, PA or other recognized physician extender acting on behalf of the physician.
	Based on the diagnoses reported in the scenario, the total ISS score is derived by taking the three highest AIS post dot codes in the most severely injured categories, squaring them, then adding them together to produce a total ISS score of 17.



I'd like to bring to your attention the definition on this particular data element. The definition specifies capturing diagnoses related to ALL identified injuries. I have reviewed many patient incidents where a very limited amount of diagnoses are reported. While not to say this is incorrect, I need to stress the importance of capturing all diagnoses identified within the EMR. This is not only an NTDS requirement, but has significant impact on research. An example would be, aggregate diagnosis data is used by the AAAM in MVC assessment to evaluate automotive design, create or alter air bag placement and other safety equipment features.

Quite often, providers do not list out each individual contusion, abrasion, laceration, etc. Within their documentation. Review trauma nursing flowsheets, nursing notes or other supporting documentation of these superficial injuries for the extra point bump in the External category for your ISS score.



Unlike diagnosis capture, where there is sometimes a lack in the reporting, I find smaller facilities with limited time and resources are capturing too many unnecessary procedures. Quite often, I find facilities are entering every chest x-ray, plain film, and other non-operative procedures that are not necessary for data collection. You MAY collect anything you feel is a performance improvement opportunity, where the collection of a particular procedure is crucial step in your identification process.

There is also more instruction detail listed in the Additional Information section in the Data Dictionary for each definition that will help answer additional questions you may have. Again, please review the current version of your NTDS Data Dictionary. The only procedures required to report are listed in this section. The asterisk on those procedures denote reporting only once for your facility.

Why ACS Resources is important?

(currently referred to as the orange book)

- ACS verification uses this document of standards
- Provides in-depth explanation of trauma programs and systems
- Chapter 15 is the Trauma Registry

State of Michigan Criteria should be utilized for Level III and Level IV facilities seeking or continuing State designation.

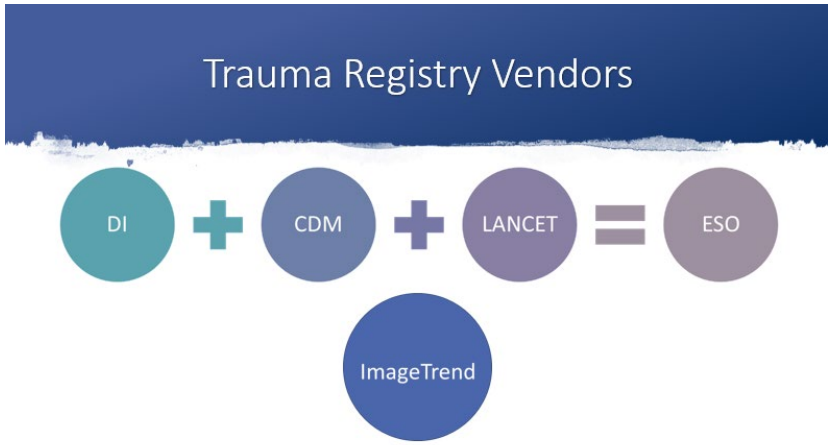
https://www.facs.org/quality-programs/trauma/tqp/center-programs/vrc/resources

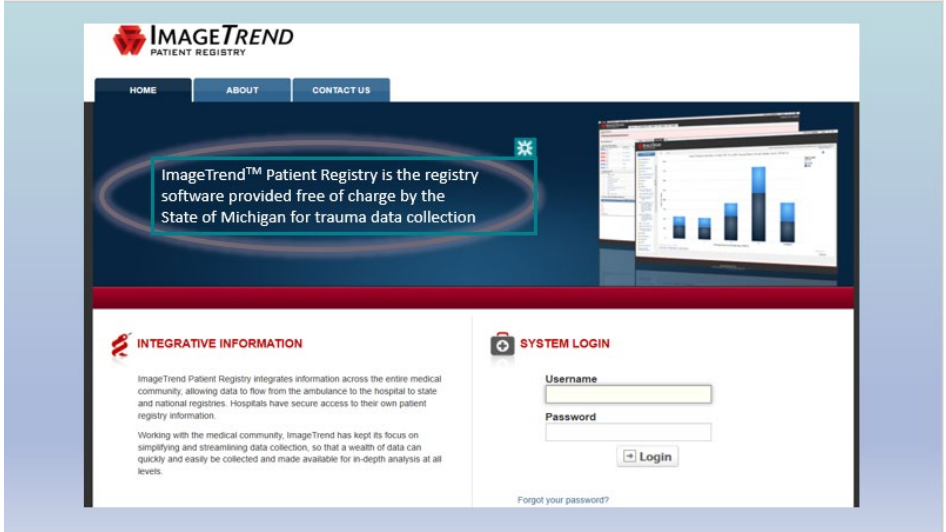
The American College of Surgeons, commonly called ACS, has a website that contains a wide spectrum of educational resources, publications and guidelines to assist trauma centers in the management and care of their trauma patients. Their goal is to advocate and educate utilizing best practices, assessment of outcomes and continuous quality improvement. They also have valuable webinars and tutorials to help trauma centers prepare for ACS site visits. The ACS conducts site visits and designations for Level I, Level II, and Level III trauma centers based upon its published standards. The ACS provides clarification documents and change logs to these standards and posts them on their website. In Michigan, Level III trauma centers have the option to have ACS verification or State of Michigan designation. The ACS does not conduct site visits for Level IV facilities. Those are performed by the State of Michigan.

The collection of ACS standards is published in a book called Resources for the Optimal Care of the Injured Patient and it currently has an orange cover. Thus, it is referred to as the orange book and is available online or hard copy. This orange book thoroughly explains trauma systems and elements needing to be present in trauma centers, and while it is geared more towards Level I through III trauma centers, it does provide an excellent overview for all levels.

The State of Michigan Trauma system website contains criteria and reference guides for Level III and IV trauma center designations, and we'll show that website address on the next slide.

	Shown here is the State of Michigan Trauma System website address for your reference. If you have not perused our website, I encourage you to do so. You will find a dedicated area just for the trauma registry that includes policies and procedures, data use agreements, and links to the most current data dictionary and the Image Trend patient registry. Registrars will find many useful tools on the State of Michigan Trauma System website. This is also the location where Level III and IV trauma centers seeking or sustaining State of Michigan trauma center designation will find documents that outline the standards to which they must meet. In Michigan, Level I and II trauma centers must provide trained site reviewers to the State to be sent to evaluate Level III and IV trauma centers. There are FAQ's on designation and verification, updates and requirements that also can be accessed on State of Michigan Trauma System website.
	I'd like to take a minute to briefly discuss the different trauma registry vendors our facilities around the state are using.

	There are multiple Trauma registry software vendors that Michigan facilities currently utilize to upload to our state repository. In late 2019, ESO purchased DI, (Digital Innovation) which you may be more familiar with their product called NTRACS/V5. CDM, (Clinical Data Management) who created and supported Trauma Base is also an ESO product, as is Lancet Technologies with their Trauma One software. These companies have combined assets, strengthened their product lines and are now working together under one umbrella. The software names have not yet changed, however; they are now run by the same company. ESO, based out of Austin, Texas, has EMS, fire and hospital software products to collect, share, report and analyze data with the goal of improving community health and safety. Then, there is ImageTrend that the State of Michigan utilizes as we will see on the next slide.

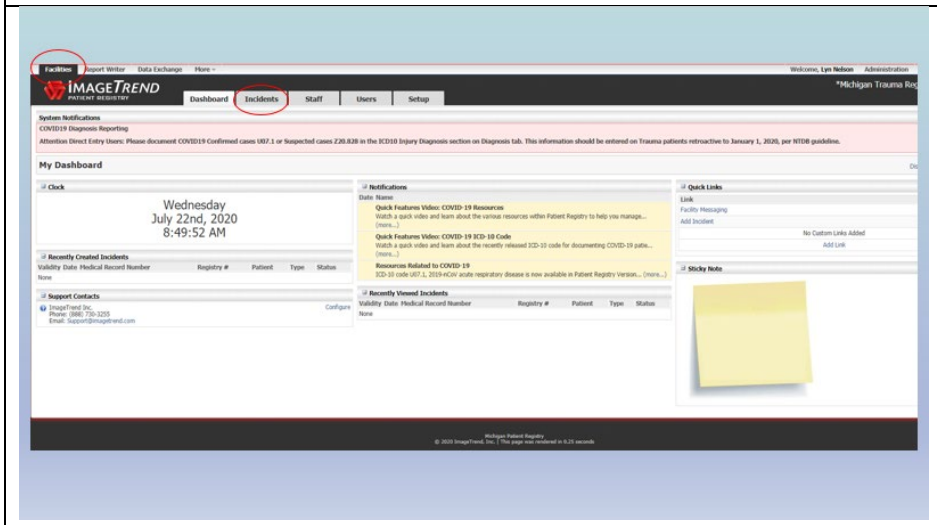


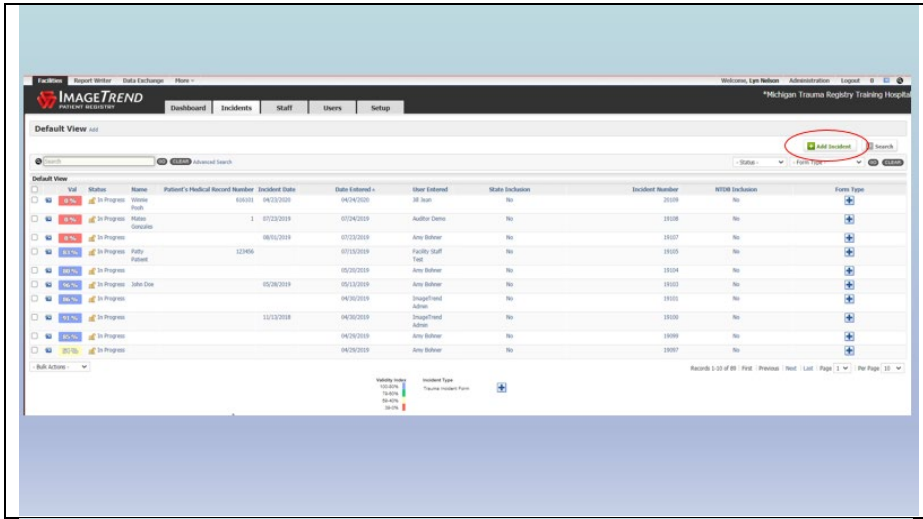
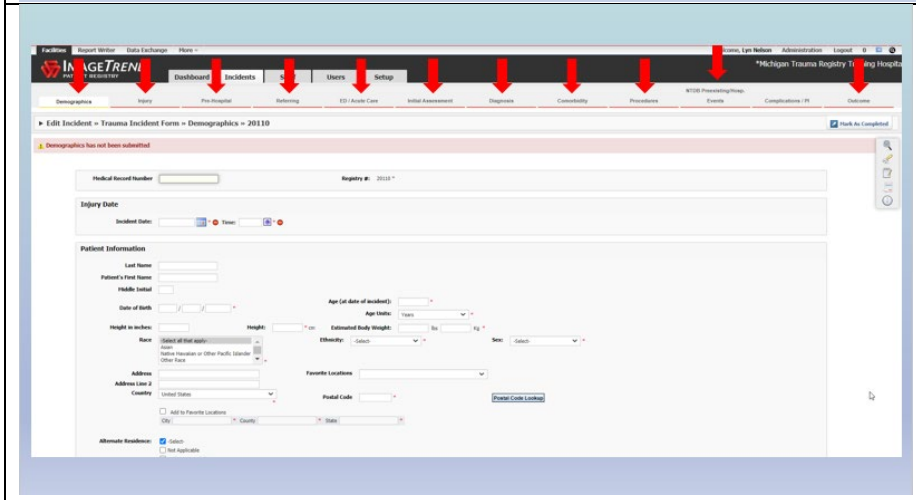
The State of Michigan utilizes Image Trend for their data collection system and it is provided to Michigan hospitals free of charge for direct entry users, or file uploading for those facilities who utilize another software vendor.

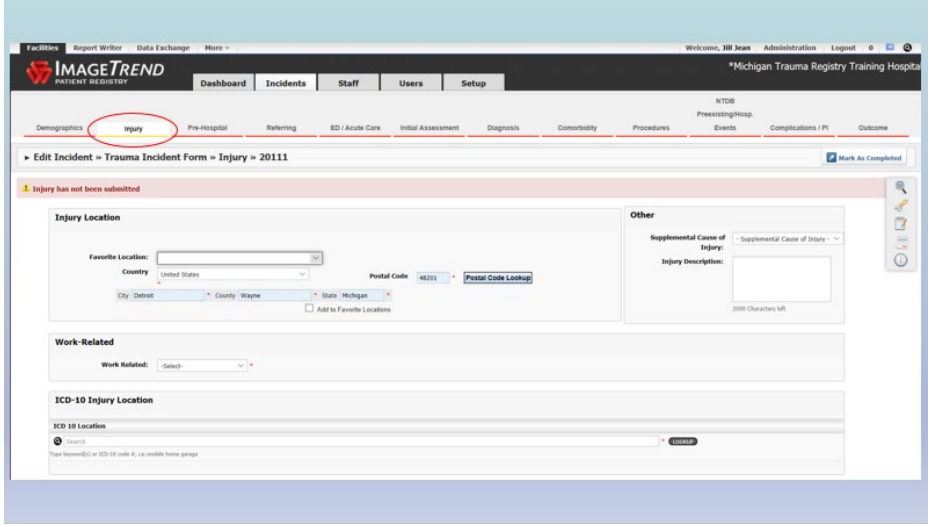
For review, in order to have access to Image Trend, the user needs to sign a Data Use Agreement and submit it via email to the State Trauma Registrar. Once this is completed, the user will be issued a username and password. Please remember to log into the Image Trend system at least once every 120 days, or the user account will become suspended. If that does happen, you can email the State Trauma Registrar to assist in unlocking the account. Keep your username and password in a convenient safe place to prevent unnecessary login issues.

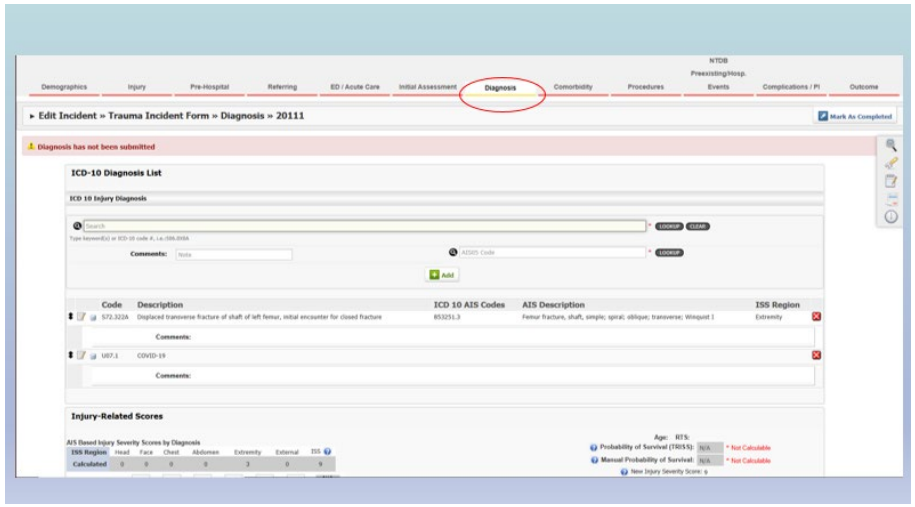
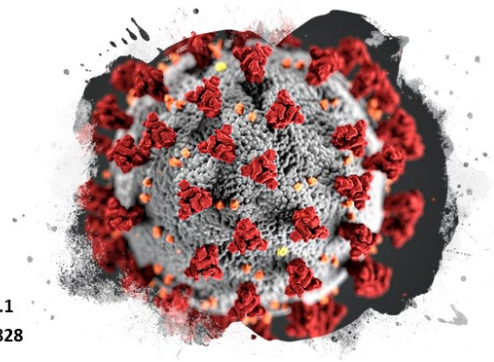
Please be aware, that after you login, you may see a banner across the top of the dashboard with helpful, time dependent, information. For example, there is currently information posted on how and where to report confirmed and suspected COVID19 cases within the registry.

If you have a username and password and are able to follow along with this instruction by opening another window, you may log into ImageTrend now and follow through the steps with me. You will have time to do that now as I explain the username and password process next.

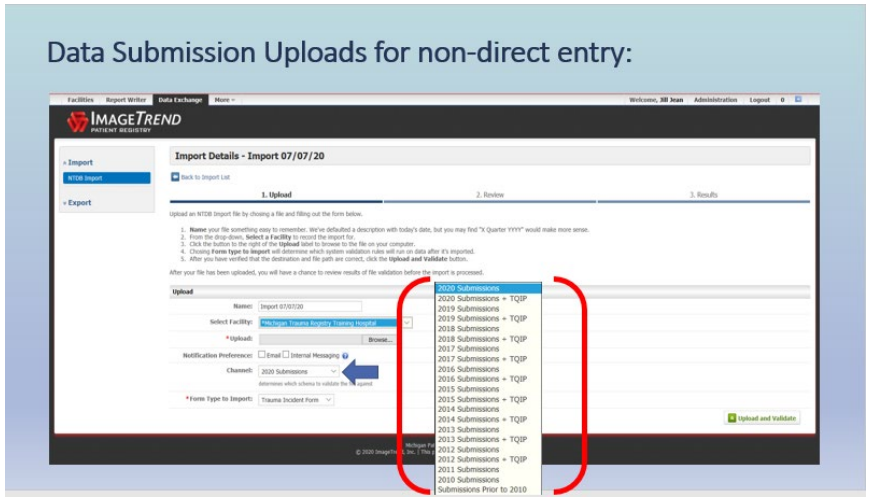
	The process for obtaining an ImageTrend username and password is to contact the State Trauma Registry Administrator via email. The user will be sent a Data Use Agreement or the user may also download a pdf copy from the State of Michigan trauma website. This three page document must be filled out and all three pages emailed back to the Administrator for review of its completeness. Once the document is accepted, the new user will receive an email with a username assigned and instructions on how to access the website. No passwords will be given via email in accordance with State of Michigan policy. The user will contact the Administrator for a temporary password, which will need to be changed upon initial login. (give time here because some people may be logging into the software)
	Once you have successfully logged in, the system will default to the Dashboard. You can see the pink-ish banner across the screen and that is what I referred to earlier as a place where we post important information. We are now looking at the tabs across the top for Incidents, Staff, Users, and Setup. To enter an incident, you need to be clicked on Facilities at the top left hand corner and make sure your hospital name is listed on the righthand side of the page. This is especially important when you have access to more than one hospital. Then you will click on Incidents (click now and circle will appear on incidents).

	To add an incident, you should be on the Incidents tab, click on the green box containing a plus sign, in the upper right section of the screen. A window will appear, click on Trauma Incident Form, then you'll be prompted to enter your ED arrival date. Click SAVE and your screen will advance to the first tab on the new incident, which is Demographics.
	The tabs across the top start with demographics and end with outcome. The only tab your hospital may not be using at this time is the Complications / PI tab. The other tabs should be completed with applicable information you have retrieved from a variety of sources within your EMR. When and how much of the information you enter at a time is up to you. Some registrars enter minimal information and then go back and edit, others wait until they have all of the information retrieved and start the entry. For example, some facilities choose to start the incident form when patient is admitted or later when the patient discharged. Regardless, you have a quarterly reporting deadline that we will discuss in a few minutes. I encourage you to have the NTDS Data Dictionary next to you during this process or minimized on your screen to refer to as you navigate through each tab of data entry. That dictionary is your source of truth for what to enter

	and where. As an example, the patient vital signs that are entered need to be recorded within 30 minutes of patient ED/Hospital arrival. Mandatory data fields are marked with a red asterisk. Please fill out these fields completely and accurately as outlined in the most current version of the data dictionary. You must click SAVE or SAVE and CONTINUE to advance to the next screen.
	Just a few education points regarding the injury section of your data entry fields. Please try to fill out as completely and accurately as possible. They are not only required fields, but are very important in data aggregation, injury prevention and research. The more specific your codes are, the more benefit these areas can be impacted. Take the time to dig into the charts, play detective and search out information that will provide you with specifics, rather than choosing unknown, NFS (not further specified), or blank fields. Questions to ask yourself, was your patient in a work related accident? Did your patient fall? Did you assign a fall , NFS code when the patient actually fell down a flight of stairs? Be diligent, take time to read through your entire chart for specificity.

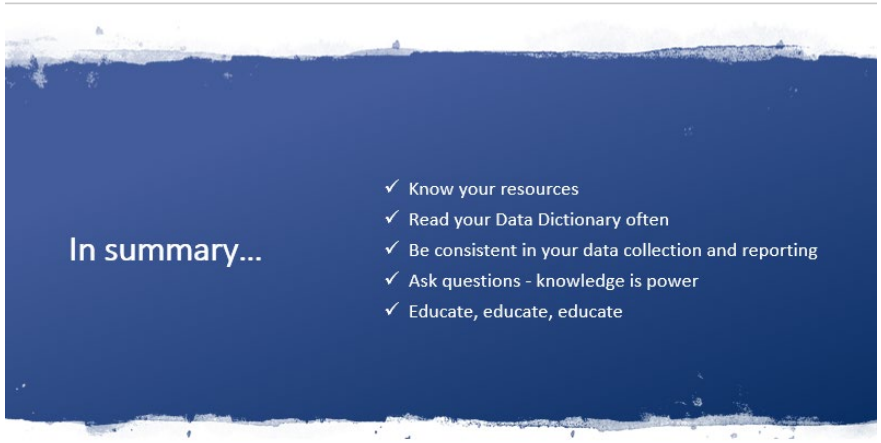
	Injury diagnosis coding can be challenging, especially for those of you who do not come from an HIM background. This is why I mentioned in an earlier slide to connect with your medical records coders, to help guide you in your own code assignment. Image Trend does help with the lookup/search feature, allowing you to enter a keyword and the system will generate the diagnosis code for you. Again, please try to be as specific as possible. For example, if you have a femur fx case, was this fx shaft? Proximal? Distal? Was the fx open, closed, or displaced? Was it left side or right? Review your chart, be specific. This is also where you will document your COVID19 confirmed or suspected cases, as I have demonstrated on this slide. (anticipate questions in the chat here)
COVID19 ICD-10 Diagnosis Reporting  **COVID19 Confirmed case U07.1** **COVID19 Suspected case Z20.828**	As you are all aware, COVID19 has significantly impacted our country and healthcare systems this year. The American College of Surgeons, Committee on Trauma recognizes the potential impact COVID19 could have on trauma patients. They have established an approach to report on COVID19 for trauma patients to quantify and report on that impact. This data is being collected only on confirmed or suspected COVID19 cases, retroactive to January 1, 2020. For confirmed cases report ICD10 diagnosis code U07.1, and suspected cases report ICD10 diagnosis code Z20.828. (this is another opportunity to take a moment and catch up on the chat questions)

	Data submission deadlines can sometimes be stressful, especially if you are running behind completing and closing out your charts in the registry. My advice is to know your deadlines, print, post or add dates to your outlook calendar to stay on schedule and submit timely. When I was working with my Level II Trauma facilities, I knew exactly how many charts I needed to complete weekly in order to stay on schedule and successfully meet my deadline, while accounting for road blocks along the way. Potential software issues, vacations, or unexpected sick leave situations can occur and thus staying ahead is beneficial to all of us.
 Submission Due Date / **Case Time Period** March 15th — October 1 – December 31 June 15th — January 1 – March 31 September 15th — April 1 – June 30 December 15th — July 1 – September 30	The submission date and time periods for the State of Michigan quarterly data submissions are as shown. Only closed, completed charts should be submitted. So just to remind you again, it is up to you when your start the chart entry process, however, when the submission deadline approaches, your incidents should be contain completed data fields that do not require further editing for the quarter of data that is due. These dates don't change. If you are an Image Trend Direct entry user, keep in mind the data you are entering is being saved real time. For more information regarding data submission and procedures for missed deadlines, see Data submission and Missed Deadlines Policy for the MI Trauma Registry, on the website.



If you are participating today and use software other than ImageTrend, you must upload into ImageTrend on a quarterly basis. Those that use ImageTrend are called direct entry users and no uploads are required as your typing into the software real time and appearing live the state registry.
If you are responsible for uploading data from your non-ImageTrend trauma registry software, it is important to select the correct channel of submission. The channel selected directly correlates with the admission dates of the patients you are uploading. (give example) Also, it may take some time for the import to be completed. You may log out of the system once a submission has started. An email confirming successful submission will follow.
If your account should become suspended, please email the State Trauma Registry Administrator for assistance. Accounts will suspend if there has been no login activity for 120 days.
Another helpful software tip is Image Trend University, which can be accessed in the MORE and HELP category section, in the upper left side of the dashboard area. There you will find instructional guides and videos on multiple subjects within the registry. This is a great self-help resource frequently underutilized.
Here is the website and technical support email address for Image Trend users. You may need to contact them with any software related issues you may experience. Their technical support staff are very knowledgeable and can assist troubleshooting software problems.

	Listed here is website information for many of the resources I have discussed today.
ImageTrend Incident Entry Quick Guide 1. https://www.mi-emsis.org/patientregistry/ 2. Login username and password. 3. Assure you are on the Facilities page as shown in the upper left-hand corner and the correct facility name is listed on the upper right-hand side. If not, click on the facility name and choose the correct one. 4. Click on Incidents. 5. Click on Add an Incident. 6. Complete the tabs across the screen starting with Demographics. Save as you move forward through the tabs. 7. Use resources such as the Data Dictionary while completing fields in the Incident record. Questions: statetraumaregistrar@michigan.gov	This is a quick guide on how to enter patients into ImageTrend. This will be available on the State of Michigan Trauma System website in the Trauma Registry section. You're welcome to print it from the website and write notes in the blank area.

	In closing, make friends with your facility resources, these people can help make your job more efficient. Assure you have the most current version of the NTDS Data Dictionary for the patients you are entering. Read your data definition often. I was always taught, if the pages in my dictionary are not falling out, I'm not reading it enough. Enter complete data; dates, times, unknown or N/A as appropriate. When there are blank fields in your registry, it is left up to interpretation whether that is missed information entered, N/A, or UNK values. If you have questions, reach out to a fellow registrar, research online or if all else fails, send me an email and I will do my best to help find the answer. Sometimes it just takes talking through a situation with a colleague to find an answer to your question. Lastly, this role is not a one and done lesson. It takes dedicated time to perform quality data abstraction, constant education and re-education whether it be on-line classes, researching on the internet, contacting your software tech support staff or participating in your local, regional or state trauma related activities and educational offerings. Thank you for your attendance today!