Trauma System Advisory Committee
3760 South Highland Drive Salt Lake City, UT 84106
5th Floor Board Room
Meeting Minutes
Monday, March 14, 2016

Committee Members:	Craig Cook MD, Holly Burke, RN, Janet Cortez, RN, Mark Dalley, Grant Barraclough, Karen Glauser, RN, Chris Drucker, Mark Thompson, Hilary Hewes MD
On Phone:	Peter Taillac, Matt Birch
Excused:	Jason Larson MD, Steven Anderson
Absent:	Rod McKinlay MD, Don VanBoerum MD
Guests:	Clay Manning, Kris Hansen
Staff:	Shari Hunsaker, Peter Taillac MD, Bob Jex, Jolene Whitney, Suzanne Barton
Presiding:	Craig Cook, MD

Agenda Topic	Discussion	Action
	Welcome	
Welcome	Craig welcomed the TSAC Committee members to the meeting and acknowledged guests present.	
	Action Items:	
Approval of Minutes	The January 4, 2016 Trauma System Advisory Committee meeting minutes were reviewed and approved by the Committee.	**Mark Dalley motioned to approve the January 4, 2016meeting minutes. Holly Burke seconded the motion. All present members voted in favor of the motion. No one opposed; none abstained. Motion carried.**
	Informational Items:	
Development of Trauma Regions Discussion – Bob Jex	We have been working the last couple of months on regionalization guidelines for the Bureau. We have been meeting monthly with staff to address those and what we have now in hand is close to being what will stand. In fairness he has updated the copy we handed out today. There were some regions that were left off that he has added. He added several hospitals to the North Central which include Primary Children's, University of Utah, Intermountain Medical Center, Jordan Valley Medical Center, Jordan-West Valley, St. Mark's Hospital, Park City Medical Center, Uintah Basin Medical Center and Ashley Regional Medical Center. He added LDS, Riverton, Alta View and Lone Peak. For South Central he added Mountain Point, Central Valley, Castleview, Gunnison, Sevier and Orem. In the Southwest area he left off Milford and Kane County and in the Southeast area there are just three hospitals. The map you have associated with that includes the regions with the regions with the names we have assigned to them after much discussion. The North would include the Northern area of the state. The North Central would include the old SST plus the Basin. South Central includes the Utah County infrastructure that was there plus Castleview, Sevier and	**Craig will make sure that this in on the agenda for review at the next COT meeting.**

	Gunnison. Southwest includes Milford, Beaver, Garfield, Valley View, Dixie Regional and Kane County Hospital. These regions were developed using referral numbers. The outlying hospitals refer to the level one and level two trauma centers in those various regions primarily and this is the outcome of that. They also spent some time talking about the core purposes for the trauma regions which center on issues of patient care and prevention including: • Participation in state and regional trauma advisory committees. • Leadership in state and regional medical audit committees. • Regular collaboration with regional trauma advisory committees, EMS or other agencies to promote the development of state and regional systems. • Participation in media and legislative education to promote and develop trauma systems. • Participation in state and regional trauma needs assessment based on national standards. • Identification and implementation of injury prevention programs to address identified needs within the region. • Participation in the development of regional trauma plans. • Provision of technical assistance and education to hospitals within the region and their EMS providers to improve system performance. Right now there are three regions the North, South Central and South West that are well on their way to meeting the purposes. North Central has started but they are not as far along as the others. In this process we would develop appropriate activities to accomplish the core purposes which would include: • Work with local health departments to promote education, injury prevention and coordination with the COT review of patient care under state guidelines. • EMS participation in regional trauma council is a central to the inclusionary philosophy of regional trauma councils. • Regional Performance Improvement should be consistent with the Regional Trauma Performance Improvement Algorithm. Dr. Nirula is chairing the State COT, so this process should move forward very well. They have spent a lot of time refining the guidelines and if there are suggestions, concerns or any improvements relative to this, they would entertain them. If not they will share it with the regional councils so they can use this as a guideline for their future activities. The guidelines are	

	required for designation. The Orange Book places a great deal of emphasis on this being mandatory for level one and level two trauma centers. We feel like the strength of the state trauma system will depend upon active participation of all designated trauma centers and those seeking designation in these regional trauma councils. It is a benefit for non-designated hospitals seeking designation to gain and develop relationships with the other hospitals in their areas. Until the guidelines are mandatory it will show as a weakness and when it gets further developed and if it wasn't corrected in the future then it would be shown as a deficiency. Craig commented from an ACS standpoint that if you were a level one or level two Trauma center and you weren't showing leadership within your region with the other hospitals, they would show it as a deficiency especially as our whole state system matures. In every region for things to really progress the way it needs to progress we need a key person in each facility and key leadership from a regional standpoint. Hopefully with Dr. Norilla leading the State COT and the ACS we can have that leadership.	
Inclusion Criteria Data Analysis – Clay Mann	At the last meeting we were reviewing the changes to our trauma registry system that would bring us more in line with the NTDB. One of those conversations that we had was whether or not one of the criterion associated with the inclusion criteria for the Utah trauma registry couldn't modify data was length of stay that changed from 24 hours to less than 12 hours. He pulled up some data that indicated what kind of additional abstractions would need to be required by each hospital if we made that change. Clay handed out a handout with that analysis. On the handout the first two columns indicate the hospital and the third column is the 2013 data that is available and includes the number of abstractions from each hospital that is truly in the statewide trauma registry. We used those inclusion criteria that each of our abstractors use and we applied those to the 2013 hospital discharge database that is available through the state and also the 2013 ED database that is also available through the state with one exception they changed the criteria for length of stay to less than 12 hours. In columns 4 and 5 the additional abstractions as we expected if we applied those same inclusions criteria to those existing datasets. One caveat, the hospital discharge database doesn't include times. To add those to the hospital discharge dataset we included every patient that had a (LOS) length of stay equal to 0 which means they stayed less than one day. We couldn't cut that one down to 12 hours. The ED database has times so we were able to use greater than 12 hours. You can go across the rows to look at how many abstractions are completing now and how many additional abstractions they could be expected to perform. There would	**Grant Barraclough made the motion that we go forward with the standard that we set of 12 hours from the arrival of the patient to ED or otherwise. Twelve hours after that would be our inclusion criteria. Motion seconded by Holly Burke. All present members voted in favor of the motion (Matt Birch on the phone). No one opposed; none abstained. Motion carried in 2017.**

	be an additional estimated 1,710 abstractions per year. These abstractions are for patients that stay less than 24 hours and greater than 12 hours. Shari Hunsaker commented that every hospital has their own definition about what an admission is. The "state's" definition of length of stay is over 24 hours. Craig commented that if we change this would this place an undue burden on other hospitals. We want to capture significant trauma data that is not going in to the registry that is considered outpatient. All the kids that come to Primary's with traumatic brain injury wouldn't be included in this based on CMS. Craig said their hospital is trying to change traumatic brain injuries with children and a lot of these kids would fit into that category based on that timeframe. From a cost standpoint, there is a huge cost to the state to our whole system based on those patients. It would be nice to have the data behind those patients. Hilary Hewes made comments about regionalization and unnecessary transfers and can we use things like tele-medicine. She said there is a benefit to this data for over-triage. Craig said that there are a lot of patients that we don't know what to do and if we feel comfortable to transfer the patient. Clay mentioned that there are small hospitals like Ashley Valley where this would benefit them with significant changes. Davis Hospital would also benefit. Bob Jex commented that the hospitals that are now trauma centers since 2013 are Allen Memorial, Davis, Delta, Fillmore, Jordan, Lakeview, Heber, Valley View and Sanpete. There were mandatory submissions before they became trauma centers. Craig asked what the main impedance to make the change. Are we going to accomplish this if we obtain more data and will it make a difference? It doesn't seem like a tremendous increase. Peter made comments that it would allow us to capture some level of over-triage. This is a concern over the nation. It is a big deal to move patients out of their locality and take them away from family for a relatively short stay. This change would give us a better picture of this especially in a regional way. Grant Barraclough made comments that they have had 18 self-presenters and self-transfers from Castleview during the year that bring themselves to the hospital and they don't have insurance and they do not want to be transferred up North by EMS so they get their friends to bring them up North.	

	Hilary said if we are going to compare data over the nation we need more data on what other people are doing. Shari said their intent to add the additional abstracts would be for 2017 to take this to the rules task force and it would be effective January 1, 2017. Shari said she would be concerned if the move they were making was decreasing data in the trauma registry. She doesn't feel like there is anything wrong with increasing our data pool if it gets us patients that are not being looked at now and analyzed. Craig's personal thought is that we don't have an overwhelming need to do this sort of an issue, Peter agreed. Smaller hospitals change their abstractions relatively small numbers. She would not advocate for a change unless we were also going to make an effort at that increased data collection. Janet made comments that the length of stay is dependent on how busy the ER is. If no one is in your ER, then you can be in and out rather quickly. Kris mentioned that ED time starts when you are checked in to the hospital. Kris mentioned that it is the time the decision was made not the time you are waiting for a bed to be ready. Craig asked what we want to do from last meeting discussion. ED arrival from time to decision was made was to take out the variableness of how busy is the center and how long do they stay in the ER versus how long have they been treated for. The discussion was you make the decision to admit and what exactly is the admission? The NTDB does not define a hospital admission. We are trying to define a hospital admission as any stay in the hospital greater than 12 hours. We need the data in order to make a decision. We need to develop a filter to look at the specific data for a few years and determine if we leave it at 12 hours or bump it up to 18 hours. Kris asked if we can query the databases outside of the trauma registry to get the information we need and can we query other databases that we have already like the hospital discharge database and ER discharge database to get a baseline idea of how patients are moved around in the system. Craig said if there is anything added to those numbers based on our ability to obtain resources then we need to make sure we are appropriately representing ourselves. Clay mentioned that the Utah Trauma Registry is woefully underutilized. He mentioned that he only gets maybe 1.5 requests per year to do a research project based on the current dataset that we have. Once the COT is organized, this data will be utilized more because each region will want their data.	

	Craig commented that we need to make sure that the data we collect is standardized and we are comparing the same things. Kris commented that Primary's puts all patients in admissions with no regard to their length of stay. Holly commented that the concern is with the smaller hospitals and how this affects them. Grant Barraclough made the motion that we go forward with the standard that we set of 12 hours from the arrival of the patient to ED or otherwise. Twelve hours after that would be our inclusion criteria. Motion seconded by Holly Burke. All present members voted in favor of the motion (Matt Birch on the phone). No one opposed; none abstained. Motion carried in 2017. Shari will address the rule change.	
Audit Filter Discussion – Peter Taillac	Peter said that Jolene, Bob Shari and himself got together and reviewed the trauma system audit filters that have been in place since 2006 and came up with the following revisions: 1. Trauma patients who die greater than one hour and less than 24 hours after ED arrival, stratified by presenting hospital identifier. Peter asked if the 24 hours should be 12 hours which was the original intent if people died before admission that may have had the opportunity to live. Clay commented that this was an early committee on trauma audit filtering and it was not associated with our inclusion criteria. Craig made the comment that from his perspective the intent from a trauma surgeon is to make sure that we don't lose or miss any of these patients. If they are alive an hour after they get to us, they should almost always be alive thereafter. If we are missing any of these patients with our filters, then we need to capture them. We need to capture the patients that die within a short period of time after the 1 hour admission. Patients that die are placed in the trauma registry. Peter would like to put number 1 on hold for now and everyone agreed. 2. Trauma patients with more than one inter-hospital transfer prior to definitive care. Number 2 is pretty straight forward. We should only have one transfer for definitive care. Everyone was in agreement with number 2. 3. Ground transport trauma patients (from scene) with an ED RTS less than or equal to 5.5 and scene transport times (scene departure to ED arrival) greater than 20 minutes. Clay mentioned that the intent was to look for patients that were severely injured and EMS had spent	**Janet Cortez will come up with possible edits for number 7.**

too much time on scene treating them before transferring them to the hospital. Peter wondered if air transport was considered in this. Clay doesn't think it was initially considered. This is not helpful for the rural areas. Peter recommended that number 3 be taken out and everyone agreed.

4. Trauma patients with an ISS greater than 15 (and all penetrating trauma) with EMS scene times (EMS scene arrival to EMS scene departure) greater than 10 minutes. This is a straight forward scene time and the change they made was to change 20 minutes down to 10 minutes. This was the national recommendation and goal. Mark Thompson commented that entrapment patients would take at least 20 minutes to get them out. Those incidents would be documented as an outlier. Ten minutes is a reasonable time and if they have a patient with trauma, they are going to "scoop and run" and start IV's and treat the patient on-route to the hospital for definitive care. Matt Birch agreed that we should leave it at 10 minutes and it's a goal that we have all been trained to. The whole point is getting these people to the surgeon is the whole idea. If we extend those times up to 20 minutes, then we open up to increase the time spent getting the patient to definitive care. If we go for 10 minutes than we will be closer to that number. We are building the templates right now and we can add in a question where if it is greater than 10 minutes on a trauma patient and they meet that trauma criteria, then we can make them answer the question as to why it took longer and that's data that could be extrapolated from all reports. Craig commented to Peter that he has the consensus for 10 minutes with the understanding that it is a goal. Clay commented that we would not have an ISS score on all patients who go to the ED and there are two issues with that and one is we hope that the final ISS is what the EMS provider sees on the scene that should correlate pretty closely. We were using the revised trauma score on the one previously because it is based on the EMS data which should be what the paramedic or provider is seeing at the time and should be available with every case. Peter commented that the EMS provider is not going to take any of the precious 10 minutes to calculate the RTS. Clay commented that they are just looking at the GCS and the blood pressure and the

	respiratory rate and they are not calculating it clearly. We would just define severe people where the ISS may not be calculated on people that are never admitted to the hospital. It was agreed on that we have the agencies do ISS greater than 1.5 or scene RTS less than 5.5 will be added to number 4. 5. Transferred trauma patients with an ISS greater than 15 and transfer time (ED admit to definitive hospital admit) greater than 2 hours. Peter commented that we may want to reconsider this one. The goal of this one was to it keep the first hospital from taking a really long time to affect a transfer to the definitive hospital. We felt like 2 hours of ED time to actually leave hospital one was a good goal. The way this is written it includes transport time to the definitive hospital admit. Peter's recommendation is to make it ED admit to ED discharge from the first hospital greater than 2 hours. Craig questioned if we need to change the 2 hours. Jolene commented that a lot of other states have set it at 2 hours. We will leave it at 2 hours and look at the data. For rural areas 2 hours is not a lot of time. Consensus was to change it to ED admit to ED discharge and leave it at 2 hours. 6. Trauma patients who die with a probability of survival (TRISS) > 50% or who live with a probability of survival (TRISS) < 50%. (TRISS score for trauma patients using physiologic measures collected at the first presenting hospital). We recommend no changes to this one. We deleted the previous # 6 that read trauma patients with an ISS greater than 15 and ED time (ED admit to ED discharge) greater than 2 hours. We deleted this because that is discussed in # 5 and they were overlapping each other so we turned it in to one. 7. Trauma patients with an ISS greater than 15 who are discharged from non-state designated trauma centers. We thought this was a good one to keep. Patient was not transferred. Craig made comments that a lot of these people are discharged to Hospice from the ER. Is there a way to exclude Hospice? Shari commented that we don't have a discharge disposition of home Hospice. We have a discharge disposition to a skilled nursing facility or long term care. There is no way to exclude Hospice patients. There was discussion about drilling down to a certain time frame for patients going to another hospital with complications with hospital	

	discharge data. It was commented that this discharge information would be on hospital data not trauma data. Craig commented that this does have value on a regional level with the filter but it's not clear and would require another analysis. Peter advised that we keep this as is and when we start the regionalization efforts and the PI we can see how it plays out. If something does come up, it will be a caution light for that region and would need to be looked at more deeply. Clay mentioned that we could clean it up with an ISS greater than a 15 that was admitted to a non-designated trauma center and kept more than 12 hours and those would be in the registry. There was discussion about elderly patients and they could easily stay 2 - 3 days and then be discharged into Hospice care and what if they died. Shari commented that this information would be in the hospital discharge data that they get and the linkage they would do. Shari said that they could look at the ED or in-patient hospital data sets to find a recurrence of that patient within a certain amount of days. Janet commented that if a patient dies in a non-designated trauma center there is no process in place to review those deaths so we would never know what happened. She would like to see a filter with outcomes from an ISS less than 15 alive or dead. Peter commented that we could replace number 1 with an ISS less than (pick a number) for patients who die in any facility with 24 hours. Craig commented that a lot of these deaths are late deaths that used to die 2 – 3 weeks later that now stay at IMED or the U for 2 months and they had an ISS of 57 but they survived and these are the patients that really need to be at the highest level of care and if they don't receive this kind of care they die. Janet commented that this is a gray area where there is some opportunity and this is something the non-designated trauma centers need to know and they don't even recognize it and the state would really want to know about those deaths because that is where we could really impact lives of our citizens. Peter asked how Janet would write this. Janet commented the	

	simplest way would be outcome equals to death in non-designated trauma centers by ISS. It would need to be a scale that would indicate if you have a super high ISS why was this patient at a non-designated trauma center or if the patient was a 3 and needed surgery why were they not sent to a trauma center with surgeons. This would make you ask more questions. It would either encourage you to become a designated trauma center so we can have the committees in place to look at it or the patients need not go there. Craig commented that the ACS would come in and say that your sickest patients needs to be at the highest level centers and they are pushing more and more that those centers are level 1 and level 2. You could come up with an ISS number (pick the number) and anything over that number that die at a non- level 1 or level 2 trauma centers get pulled out so we know that our sickest patients are being cared for at our highest level of care. That would be stratified by designated and non-designated. Your designated would be able to quickly recognize what they can't care for and quickly transfer the patient. The non-designated would not recognize this and would keep the patient. The 3's and 4's know better because that is the way it is built in the designation process so if they kept the patient and they died and it was something they couldn't care for there is opportunity and if the ones that are designated and the patient dies then there is opportunity there but we need to know about them. We should be able to pull those cases by region and say what we can do to educate you and help you become designated trauma centers. We could stratify the data by age. If you used this information from a regional standpoint you could sift through the information and Shari and the state could help the region look at the cases and we could find them and identify them and reviewed by the region. Janet will come up with some possible edits for number 7. 8. Trauma patients less than 15 years old (children) who either had an ED GCS greater than or equal to 8, no intubation, or ISS less than 15 a transferred to a regional pediatric trauma center. We inverted number 8 and it used to say patients less than 13 years old who had an ED GCS less than or equal to 8, were intubation or ISS greater than 15 and were transferred. What we were trying to get at was looking to the over-triage	

	through Primary's and we inverted that and made it simpler to look at over-triage. Peter thinks that by keeping one that says if you had a child with an ISS over 15 and you didn't transfer them is still a valid measure when looking at under- triage and over-triage on the pediatric side. Hilary's thoughts were the correct age should be 13 and if we change that it would make sense for over-triage. If the kid has a femur fracture and not necessarily need specialty care they are over-triaged only because there is not a pediatric orthopedic surgeon that will touch them. Hilary said she thinks it's reasonable because it will get the kids with the mild injuries. Hilary said that there is a specialist problem and there is really no way to get over that. Peter commented that we could change the "or" ISS to "and" potentially to get rid of the fractures and those kind of things. Kris mentioned that you want to do over-triage it doesn't matter the age because this criteria is the same for any hospital. Jolene commented that this one was set up specifically for kids as a pediatric filter. Craig commented that he thinks there is enough of an effort with over-triage at Primary's. Peter proposed that we revert it back to where it was and make it say "trauma patients less than 15 years old who either had an ED GCS less than or equal to 13, were intubated, or ISS greater than 15, and were not transferred to a regional pediatric trauma center". 9. Number 9 is one that we added which we are doing a good job with our field triage criteria and is EMS following it. Trauma patients who meet the criteria of Steps 1 and 2 of the CDC Trauma Field Triage Guidelines are transported to the highest level trauma center within the region. (NEMSIS v3.4 data element eInjury.03). It's a great one for the region to look at and we can also do it for the state. Shari has done the research for steps 1 and 2 and we need to get NEMSIS version 3. This brings us back to number 1. Do we want to lose number 1? Consensus was to lose it and replace it with the one that Janet will create. Janet said she will add all trauma related deaths at non-trauma centers greater than 1 hour and the other one would be all trauma related deaths with an ISS of (15 or 25) for level 3 and level 4 trauma centers. Craig recommended that she use 15 because it would cover everything.	
Status on Free	Agenda item tabled until next meeting because of time constraints.	**Agenda item tabled until**

Standing ED Role	We will put this item earlier on the agenda for the next meeting.	**next meeting in June.**
Status on Strategic Plan – Jolene Whitney	Everyone got a copy of the Utah Bureau of EMS and Preparedness Strategic Plan that was handed out at our last meeting with the section that was specific to trauma systems and the goals and objectives. Jolene wanted to make sure that you all knew that we are looking at these goals and looking at the objectives and we are making some progress in meeting some of these and we are on schedule. Today some of the goals and objectives were to bring the audit filters to the committee and start reviewing those, develop a regional performance improvement structuring process and adopt the ACS new trauma center designation criteria. There is some good progress being made on the goals and objectives that you helped create for our trauma systems.	
Status on Designations – Bob Jex	Right now in the next quarter we have one re-designation at Brigham City that we will be preparing for. We have been working with Davis, Mt. Point, Jordan, West Valley, Garfield and Castleview for designation for level 3 or level 4 within the next year and we should be able to make it work. We have 5 other designations for the later part of the year. There are 26 designated Centers and 20 non-designated centers in the state. Hospitals are recognizing the value of being a center capable of handling trauma patients.	
Status on Needs Criteria for Trauma Centers – Bob Jex	Last year beginning in March we talked about setting the criteria for needs base designation of level 1 and level 2 trauma centers. We put some of that language in the rule and we took it to the EMS Committee and it was soundly defeated by the Mountain Star Corporation folks who have plans to add a level 2 center in the state. The TSAC committee approved this and the EMS committee vetoed it. In August last year Bob was invited back to Chicago and they discussed needs base criteria and after a day's worth of discussion they decided the Florida model would be worth adopting because it was and it accepted because it was very objective and it has been adjudicated in the state of Florida. Please review the criteria (committee members); it's reasonable and objective and will meet the needs of the state. It might be too late for St. Mark's folks but we can make sure that it doesn't happen to again in the state to maintain the integrity of the trauma system. Bob will come prepared with a draft rule at the next meeting do you can review and discuss it and will use a MSA data for Utah and will accomplish the same thing. If we adopt this rule they can be ACH certified and not be state designated. Rule process can take 3 - 6 months and take effect in a year. The state is very broad based stake holder support with this. Craig commented that it is imperative that the state does this so we have the appropriate trauma system with the appropriate	**We will put Needs Criteria for Trauma Centers on the agenda for the next meeting in June.**

	trauma system with the utilization of proper resources and also not deluding experience of higher level trauma centers. We need to move forward with this.	
Next Meeting	June 13, 2016	
2016 Meeting Schedule	March 14, 2016, June 13, 2016, September 12, 2016, December 12, 2016	
End of Meeting		**Meeting Adjourned**