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Do contradictions in TQIP measures affect perceptions of quality? An analysis of TQIP definitions on quality outcomes for placement OF ICP monitoring at a single level one Trauma Center☆

DR. MAGGIE BRANDT (Ypsilani, Michigan): The authors present their response to the experience of being a high outlier in one category of the TQIP report. Their concern is that the measurement is not evaluated in the program quality accurately. I agree with your premise. I think it's inherent in this method of quality reporting. In our hospital, we also have a very low use of ICP monitors, yet we have aggressive neurosurgeons who operate without delay for those who need operative intervention.

So in our TQIP report, we have great time to OR and very low ICP use. In our deeper dive, though, we found that our results were very similar to your center's and our care is good, even though we are both ends of the caterpillar graph. One of the difficulties in using national TQIP reports is the huge lag time between the patient care events and the delivery of the reports and that due to the enormous volume of data in the report it is hard to sort out the noise feom the data. The parameters measured really are an attempt to pick specific practices that demonstrate high quality care, but, as you mentioned, it's a moving and evolving target.

In Michigan, we have the luxury of the Michigan Trauma Quality Improvement Program. Each participating center has the ability to actually log into a website, review its data and compare ourselves to other organizations within the state. So I can compare my program to all level 1 centers, I can compare it to all the state. It's a very luxurious advantage that I think that we have. The data is also very short, within three months of time.

I do think that national TQIP is the process and it's a way to improve and it's a growing – it's growing and will help as it becomes more user friendly and more granular. Because we have the same problem, I actually have some questions I'm hoping that you can answer.

You sort of alluded in your presentation as to the determinant of how unsurvivable injury, but how exactly was unsurvivable injury identified? Those seem to be the patients that in your group that make you the outlier patients who could have had an ICP but then didn't get an ICP and so moved to the right of that caterpillar graph.

Was that initial assessment inaccurate? Did those people really die of brain injuries and was that an opportunity for improvement? You also sort of implied who decides which patients get the ICP monitor? Is it the trauma surgeons and do they place the monitors? Is it the neurosurgeons, do they place the monitors? Is it a collaborative decision?

When I looked at the TQIP guidelines, it looks like there's a lot of ways that you can justify not placing an ICP monitor, so is part of the problem lack of documentation as to the decision making? If it's not the trauma surgeons who are making those decisions, are the surgeons placing the ICP monitors included in the review of those TQIP results so that they're aware of this outlier status? And what changes, if any, has your trauma program made based on this study?

I believe you're using TQIP data in the way it was intended. You look at your data, you compare it to others, but you don't take the rank of an individual metric to assist in final analysis, rather you're investigating further and digging deeper and using your own registry data. This allows you to make sure you're honestly reviewing the whole picture, making changes that improve your program and your patient care, rather than teaching to the test, changing specifically so that you have better TQIP ranking, and I congratulate you for that.

DR. WEYERBACHER: To start off, non-survivable injuries are determined by our neurosurgical colleagues. In this data that we reviewed, any of the individuals that were considered to be non-survivable did, in fact, die from their neurological injuries. So this was deemed to be an accurate assessment by our neurosurgical colleagues.

To answer next, as far who decides eventually on the ICP monitor placement, that is also by our neurosurgical colleagues. It is done in conjunction with the trauma team, but they are the individuals who determine eventually the need for placement. I think our institution is very fortunate in the fact that we always have a neurosurgical team in-house, and they are always very easy for us to discuss any cases of concern with.

As far as a specific area that I think has really helped us improve, is we are the individuals that do monitor our TQIP data as the trauma program. That being said, with the fact that we do have close ties with our trauma ICU team and our neurosurgical team, it's actually allowed us to go back, review this data and discuss with them. And I think it gives us a better evaluation on a daily basis of our patients and a discussion of whether or not they actually do require a monitor.

And it's something that we always bring up on these patients, do they still need a monitor, you know, do they need a monitor now after such and such imaging, do they need a monitor – so I think it's basically helped us really kind of open up the line of communication, which obviously is very necessary for good medicine. So they are included in TQIP data. That being said, I think all of our – you know, our trauma surgeons are the primary individuals considered in the data set at the initial evaluation of the trauma.

DR. ANNA LEDGERWOOD (Detroit, Michigan): I'm just a little impressed that you had the ability to make that assessment of a

☆ (Presentation given by Jonathan Weyerbacher, M.D.)

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nonsurvivable injury pretty much when the patient arrives, so I am impressed with that. I wonder how long before those patients died.

The second thing is, I see patients. There are some patients, we put a monitor in. The pressures are very low. We never treatment them. The monitor comes out fairly quickly. There are other patients where we go ahead and we treat these patients, and, obviously, the treatment was indicated. And I am wondering of the patients in whom you placed the monitor, how many actually needed treatment and how many did not?

DR. WEYERBACHER: So, as far as the timing for our neurosurgical colleagues, the amount of time it took them to make that decision, I don't have specific data on that exactly. As far as, you know, basically the length and extent of ICP monitoring placement, you're right. If they have low pressures, we do keep it in for 24 to 24-h period.

DR. JONATHAN SAXE (Indianapolis, Indiana): Just to answer Dr. Ledgerwood, about 13% of them we actively treated and that was the over placement or idea of over placement of ICP monitors. That number indicated the number of people that we didn't have to treat. It was we put them in, it was low ICP, took them out.

So it's a small percentage. We put them in – it seemed to be putting them in the correct patients and didn't seem to be not putting them in the patients who didn't need them.