

Michigan Trauma Quality Improvement Program (MTQIP)

2024 Performance Index

January 1 to December 31, 2024

Measure	Weight	Measure Description	Points	
#1	10	Data Submission		PARTICIPATION (30%)
		On time and complete 3 of 3 times	10	
		On time and complete 2 of 3 times	5	
#2	10	Meeting Participation		
		Surgeon and TPM or MCR attend 3 of 3 meetings	0-10	
		Surgeon and TPM or MCR attend 2 of 3 meetings	9	
		Surgeon and TPM or MCR attend 0-1 of 3 meetings	6	
#3	10	Data Validation Error Rate		
		0.0-3.0%	0	
		3.1-4.0%	10	
		4.1-5.0%	8	
#4	5	PI Death Determination Documentation (12 mo: 7/1/23-6/30/24)		
		> 4 Cases missing documentation	0	
#5A	8	Timely LMWH VTE Prophylaxis in Trauma Admits (18 mo: 1/1/23-6/30/24)		
		≥ 52.5 % of patients (≤ 48 hr)	5	
		≥ 50.0 % of patients (≤ 48 hr)	3	
		< 45.0 % of patients (≤ 48 hr)	0	
#5B	2	Weight Based LMWH Protocol in Use (12mo: 7/1/23-6/30/24)		
		No	0	
#6	10	Timely Surgical Repair in Geriatric (Age ≥ 65) Isolated Hip Fxs (12 mo: 7/1/23-6/30/24)		
		≥ 92.0 % of patients (≤ 42 hr)	10	
		≥ 87.0 % of patients (≤ 42 hr)	8	
		< 85.0 % of patients (≤ 42 hr)	0	
#7	10	RBC to Plasma Ratio in Massive Transfusion (18 mo: 1/1/23-6/30/24)	0-10	
#8	10	Serious Complication Z-Score Trend in Trauma Admits (3 yr: 7/1/21-6/30/24)		
		< -1 (major improvement)	10	
		> 1 (rates of serious complications increased)	5	
#9	10	Mortality Z-Score Trend in Trauma Admits (3 yr: 7/1/21-6/30/24)		
		< -1 (major improvement)	10	
		> 1 (rates of mortality increased)	5	
#10	5	Patient Reported Outcomes Participation (12 mo: 7/1/23-6/30/24)		
		No agreement OR Signed agreement and <90% of patients contact information submitted	0	
#11	10	Timely Antibiotic in Femur/Tibia Open Fractures - COLLABORATIVE WIDE MEASURE		
		< 85% patients (≤ 90 min)	0	
Total (Max Points) =			100	

Additional Information

Measure 1: Data Submission: Partial/incomplete submissions receive no points. Complete data submission is defined as all cases submitted for the requested interval. To be considered complete, cohort 1 cases should have a missing rate of <10% for first name, last name, and MRN variables for 1/1/20 cases forward.

Measure 2: Meeting Participation: A surgeon may represent one trauma center only. Alternate surgeons are allowed but must be consistent (not rotating). The alternate surgeon must be an attending-level equivalent from the trauma call panel.

Measure 3: Data Validation Error Rate:

Centers not selected for validation this year will receive full points. Centers that are selected but do not schedule a visit will receive 0 points for the validation measure.

Measure 7: RBC to Plasma Ratio in Massive Transfusion

Step 1: Assign (weight) to each MTP patient’s 4 hr PRBC/FFP ratio to the designated tier and points using the chart below.

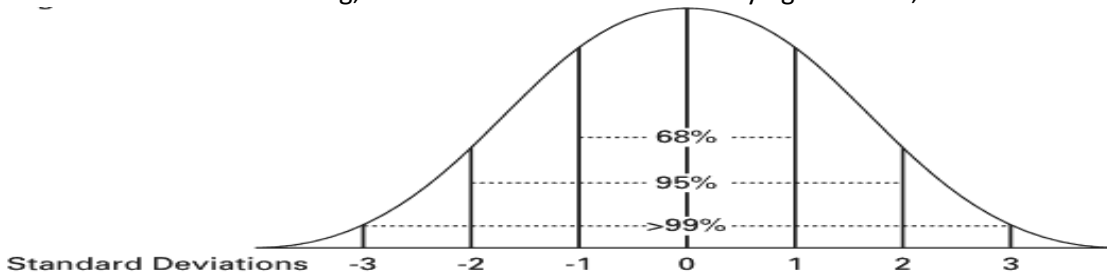
Step 2: Add the points and divide by the number of patients (weighted average). See the example below:

Step One		
PRBC to Plasma Ratio	Tier	Points
≤1.5	1	10
1.6 – 2.0	2	10
2.1 – 2.5	3	5
>2.5	4	0

Step Two (Example)					
Patient	PRBC	FFP	PRBC/FFP	Tier	Points
1	10	10	1.0	1	10
2	5	2	2.5	3	5
3	9	2	4.5	4	0
					Total 15
Total Points/Total #Patients = 15/3 = 5 points earned					

Measure 8 and 9: Z-Score Trend Calculation

The z-score measures a hospital’s trend in #8 serious complications and #9 mortality over a three-year period. The z-score estimates the slope of a hospital’s own linear trend line over time, standardized by the error estimate. The score indicates whether the hospital’s performance is flat or trending upwards or downwards. If the z-score is one standard deviation away (either >1 or <-1), there is evidence that the hospital’s performance is trending in one of these directions as opposed to being flat. Scores >1 are worsening, scores between 1 and -1 are staying the same, and scores < -1 are improving.



Measure 8: Serious Complication is Any Complication with a Severity Grade of 2 or 3 (Defined Below)

Complication Severity Grade 2

Definition: Potentially life-threatening complications

Complications: catheter-related bloodstream infection, central line-associated bloodstream infection, clostridium difficile, decubitus ulcer, deep vein thrombosis, enterocutaneous fistula, pneumonia, pulmonary embolism, unplanned return to ICU, unplanned return to OR

Complication Severity Grade 3

Definition: Life-threatening complications with a residual or lasting disability

Complications: acute renal failure, acute respiratory distress syndrome, cardiac arrest, myocardial infarction, renal insufficiency, stroke/CVA, systemic sepsis, unplanned intubation, ventilator-associated pneumonia.

Collaborative Wide Measure:

Points are awarded based on the total collaborative result, not individual hospital result

Scoring When Center Has No Patients Meeting Measure Criteria

When a center has no patients to score for a measure, that measure will be excluded from its performance index denominator. Example: A center with no massive transfusion patients will have the measure (worth 10 points) excluded, and their maximum total numerator will be 90 points, the denominator will be 90 points, and a new % (points) calculated by dividing the numerator by the denominator

Filters

#4 PI Death Determination

Cohort: 2 (Admit Trauma Services)

No Signs of Life: Exclude DOAs

Default Period: Custom (7/1/23 to 6/30/24)

#5a: Timely LMWH VTE Prophylaxis in Trauma Service Admits

Practices > VTE Prophylaxis Metric

LMWH \leq 48 hr

Cohort: 2 (Admit to Trauma Service) > 2-day LOS

No Signs of Life: Exclude DOAs

Transfers Out: Exclude Transfers Out

Default Period: Custom (1/1/23 to 6/30/24)

#5b: Weight-Based LWMH Protocol in Use

Points are awarded based on the submission of the following:

Screenshot of the center's protocol with the weight-based criteria visible in the image AND

Screenshots of 5 patients using the protocol with the date and dosage visible in the image.

Submit screenshots to the MTQIP submission portal. For further instruction, see [Video demonstration](#).

Default Period: Submit by 12/6/24.

#6: Timely Surgical Repair in Geriatric (Age \geq 65) Isolated Hip Fracture

Cohort: 8 (Isolated hip fracture)

Age: \geq 65

No Signs of Life: Exclude DOAs

Exclude: Transfers out, non-operative isolated hip fractures

Default Period: Custom (7/1/23 to 6/30/24)

#7: Red Blood Cell to Plasma Ratio in Massive Transfusion

Hemorrhage

Cohort: 1 (All)

No Signs of Life: Include DOAs

Transfers Out: Include Transfers Out

Default Period: Custom (1/1/23 to 6/30/24)

#8: Serious Complication

Cohort: 2 (Admit to Trauma Service)

No Signs of Life: Exclude DOA

Transfers Out: Exclude Transfers Out

Default Period: Custom (7/1/21 to 6/30/24)

#9: Mortality

Cohort: 2 (Admit to Trauma Service)

No Signs of Life: Exclude DOA

Transfers Out: Exclude Transfers Out

Default Period: Custom (7/1/21 to 6/30/24)

#10: Patient-Reported Outcomes Participation

Points are awarded based on the following:

A signed agreement and \geq 90% of patients have contact information submitted defined as a validly formatted email or telephone number.

Cohort: 1 (All)

No Signs of Life: Exclude DOAs and all Deaths/Discharge to Hospice

Transfers Out: Include Transfers Out

Default Period: Custom (7/1/23 to 6/30/24)

#11: Timely Antibiotic in Femur/Tibia Open Fractures - COLLABORATIVE WIDE MEASURE

Points awarded based on the total collaborative result, not the individual hospital result.

Type of antibiotic administered along with date and time for open fracture of femur or tibia.

Eligible: Presence of acute open femur or tibia fracture based on AIS or ICD-10 codes (available on mtqip.org)

Exclude: Direct admissions, Transfers in, and Death in ED

Cohort: 1 (All)

No Signs of Life: Exclude DOAs

Transfers Out: Include Transfers Out

Default Period: Custom (7/1/23 to 6/30/24)

Abbreviations Key

AIS – abbreviated injury score

CT- computed tomography

CVA - cerebral vascular accident

DOA - dead on arrival

ED - emergency department

FFP – fresh frozen plasma

FX – fracture

HR – hour

ICD – international classification of diseases

ICU - intensive care unit

LMWH – low molecular weight heparin

LOS – length of stay

MCR – MTQIP clinical reviewer

MIN - minute

MO - month

OR - operating room

PCP - primary care physician

PI – performance improvement

RBC – red blood cell

TBI – traumatic brain injury

TPM – trauma program manager

VTE – venous thromboembolism

YR - year