



Optimizing the Trauma Registry for PI

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ACS Requirements

Data and PI are
INTEGRAL parts of
your trauma program.
Neither can be
successful without the
other.

6.1 Data Quality Plan—TYP

Applicable Levels

LI, LII, LIII, PTCL, PTCII

Definition and Requirements

All trauma centers must have a written data quality plan and demonstrate compliance with that plan. At minimum, the plan must require quarterly review of data quality.

Additional Information

The plan should allow for a continuous process that measures, monitors, identifies and corrects data quality issues and ensures the fitness of data for use.

Ensuring data validity is an important part of a data quality plan. Validation may be internal or external.

Examples of external data validation include the Trauma Quality Programs (TQP) Data Center Validation Summary Report and the TQP Data Center Submission Frequency Report.

High-quality data are necessary for focused quality improvement efforts.

Measures of Compliance

- Written data quality plan
- Written results summarizing internal and/or external data validation
- Trauma center's trauma registry data validation report(s)
- Evidence of a comprehensive review of the TQP Data Center Validation Summary Report
- Evidence of a comprehensive review of the TQP Data Center Submission Frequency Report (if applicable)

7.2 PIPS Plan—TYPE II

Applicable Levels

LI, LII, LIII, PTCL, PTCII

Definition and Requirements

All trauma centers must have a written PIPS plan that:

- Outlines the organizational structure of the trauma PIPS process, with a clearly defined relationship to the hospital trauma program
- Specifies the processes for event identification. As an example, these events may be brought forth by a variety of sources, including but not limited to: individual personnel reporting, morning report or daily sign-outs, case abstraction, registry surveillance, use of clinical guideline variances, patient relations, or risk management. The scope for event review must extend from prehospital care to hospital discharge.
- Includes a list of audit filters, event review, and report review that must include, at minimum, those listed in the Resources section
- Defines levels of review (primary, secondary, tertiary, and/or quaternary), with a listing for each level that clarifies:
 - Which cases are to be reviewed
 - Who performs the review
 - When cases can be closed or must be advanced to the next level
- Specifies the members and responsibilities of the trauma multidisciplinary PIPS committee
- Outlines an annual process for identification of priority areas for PI, based on audit filters, event reviews, and benchmarking reports

It all starts with the data.

- Ensuring accurate, complete, and consistent data is **paramount** to success
 - Reliable process improvement depends on high-quality data
 - Valid sources
 - Standardized Definitions
 - Eliminate duplication or gaps before analysis



Strong Data Governance

- Establish strong data governance and accountability
 - Data entry standards
 - Audit processes
 - Define clear roles and responsibilities





Data Entry Standards

- National Trauma Data Standard
 - Trauma Quality Improvement Fields
 - State, Regional or Local Fields
-
- DO YOU HAVE A DICTIONARY FOR YOUR FACILITY?





Audit Processes

Logic reports

Inter-rater Reliability (Validation)

- The gold standard is a re-abstraction of 10% of your registry volume
 - All registrars on your team should have an IRR Rate
 - 100% of the first charts for new registrars



Defining Clear Ownership

Who's in "charge" of registry oversight?

- What is the process to ensure that data entry is done timely?
- Logic reports are done regularly?
- IRR Validation is completed consistently?

Who completes the data reporting?

- Who verifies that the report is correct and accurate?
- Who creates the graphs and benchmarks for presentation?

Who presents the data?

- Where? In what meeting? Under what circumstances?
- Through what processes?



Using Data to Identify Root Causes

Apply structured methods to ensure improvements target the true drivers of variation or error

Performance Metrics

Trend analysis

Pareto Analysis



All are methods to help establish clear standards and compare actual performance against pre-conceived notions



Keys to Success

Automating reporting as much as possible

- Via registry software
- Via calendar reminders

Data reporting calendar

- Regular reporting on all aspects of your program
 - as determined by your program



Dashboards to your advantage

Maintaining data dashboards reliably and consistently positively affects ALL aspects of PI

Makes multidisciplinary meetings easier by pre-reading data for reporting

Makes case review easier by showing trends (positive or negative) or identifying outliers

Makes Event Resolution easier



Allow for real-time adjustments and sustained improvements



HEALTH AND MEDICAL ANALYSIS

Patients Demographics

Key Trends

Treatment & Cost

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Filters Menu

Medical Condition

Hypertension

Year

2022

Month Name

All

Key Highlights



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Admitted Patients
2,785
▲ 2.8% Vs 2021

Rooms / Bedspace
398
▼ -3% Vs 2021

Avg Billing Amount
\$25,350
▼ -2.7% Vs 2021

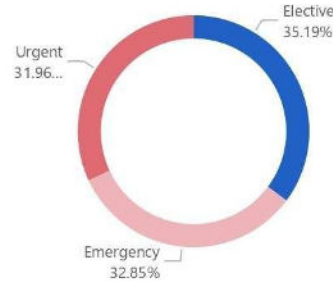
Doctors
2,666
▲ 2.1% Vs 2021

Avg LOS (Days)
15.65
▲ 1.1% Vs 2021

Avg Age
51.95
▲ 1.2% Vs 2021



Admitted Patients by Admission Type



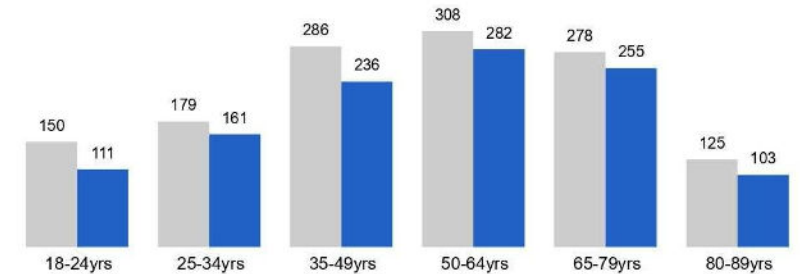
By Age Group

By Med Condition

By Blood Group

Agegroup

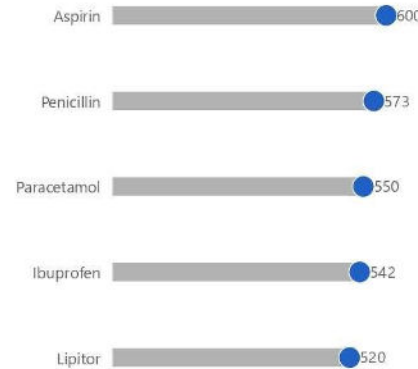
Gender ● Female ● Male



Hypertension, or high blood pressure, is a condition where the force of the blood against artery walls is consistently too high, increasing the risk of heart disease, stroke, and other health problems.

- N** Normal 0%
- I** Inconclusive 0%
- A** Abnormal 100%

Recommended Medications



Condition-Specific Recommendations

- High abnormal BP readings (100%). Adjust medication protocols.
- ACTION: Abnormal results require follow-up for Hypertension patients.

Hospital	Arthritis	Asthma	Cancer	Diabetes	Hypertension	Obesity	Total
Cedars-Sinai Medical Center	53	31	53	113	128	119	497
Cleveland Clinic	58	37	55	117	105	98	470
Houston Methodist Hospital	445	298	405	986	1,025	903	4,062
Johns Hopkins Hospital	222	140	212	569	583	540	2,266
Massachusetts General Hospital	41	33	43	101	139	114	471
Mayo Clinic	50	22	41	125	127	110	475
NewYork-Presbyterian Hospital	56	26	41	93	112	107	435
Northwestern Memorial Hospital	55	39	40	136	119	120	509
UCLA Medical Center	134	100	136	341	330	297	1,338
UCSF Medical Center	60	30	58	131	117	98	494

Summary

1/31/2018 3/31/2021

Case_Type ▼ Specialty Name ▼

All ▼ All ▼



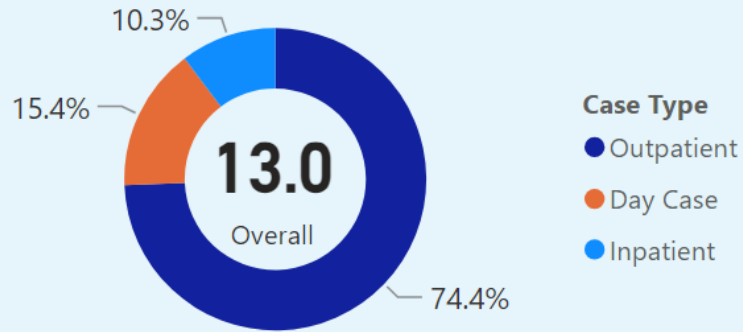
709K

Latest Month Wait List

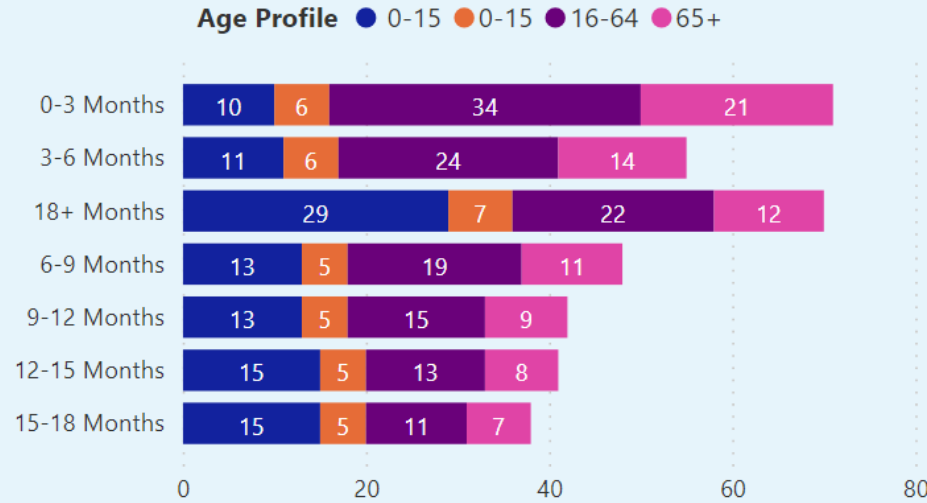
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PY Latest Month Wait List

Wait List Breakdown



Time Band vs. Age Profile



Average

Median

Top 10 Specialty

Accident & Emergency

69.5

Dermatology

35.0

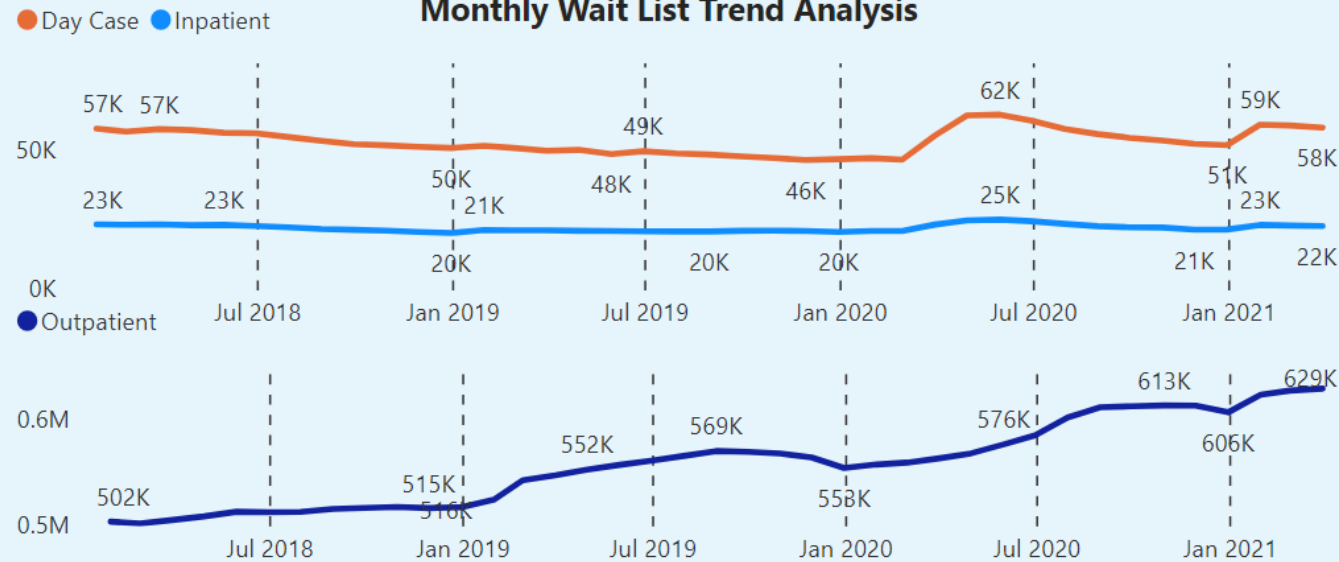
Clinical (Medical) Genetics

29.0

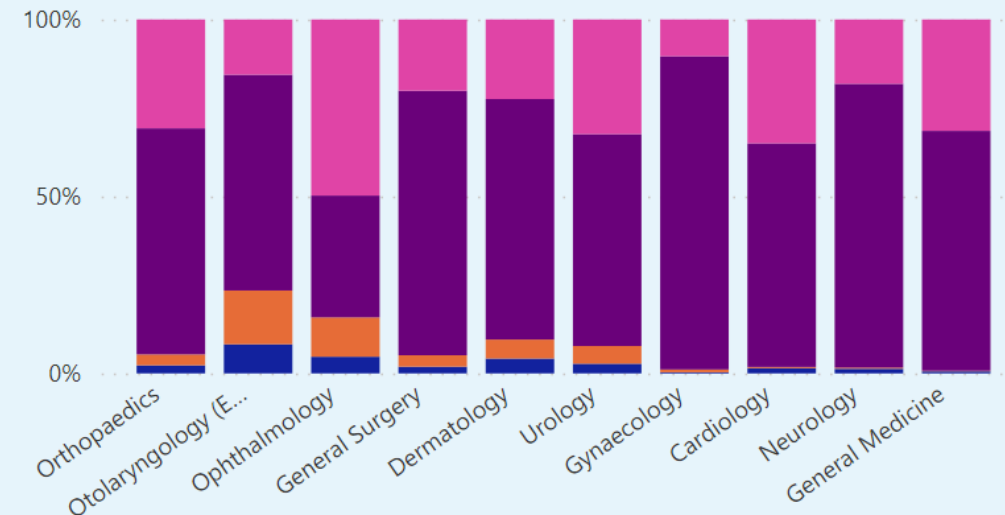
Cardiology

28.0

Monthly Wait List Trend Analysis



Age Profile



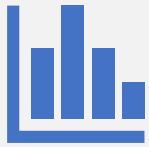


Response report	Focus countries	Youth			SRHR		
		Youth as a population	Age-disaggregated data	Youth engagement	SRHR issues	SRHR issues disaggregated by age	Youth SRHR
UN office reports							
UN OCHA	Fiji						
UNDRR	Vanuatu and Fiji						
UNICEF 1	Vanuatu, Fiji, Tonga						
UNICEF 2	Vanuatu, Fiji, Tonga						
UNICEF 3	Vanuatu, Fiji, Tonga						
Government reports							
NDMO	Vanuatu						
NEMO	Tonga						
Response Cluster reports							
WASH Cluster	Vanuatu						
Humanitarian organisation reports							
CARE, AHP	Fiji						
CARE	Vanuatu						
World Vision 1	Vanuatu						
World Vision 2	Vanuatu						
World Vision 3	Vanuatu						
World Vision 4	Vanuatu						
IPPF 1	Fiji						
IPPF 2	Vanuatu						
IPPF 3	Vanuatu						
IPPF 4	Tonga						
IFRC 1	Fiji						
IFRC 2	Fiji						
IFRC 3	Vanuatu						
IFRC 4	Vanuatu						
IFRC 5	Vanuatu						
PHT 1	Vanuatu, Fiji, Tonga						
PHT 2	Vanuatu, Fiji, Tonga						
PHT 3	Vanuatu, Fiji, Tonga						
PHT 4	Vanuatu, Fiji, Tonga						
PHT 5	Vanuatu, Fiji, Tonga						

Key	
	Identified as an issue of focus
	Mentioned but not specifically identified as an issue of focus
	Not mentioned



Culture of data integrity and transparency



Obtained by regularly reporting reliable and valid data



Easy to access and easily obtained data and statistics about your program



Promotes compliance with guidelines and protocols



Translated to other service lines and Hospital Data Quality Programs



Goal setting and alignment



- Align with Best Practices & Quality Care
- Make sure goals are attainable
 - May need to start smaller



Don't forget to celebrate your wins

**JUST IN
CASE YOU
NEED AN
EXCUSE TO
PARTY.**

- Resolution of an event with an observable positive effect
- Continued observance of protocols
- Maintenance of the norm



PIPS chart section for ACS Verification Review



ALL Levels of Review discussions with dates reviewed AND dates closed



Any data applicable to the case, even if closed in primary



ALL event resolution documentation (including but not limited to):

Emails

Education

Policy and Guideline changes

Meeting minutes

DATA



Regardless of Registry



All can assist with PI documentation



Some are better at storing documents than others – find a system that makes the most sense for your program.

Hyperlinks can be especially helpful



Other thoughts

Do not have multiple tracking spreadsheets for multiple projects

- USE YOUR REGISTRY – are the cases open, closed or pending?
- Do the discussions and levels of review have dates attached?

Don't use MRN or patient names for cataloging of event resolution

- Use the registry number- it's case specific

Consideration for direct trauma surgeon/ physician entry



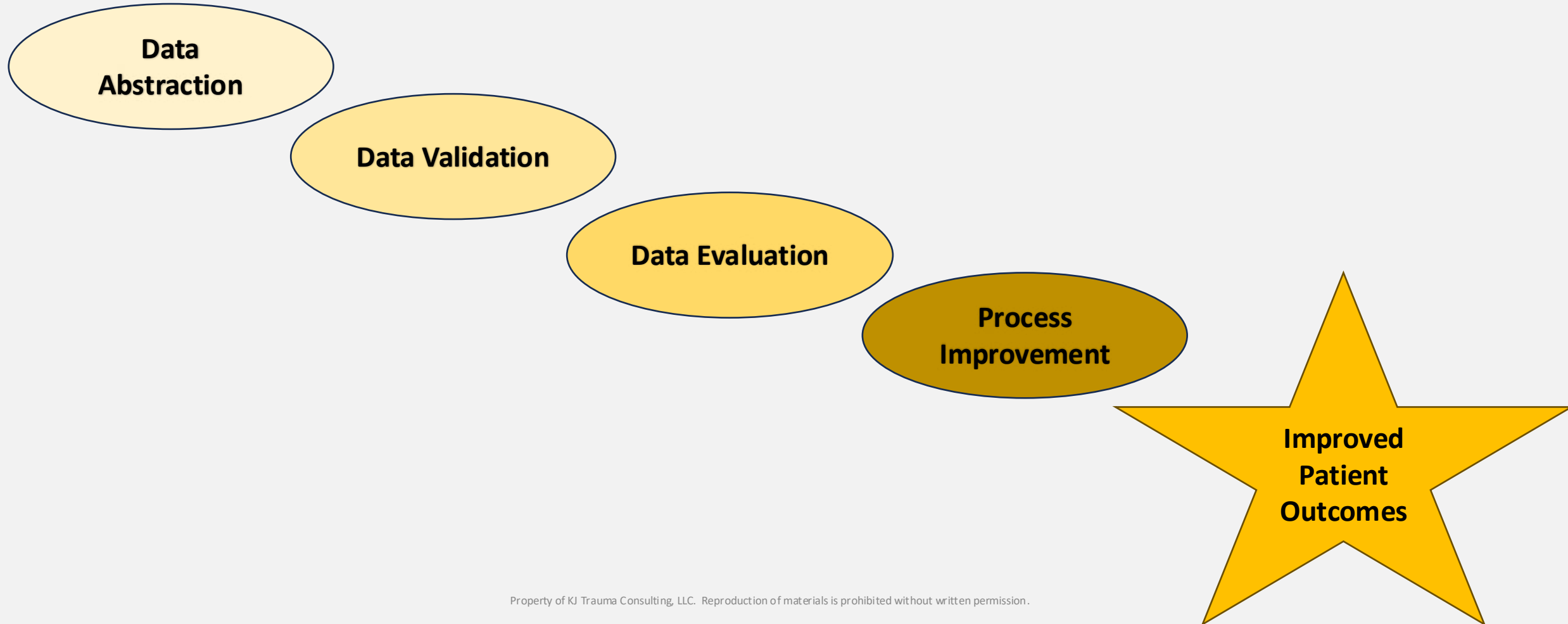
A note about Audit Filters

- Audit Filters should be reviewed at least annually
 - Ensures they're appropriate and applicable to your program
 - Use caution when recycling names in your registry, as the definition may have changed drastically from year to year.



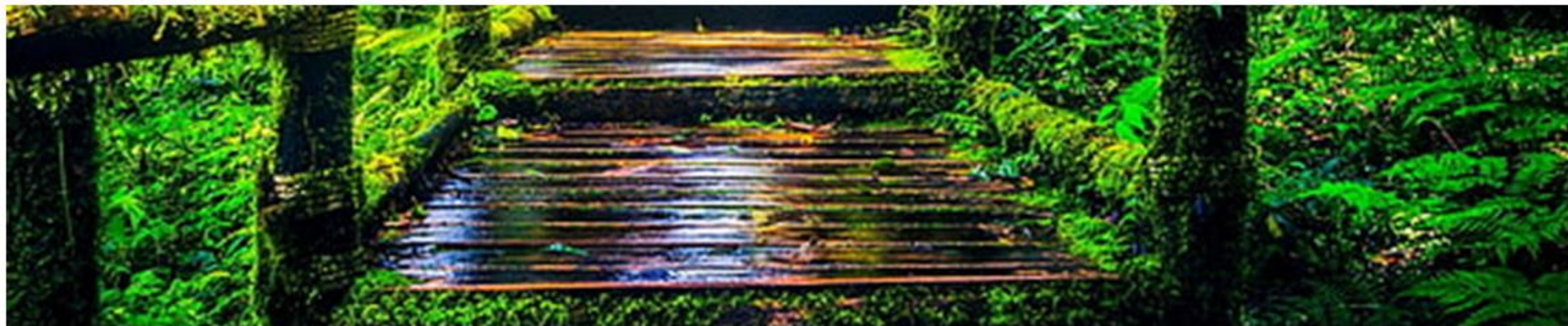


Data and the Trauma Program





Thank You





Resources

Chapman, B., (2026, January 29). *Trauma Program: KJTC Pyramid of Success Resources for Optimal Care of the Injured Patient (2022 Standards)*. (2025). (Ser. Revised 2025). American College of Surgeons.

Trauma Outcomes & Performance Improvement Course. (2025) Society of Trauma Nurses

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https://www.reddit.com/r/batman/comments/1fcxf29/im_confusedwhy_dont_the_batman_fans_want_robin_to/

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Our Services



Trauma Data Management

Provide short-term, long-term, and ongoing data collection, coding, scoring, reporting, and analysis support.



Trauma Program Consultation

Provide a team of trauma professionals who will review your current processes and offer recommendations for improvement.



Data Validation

Review for accuracy, quality of source data, logic connections, correct code assignments as well as overall findings report.



Trauma Performance Improvement

Team of dedicated trauma PI nurses provide a continuous review of the quality of care provided to injured patients. A continuous review of patient outcomes, identification of system issues or deviations in care, and implementation of corrective actions to improve patient safety and clinical performance.