

## Objective Measures



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*Enhancing Quality Assessment and  
Performance Improvement Programs in  
Transplant Programs and Hospitals*

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# CMS Webinar Series

## Transplant Centers

1. Introduction to the Transplant QAPI: Regulatory Overview
2. Worksheet Overview
3. Comprehensive Program and 5 Key Aspects of QAPI
- 4. Objective Measures**
5. Performance Improvements
6. Adverse Events
7. Transplant Adverse Event “Thorough Analysis”
8. QAPI Tools (part 1)
9. QAPI Tools (part 2)
10. Data display
11. Writing an effective Plan of Correction and Other QAPI Resources
12. Interpretive Guidelines

# Disclaimer

- This training consists of Quality concepts, foundational and historical perspectives of Quality Assessment and Performance Improvement (QAPI) methodologies as they were originally developed.
- Healthcare has not come to an agreement on any one definition of what quality is, the best method(s) to employ or the best tool(s) to utilize within quality assessment and process improvement activities. Today, many organizations blend several quality concepts and tools to provide for a more nimble and individualized quality program.
- CMS is not prescriptive. This training does not support or advocate any particular method or tool. This training fully supports that the QAPI process includes data driven decisions that will sustain improvement leading to improved patient outcomes.

# Objectives

The purpose of this webinar training is to enhance Quality Assessment and Performance Improvement activities within Transplant Programs through increased knowledge of Quality regulations, methods, tools and documentation practices.

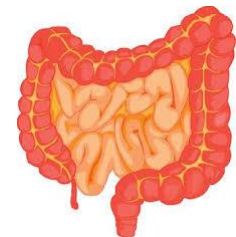
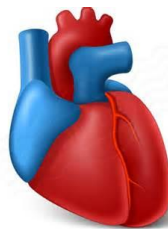
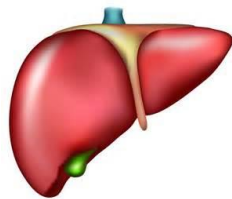
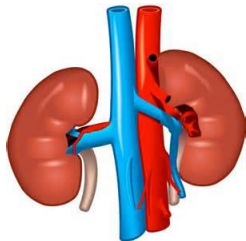
Upon completion of this session, the participant will be able to:

- Identify the CMS regulations applicable to activity/process and outcomes measures for Transplant QAPI programs.
- Differentiate between “Process” and “Outcome” objective measures.
- Discuss strategies for selecting objectives measures appropriate for individual transplant programs (high risk, high or very low volume, problem prone...).

# Determining Objective Measures

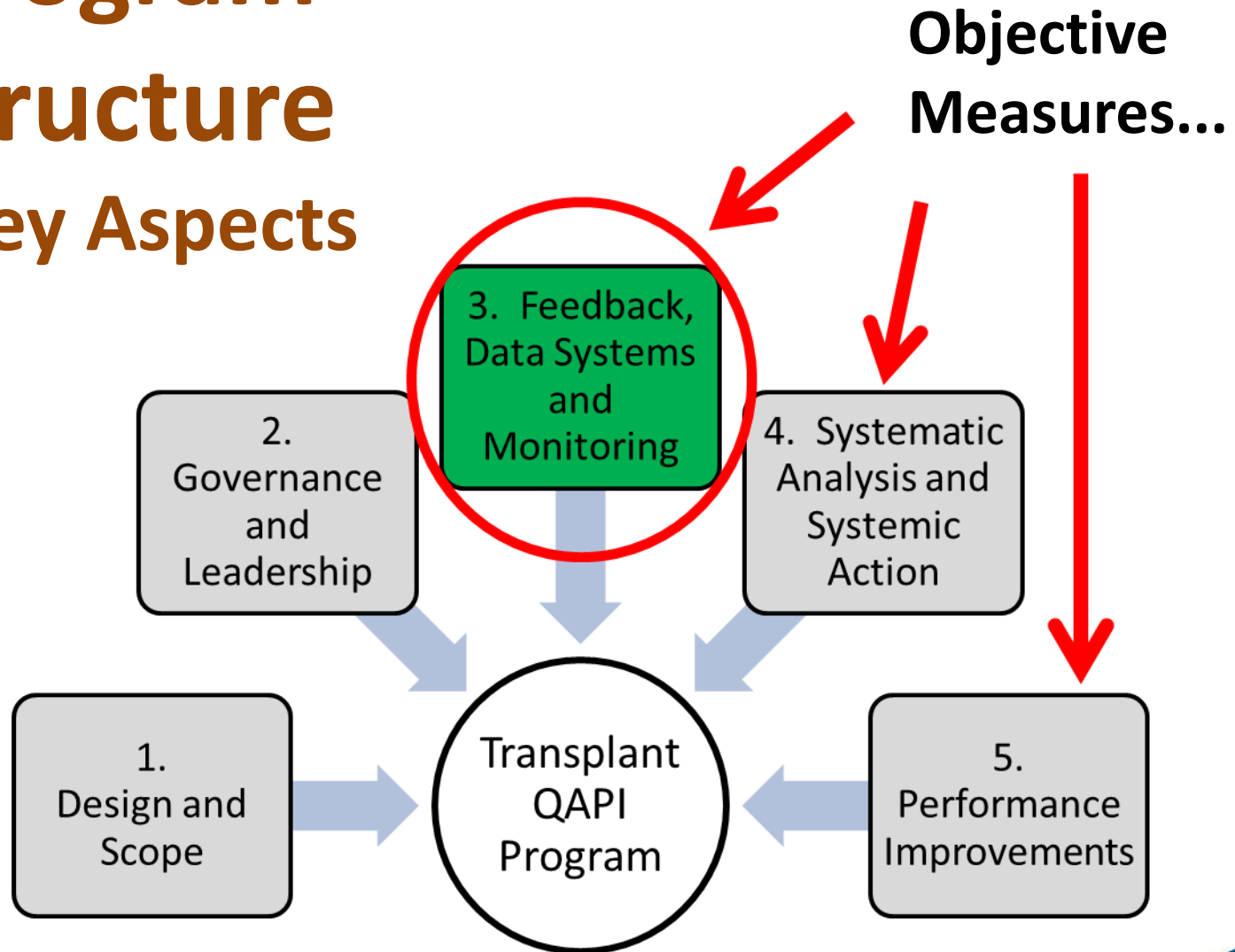
§482.96(a) Standard: Components of a QAPI Program

*(a) The transplant center's QAPI program must use objective measures to evaluate the center's performance with regard to transplantation activities and outcomes.*



# Program Structure

## 5 Key Aspects

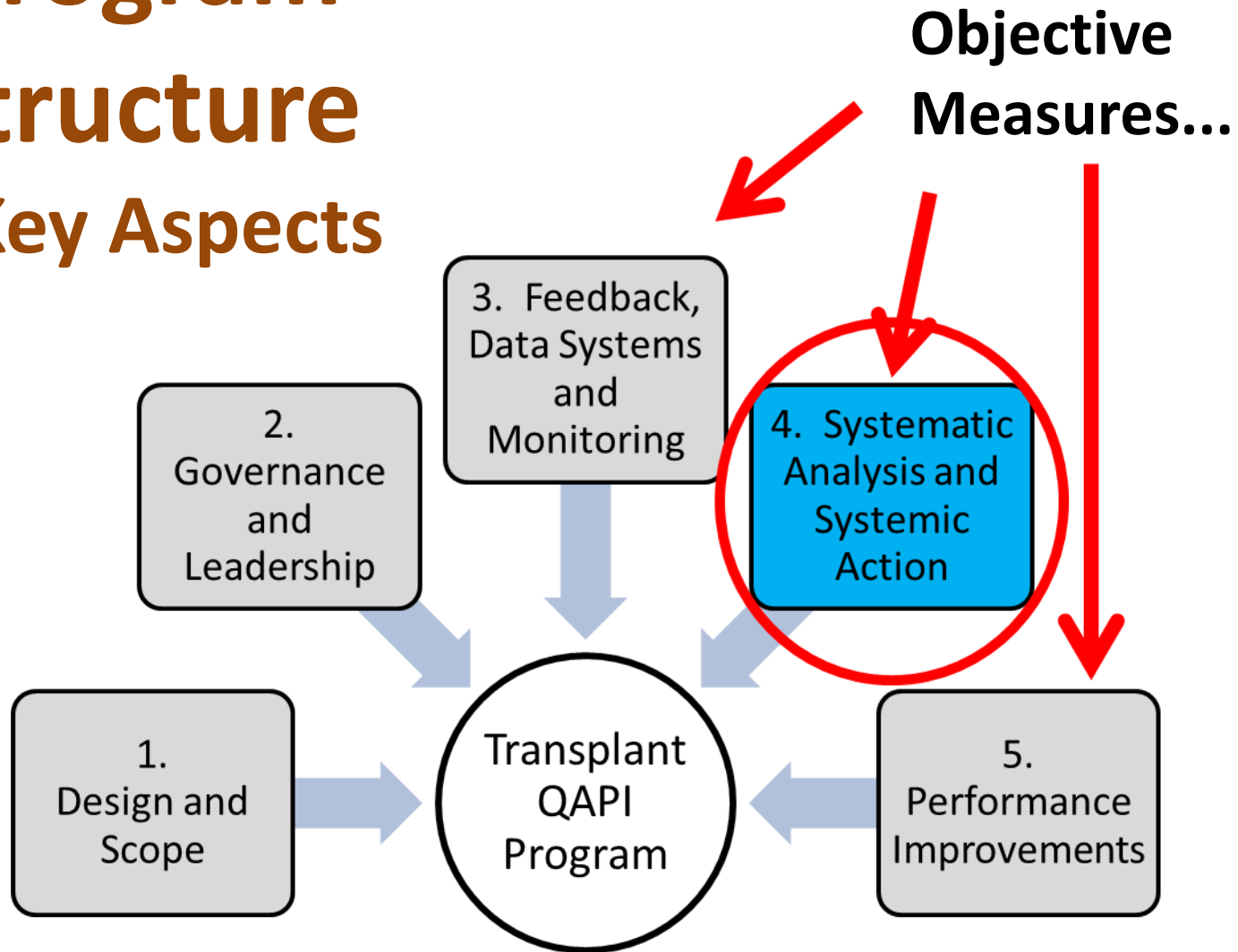


# Aspect 3: Feedback, Data Systems and Monitoring

- The transplant program must have systems in place to monitor care and services in all phases and settings of transplant and living donation, drawing from multiple sources;
- Process and outcome indicators reflecting the complexity of services within the program are defined, measured, analyzed and tracked;
- Applicable benchmarks or targets are established by the program to measure performance.

# Program Structure

## 5 Key Aspects



# Aspect 4: Systematic Analysis and Systemic Action

- The transplant QAPI program must analyze collected data.
- Analyses must include, but are not limited to, analysis of data related to proactively defined quality indicators and the ongoing use of systemic methods to assess and analyze adverse events....
- Systemic actions look comprehensively across all involved systems to prevent future negative events and promote sustained improvement.

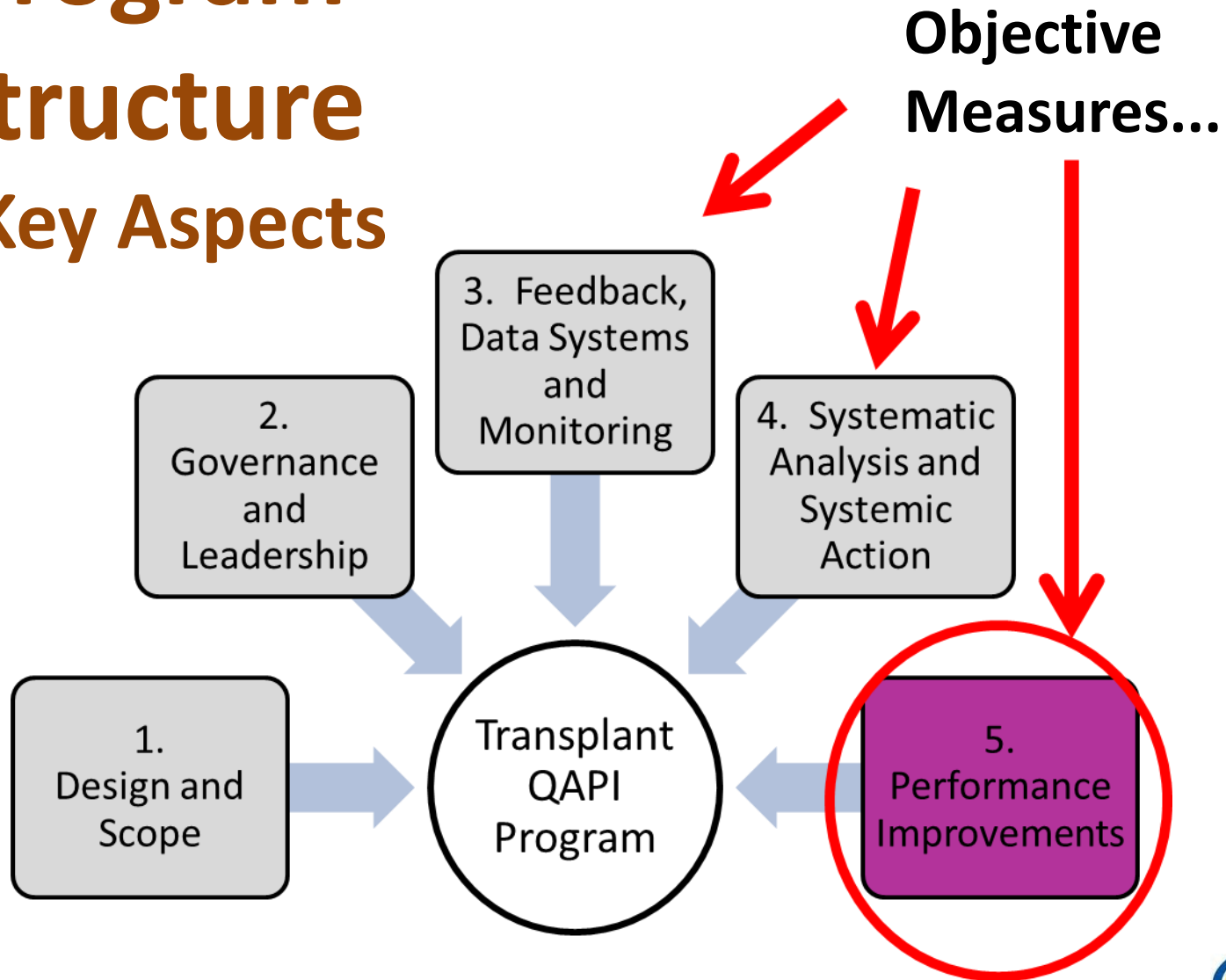
# Systems Issues

- Focus is on the system of related processes
- Understand the process, identify all the steps in a process
- Evaluate and anticipate points of failure
- Select solutions that improve the process
  - Prevent Miscommunication
  - Streamline
  - Reduce handoffs
  - Reduce human error
  - Eliminate failure points
- Communicate the results



# Program Structure

## 5 Key Aspects



# Aspect 5: Performance Improvements

- The transplant QAPI program must define, implement, and evaluate performance improvement interventions with the objective of improving quality of care;
- Once implemented, the interventions are later evaluated for success or continued need for improvement;
- Evidence of evaluation and sustained improvement is communicated to all stakeholders.
- Areas that need attention will vary depending on the organ type.

# Basic Questions to Ask:

**What are we trying to accomplish?** (more of something, less of something?)



**How will we know a change is an improvement?**



**What change can we make that will result in improvement?**

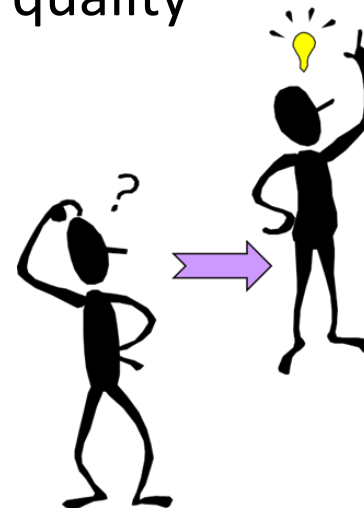


# How do you identify YOUR objective measures?



# How do we choose objective measures?

- Clinically Relevant – making a difference for patient care?
  - High risk
  - High volume (or of such LOW volume it's an issue!)
  - Problem prone
- Financially Important (caution - where is your quality outcomes monitoring related to this...)
- Meaningful to Audience
- “Controllable” (Within your Scope...)
- Feasible to Collect the Data
- Is it a “pertinent negative”? (see next slide)



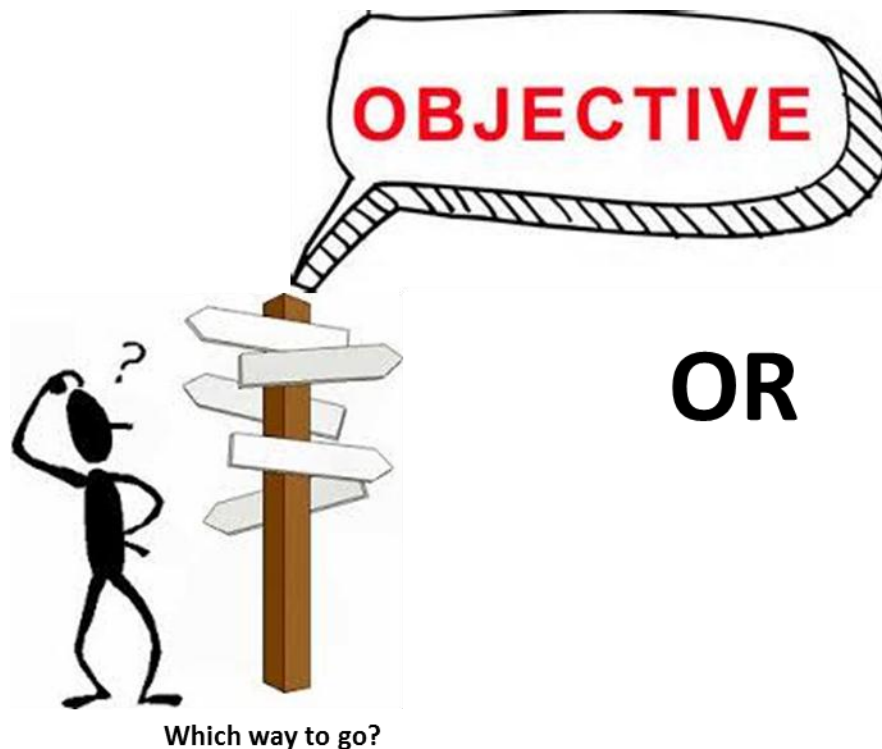


## **“Pertinent Negative”**

What are those things so critical to your program, that it is important to know if they DON'T happen?

# Objective Measures

Do you struggle with objective measures or have you taken a smart approach?

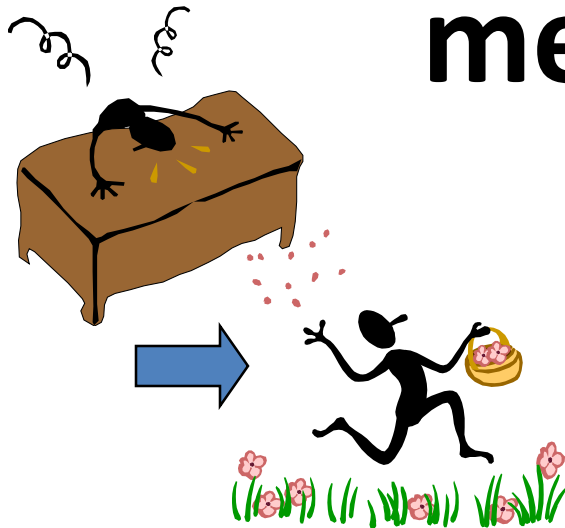


OR

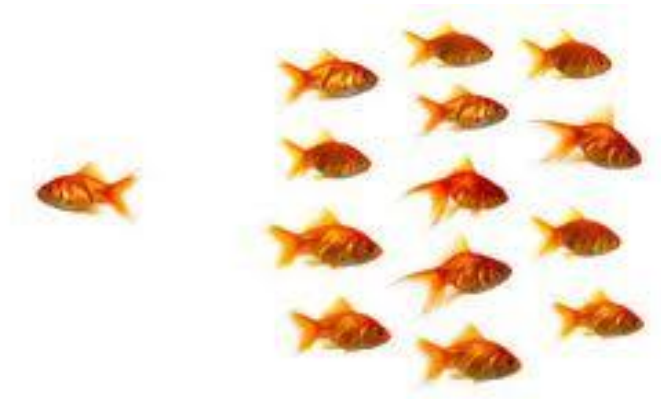


# OBJECTIVE MEASURES

**Will someone just tell me what I have to do?**



# NO – each program is unique!



“If you’ve seen one transplant program, you’ve seen one transplant program” ...

# Where do I go from here?



## QAPI PLANNING

Prioritization of activities should be based on risk analyses of the severity affecting patients (eg. High volume, High Risk, Problem Prone areas)

- Identify Patient Flow Processes
- Identify Information Flow Processes
- Identify Material Flow Processes
- Identify QAPI Information flow
- Identify Resource Management

## STRATEGIC GOALS

The organization should have strategic goals of improving patient outcomes and patient safety, increasing efficiency and promoting preventative health measures. Strategic goals give direction to organizational QAPI efforts.

# Where do I go from here?

(continued)



## **ALIGNMENT**

Transplant QAPI Planning activities should align with the **Hospital** QAPI plans as well as the organizations strategic plans, vision and mission

## **PATIENT FOCUSED**

Patients are customers, with individual needs and expectations. Patients and their families must be actively engaged in health care decision-making and options for treatment

## **CUSTOMER ORIENTED**

An organization can improve patient care quality by assessing and improving the governance, managerial, clinical, and support processes that most affect customers

# Objective Measures:

## Fundamental Concepts



- Objective measures are defined data elements that are selected to reflect program activities and outcomes.
- “Objective” means being able to be reviewed in an unbiased manner, strictly identified by a numerator and denominator. Measures selected should be sufficiently defined for program staff so that all members understand their meaning.
- Activities or processes must relate to the core transplant processes across all phases of transplant and living donation as mandated by CMS, the OPTN and all other applicable standards and regulations and as described in the program’s policies and procedures.
- Outcome measures must relate to the intended and unintended effects resulting from the care provided.
- The objective measures must be defined, collected and analyzed and result in recommendations that are communicated to the transplant program decision-makers.

# What are you measuring?



- **Structure:** the context for delivery of care, including finance, staffing, environment, equipment
- **Process:** the activities or procedures leading to outcomes
- **Outcome:** the effects, results or consequences of a process

[Example derived from A. Donabedian (1966) not required by CMS]

# Objective measures evaluate processes that impact patient outcomes

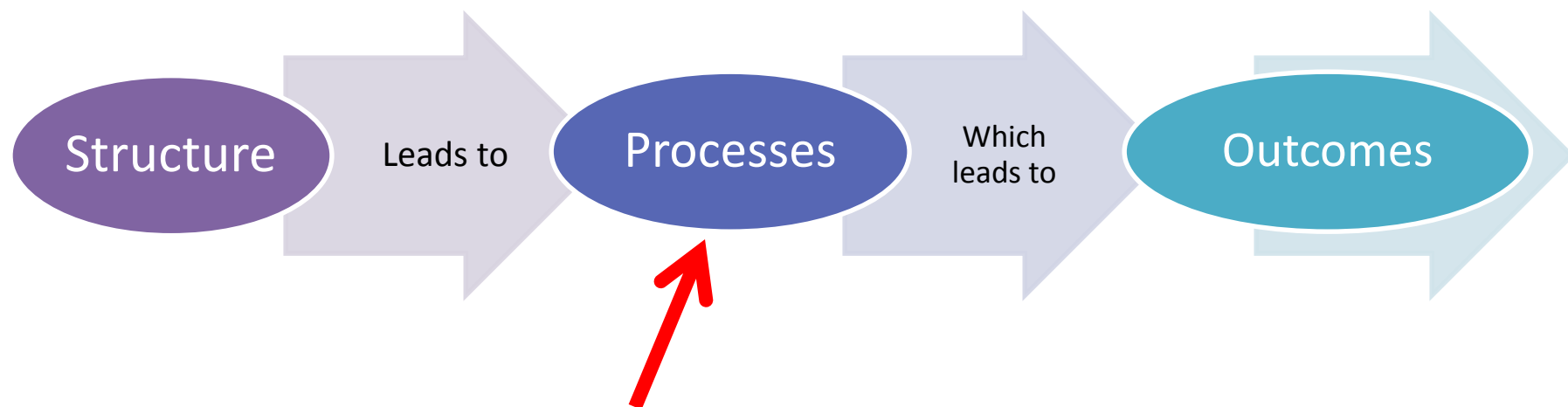
## Process Measure

- reflecting steps ['process'] to complete a task

## Outcome Measure

- relating to the results or end point of care

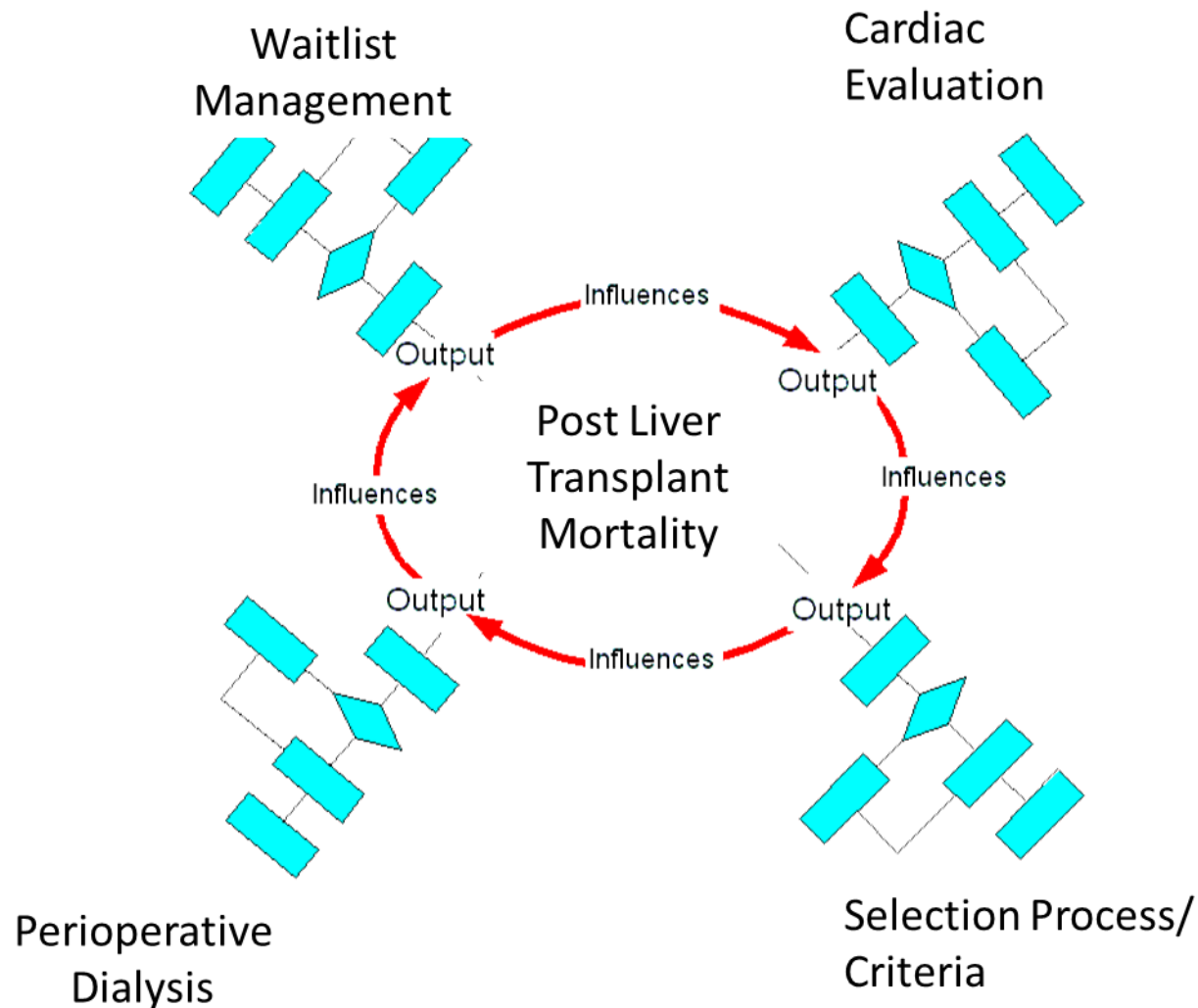
# Improving PROCESSES



A process is a series of actions or steps taken in order to achieve a particular end.

A healthcare process refers to the procedures, methods, means or sequence of steps for providing patient care and producing clinical outcomes.

# Processes are sequentially related steps intended to produce specific outcomes: Transplant Example



## PROCESS-Focused Measures

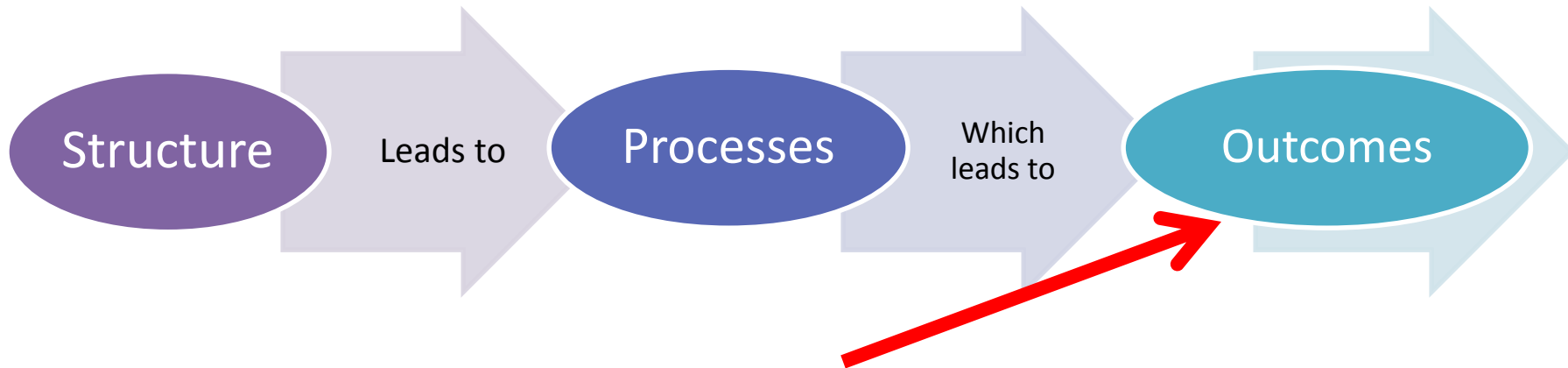
## Examples Only

Selection of a process measure as part of Performance Improvement activities needs to ensure the measure contains a sequence of related steps that produce a desired outcome

| PRE-TRANSPLANT                                       | TRANSPLANT                                    | POST -TRANSPLANT                                                |
|------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------|
| ABO Prior to listing                                 | Cold Ischemic Time                            | Critical Care Protocols                                         |
| Referral to Waitlist time                            | Blood Type Verification                       | Immunosuppression                                               |
| Adherence to Treatment Plan                          | Surgical Time Out adherence                   | Individualized Patient Care Plan                                |
| Updating UNET information                            | Involvement of multidisciplinary team members | Involvement of Multi-disciplinary team members (follow-up care) |
| Donor Acceptance Rates                               | Surgical Protocols                            | Nutritional Support                                             |
| Informed Consent                                     | Surgical Skin Prep adherence                  | Pharmacy Support                                                |
| Education                                            | OR Staff Traffic Control                      | Discharge Planning                                              |
| Patient Re-evaluation                                | Recovery Room Protocols                       | Protocol / Policy Adherence                                     |
| Patient Flow (continuum)                             | Critical Care Bed Availability                | Follow Up visits / evaluations                                  |
|                                                      |                                               |                                                                 |
| PRE-DONATION                                         | DONATION                                      | POST-DONATION                                                   |
| Nutritional Screening in record                      | Surgical Protocol Adherence                   | Adherence to Protocols                                          |
| Medical / Psychosocial Evaluation                    | Involvement of multidisciplinary team         | Documentation of Follow up visits                               |
| Adherence to Protocols (Informed Consent, Education) | Documentation by Living Donor Advocate        |                                                                 |



# Improving OUTCOMES



Outcome is defined as: An end result; a consequence. Something that follows from an action or a final product.

In healthcare, Outcomes refer to the results of care (*the end*), they can be positive (example: a full recovery) or negative (examples: death, infection, or injury).

## Managing Outcomes includes:

- Reliance on Standards and Guidelines
- Measurement of the functioning and well-being of patients
- Pooling of Clinical and Outcome data
- Analysis and Dissemination of outcome results

## OUTCOME-Focused Measures

## Examples Only

Outcome focused measures monitor the results of care and do not involve processes. Outcome measures do not include financial or logistical items, they should be focused on the delivery or result of care provided to patients.

| PRE-TRANSPLANT                                        | TRANSPLANT                                            | POST -TRANSPLANT                                      |
|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| Mortality on Waiting List                             | Unplanned Return to OR                                | Infection Rates                                       |
| Health Maintenance on Waiting List                    | Transplant Rate vs. Expected                          | Diabetes (new onset post procedure)                   |
| Diabetes (existing condition)                         | Infection rate while hospitalized                     | Mortality                                             |
|                                                       | Length of Stay in ICU / Step Down Critical Care units | Complications / Adverse Events (graft survival, etc.) |
|                                                       | Overall Length of Stay                                | Readmission within 90 days                            |
|                                                       | Complication / Adverse Events                         | 30-day patient/graft                                  |
|                                                       | Dialysis within 7 days                                | Emergency Room visits                                 |
|                                                       |                                                       | Patient Satisfaction                                  |
| PRE-DONATION                                          | DONATION                                              | POST-DONATION                                         |
| Percentage of donors who met weight loss requirements | Conversion rates from Laparoscopic to Open            | Infection Rates and Follow Up Care                    |
| Health Maintenance after evaluation                   | Length of Stay – ICU / Step Down ; Overall            | Complications / Adverse Events                        |
|                                                       | Infection Rates                                       | Patient Satisfaction                                  |

# Do your efforts demonstrate the bi-directional communication of hospital and transplant initiatives\*?

## Integrated

- LOS Management
- Readmissions
- Falls
- Patient Safety Goals
- Medication Errors
- Medication Safety
- Infection Prevention and Control:
  - CLABSI (Central Line Associated BSI)
  - CAUTI (Catheter Associated UTI)
  - SSI (Surgical Site Infections)
- Core Measures (Heart Failure and Pneumonia)
- Stroke Outcomes
- Restraint Utilization
- Customer Satisfaction/Perception of Care

## Distinct

- Patient Flow: referral to evaluation, evaluation to listing, waitlist management
- Transplant-specific readmissions issues
- Graft to host transmission: infection prevention management
- Blood utilization in OR
- Transplant- specific surgical complications
- Others?

**\*Intended as examples only, not required regulation**

# Why am I doing this?

**STOP  
COLLECTING  
NUMBERS IF  
YOU'RE NOT  
DOING  
ANYTHING  
WITH THEM!**

**Data  
Rich  
Information  
Poor**



# You must educate your audience to transplant “nuances”

Hospital: Familiar & Understood...

## INTEGRATED

- Regulatory/accrediting standards for hospitals
- Referral Volumes/growth
- Clinic Volumes/growth
- Transplant Volume
- LOS
- Cost per case
- Readmissions

Transplant: Opportunity to Educate ....

## DISTINCT

- “Dedicated” transplant CoP’s including QAPI
- Program competition within region
- OPO relationships
- Waitlist patients & responsibilities
- Critical Outreach activities
- Living Donor program



Critically analyze what you  
“borrow” from others.

Is it high risk, high volume, or problem prone  
for YOUR program?

Is it important enough for YOU to measure?

# “Borrowing” from best practices

- Be careful when using “best practices” for measures
- Other programs “opportunities” for improvement might not be the same as yours;
- Example: are you monitoring how many patients get swans and A-lines peri-operatively when this hasn’t been an issue for you?
- Critically evaluate others’ thresholds & targets

# Best Practice Process:

“Borrowing” from others....

1. In Excel file, consider putting “N” sample sizes with your data, especially with small patient volumes
2. Adding cell comments (Highlight cell, select “Review” from toolbar and add “New Comment” or “Edit Comment” )

The screenshot shows the Microsoft Excel interface with the 'Review' tab selected. The 'Comments' group in the ribbon is highlighted, with the 'Edit Comment' button circled. A callout box labeled '2. Cell Comments' points to this button. Another callout box labeled '1. “N” sample size' points to a cell in the data table. The data table has columns labeled N through AO and rows 10 through 13. The table contains various data points, including 'NA', percentages, and counts. A cell comment is visible for the cell containing 'NA' in row 12, column S, with the text '#123456 M. Hatter 090614'.

|    | N | O  | P | Q | R | S  | T  | U             | V | W | X | Y | Z             | AA            | AB | AC | AD          | AE | AF            | AG            | AH | AI | AJ | AK | AL | AM | AN | AO |
|----|---|----|---|---|---|----|----|---------------|---|---|---|---|---------------|---------------|----|----|-------------|----|---------------|---------------|----|----|----|----|----|----|----|----|
| 10 |   |    |   |   |   |    |    |               |   |   |   |   |               |               |    |    |             |    |               |               |    |    |    |    |    |    |    |    |
| 11 |   |    |   |   |   | NA | NA | (1/1)<br>50%  |   |   |   |   | (1/1)<br>100% | (3/3)<br>100% |    |    | (0/1)<br>0% |    | (1/1)<br>100% | (1/1)<br>100% |    |    |    |    |    |    |    |    |
| 12 |   |    |   |   |   | NA |    | (2/2)<br>100% |   |   |   |   | (1/1)<br>100% | (3/3)<br>100% |    |    | (0/1)<br>0% |    | (1/1)<br>100% | (1/1)<br>100% |    |    |    |    |    |    |    |    |
| 13 | 2 | 10 | 2 |   |   | 0  | 0  | 2             |   |   |   |   | 1             | 3             | 1  |    | 1           |    | 1             | 1             | 1  |    |    |    |    |    |    |    |

# FQAPI Survey Findings

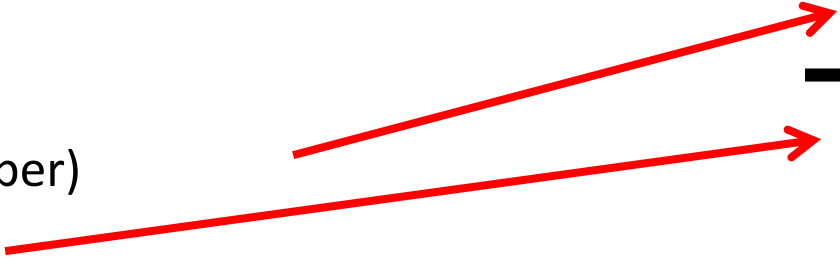
(X100 CITED >50% of 2014 surveys)

## 482.96(a) Standard: Components of a QAPI Program

- No process measures for pre donation and no outcome measures for pre donation, and post donation phases.
- Measures were not consistently identified by process, outcomes, or by phases.
- No rationale used for identification (program unable to state why)
- No evidence of data analysis, aggregated data, and appropriate action taken or implemented presented.
- The QAPI Plan did not include Living Donation in selection of objective measures.
- Did not identify measures in all programs in all phases as stated in plan.

# Considerations for Objective Measures

- Define your measure
  - Numerator (top number)
  - Denominator (bottom number; “out of how many” is important!)
  - Data source
  - Reason the measure exists
  - Triggers for action (threshold/benchmark)
  - Abstraction done by whom?
  - Evaluation of measure (?annual review vs. other)
  - The process for consideration of retirement of measures
- Put these in your QAPI Plan!



A diagram showing the fraction  $\frac{2}{3}$ . A red arrow points from the 'Numerator (top number)' list item to the number 2. Another red arrow points from the 'Denominator (bottom number; “out of how many” is important!)' list item to the number 3.

# Retiring a Measure

- Are your objective measures still important for your program?
- Is your scorecard of data all “green”?
- What about “permission” to STOP monitoring something?
- Have you consistently met the target or threshold for more than three measurement periods?
- Consider:
  - moving monitoring to less frequently (monthly to quarterly; quarterly to semi-annually; semi-annually to annually)
  - “Spot checking” with a periodic audit of a sample of patients
  - Changing sample size from 100% to a smaller but valid sample size (consult your hospital QAPI program)



# Process Improvement: Change



The essence of making positive change includes the steps of:

- Discovery (identify problem, define problem, map the process)
- Data (define, collect, analyze, utilize)
- Implement Change
- Monitor and Evaluate Changes made
- Continue cycle until desired outcome is achieved and sustained

**Objective measures evaluate change!**

# Clarification:

**CMS does NOT  
require that each  
objective measure  
has a related PI  
Project.**



However, it makes logical sense that at least some of your objective measures will have documentation of activity related to improvement activity. Monitoring them provides evidence of how you are tracking sustained improvement.....

# For Example:

Examples of objective outcome measures could include:

- Survival rate (graft and patient) over a designated period of time, including sub-group analyses;
- Number of blood type compatibility errors over a designated period of time;
- Number of post-transplant or post-living-donation infections and other complications;
- Percentage of organ rejection over a given period of time; and
- Measurements of the effectiveness of the transplant candidate/recipient and potential LD/LD and family education.

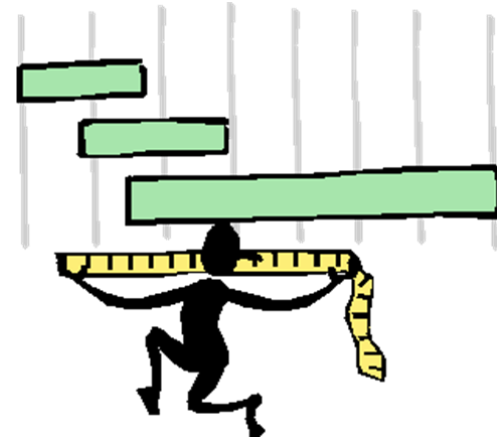
# Examples Related to PI (continued)

Examples of objective process measures could include:

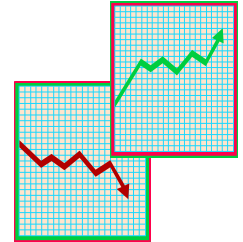
- Frequency of the use of criteria exceptions in the patient/donor selection process;
- The extent to which OPTN rules for removal from the wait list are adhered to;
- Number of the transplant candidate/recipient and potential LD/LD or family complaints that were received, investigated, and resolved;
- Number of complaints related to consent practices;
- Returns to OR in a specified period; and,
- Extent of adherence to patient evaluation steps.

# How Do I Measure A Process or Outcome?

- How Do I Know What Is Good Enough?
- Compare data to a target or benchmark
- How Do I Find A Benchmark
  - Literature and Internet Searches
  - Another Hospital
  - Other Professionals
  - “Internal Benchmark” (historical data, experience...)

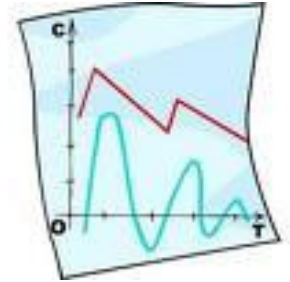


# Measures Selection & Management



- Avoid “scope creep”, pick a reasonable topic
- Appropriate methodology to look at issue
- Appropriate sample size  
 (“5% or 30-50 per timeframe” rule – check with Hospital Quality...)
- Baseline
- Look at data over time to document improvement
- True process improvement is not indicated by one data point in time
- Implement identified activity consistently without “tinkering” with process
- (More Education to come re: PI Methods & Tools)

# Questions to Ask About Objective Measures



- Is Your Data “Clean”
  - identify incomplete, incorrect, inaccurate, irrelevant parts of the data and then replace, modify or delete the dirty data
- Source Data Reliability
- Numerator/Denominator Correct/Valid?
- Cost Effective to Capture?
- Inter-rater reliability:
  - Will different people come up with the same results/outcomes
- Does it need to be:
  - Risk/Severity Adjusted?
  - Stratified by Group?

# Not Required by Regulation but Useful: Objective Measures Matrix

- Includes all required information
- Useful for “snapshot” overview for leaders (and regulators!)
- Provides detail of required work necessary for compliance (for resource considerations!)
- Program Specific!

## Transplant Quality Measures: XYZ Program

| Phase                                     | Benchmark                | Cohort               | P/O/S | Data Source | Data Entry          | Data Mining     | Data Definition                                                                                                                                                              |
|-------------------------------------------|--------------------------|----------------------|-------|-------------|---------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Transplant Volume                         | CY Budget                | monthly rolling year | S     | OTTR        | Coordinator A       | OTTR Data Admin | Monitor transplant volume by month (actual # procedures)                                                                                                                     |
| % WL Growth                               | CY Budget (>=10% target) | monthly rolling year | S     | OTTR        | Listing Coordinator | OTTR Data Admin | (Program specific definition here) Monitor additions to the waiting list each month to assess performance to target of 10% increase from prior year. Calendar year by month. |
| Overall ALOS                              | Internal Benchmark       | monthly rolling year | S     | OTTR        | Coordinator A       | OTTR Data Admin | (Program specific definition here)                                                                                                                                           |
| Dialysis dollars saved (for AKO programs) | N/A                      | monthly rolling year | S     |             | Txp. Manager        |                 | (Program specific definition here: conversion to functioning kidney from chronic dialysis...)                                                                                |

## Process

| Phase |                                                 | Benchmark                            | Cohort               | P/O                                                                                                   | Data Source | Data Entry                               | Data Mining     | Data Definition                                                                                                                                                                                                         |
|-------|-------------------------------------------------|--------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------|-------------|------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRE   | Referral/Intake to Eval Start < 30 days         | 100% review outliers                 | monthly rolling year | P                                                                                                     | OTTR        | Intake Coord/ Pre-Transplant Coordinator | OTTR Data Admin | Monitor the number of patients with REFERRALS ENDED with end reason "Evaluation Started" >30 days and review for PI opportunities; 1 month previous.                                                                    |
| PRE   | Evaluation Length - (All End Reasons) < 30 days | 100% review outliers                 | monthly rolling year | P                                                                                                     | OTTR        | Pre-Transplant Coordinator               | OTTR Data Admin | Monitor the number of patients with EVALUATIONS ENDED with ALL end reasons >30 days and review for PI opportunities; 1 month previous.                                                                                  |
| PRE   | Social Work Assessments (outpatient)            | 100% compliance CMS Requirement      | point-in-time        | P                                                                                                     | OTTR        | Social Worker                            | OTTR Data Admin | Compliance with UH Transplant Institute SW Guidelines as required by CMS Regulation. Point in time of listed patients as of "today" % that have a Psycho social update within the last 12 months; SW to review outliers |
| PRE   | Two ABOs Prior to Listing                       | 100% compliance CMS/UNOS Requirement | monthly rolling year | Consider eliminating this one due to current computer process "fail-safe" - cannot list without them! |             |                                          |                 |                                                                                                                                                                                                                         |

## Outcomes

|      |                                                                                  | Benchmark            | Cohort               | P/O | Data Source | Data Entry            | Data Mining       | Data Definition                                                                                                                                                                                                                                       |
|------|----------------------------------------------------------------------------------|----------------------|----------------------|-----|-------------|-----------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre  | Deaths on Waitlist                                                               | 100% review          | monthly rolling year | O   | OTTR        | Listing Coordinator   | OTTR Data Admin   | Monitor the number of deaths on the waiting list each month and ensure that each one is discussed; Calendar year by month; semi-annual comparison to the latest release of the SRTR Region Deaths on the wait list during the previous calendar year. |
| Pre  | Referrals to Hospice                                                             | Internal Benchmark   | monthly rolling year | O   | OTTR        | Listing Coordinator   | OTTR Data Admin   | Program specific definition here                                                                                                                                                                                                                      |
| PRE  | Total Ischemic Time <12 Hours (Cross Clamp Time-Donor to Recipient Unclamp Time) | 100% review outliers | monthly rolling year | O   | OTTR        | On-Call Coordinator   | OTTR Data Admin   | Review all transplants cases each month with donor organ total ischemic time >12 hours                                                                                                                                                                |
| PERI | Blood Products (Median Per Case) - PRBC Intraoperative                           | TBD                  | monthly rolling year | O   | OTTR        | Inpatient Coordinator | OTTR Data Admin   | Monitor the median usage of intraoperative PRBC blood products per month against prior months and review outliers                                                                                                                                     |
| PERI | Organ Offer Refusals                                                             | 100% review          | monthly rolling year | O   | UNET/ EXCEL | Surgical Director     | Surgical Director | Review the all organ refusals each month; 1 month                                                                                                                                                                                                     |
| PERI | Blood Products (Median per Case) - PRBC SICU 24 hrs post-op                      | TBD                  | monthly rolling year | O   | OTTR        | Inpatient Coordinator | OTTR Data Admin   | Monitor the median usage of PRBC blood products on a monthly basis against prior months and review                                                                                                                                                    |

# NOT A REQUIREMENT BUT USEFUL

## Objective Measures Matrix

**XYZ Transplant Program Quality Measures Tracking Grid**

| Phase     | Type (structure, process, outcome) | Measure             | Target | Data Definition | Source | Responsible Person | Benchmark/References |
|-----------|------------------------------------|---------------------|--------|-----------------|--------|--------------------|----------------------|
|           | (Structure)                        | Transplant Volume   |        |                 |        |                    |                      |
| Pre Txp.  | Process                            |                     |        |                 |        |                    |                      |
| Pre Txp.  | Outcome                            |                     |        |                 |        |                    |                      |
| Txp.      | Process                            |                     |        |                 |        |                    |                      |
| Txp.      | Outcome                            |                     |        |                 |        |                    |                      |
| Post Txp. | Process                            |                     |        |                 |        |                    |                      |
| Post Txp. | Outcome                            |                     |        |                 |        |                    |                      |
|           | (Structure)                        | Living Donor Volume |        |                 |        |                    |                      |
| Pre LD    | Process                            |                     |        |                 |        |                    |                      |
| Pre LD    | Outcome                            |                     |        |                 |        |                    |                      |
| Donation  | Process                            |                     |        |                 |        |                    |                      |
| Donation  | Outcome                            |                     |        |                 |        |                    |                      |
| Post LD   | Process                            |                     |        |                 |        |                    |                      |
| Post LD   | Outcome                            |                     |        |                 |        |                    |                      |

# Special Issue:

## Tracking transplant patients....

- Can you identify your transplant patients throughout the entire patient encounter from Referral to Listing to Admission, Transplant/Donation, to Outpatient?
- Are they flagged in your system somehow for every encounter (visit, admission)?
- If you can flag your VRE/MRSA patients in your lifetime electronic medical record, you can flag Transplant Recipients!

# Common Transplant Issues & Concerns



Bleeding – Quality of Organ  
Cardiac Evaluation/Events  
Delayed Graft Function  
Follow-up Visits  
Graft Survival  
Immunosuppression Prophylaxis  
Immunosuppression Therapy  
Infections/Infectious Disease  
Nutrition  
Organ Offer Declinations  
Patient Education  
Re-Admissions  
Selection Criteria  
Serology Testing  
Team Structure and Training  
Technical Competency of Team  
Waitlist Management

# Objective Measures: Sample Topics

|                                      |                                                                 |                              |
|--------------------------------------|-----------------------------------------------------------------|------------------------------|
| 30 day, 90 day, 1 yr. mortality      | Follow Up visits / evaluations                                  | Nutritional Support          |
| 30 day, 90 day, 1 yr. graft failures | Health Maintenance on WL                                        | OR Staff Traffic Control     |
| ABO Prior to listing                 | Immunosuppression                                               | Patient Flow (continuum)     |
| Adherence to Treatment Plan          | Individualized Patient Care Plan                                | Patient Re-evaluation        |
| Adverse Events                       | Infection Rate while hospitalized                               | Pharmacy Support             |
| Blood Utilization                    | Infection rates                                                 | Post Op Thrombosis           |
| Cold Ischemic Time                   | Informed Consent                                                | Protocol / Policy Adherence  |
| Complications                        | Involvement of multidisciplinary team members                   | Readmission w/l 90 days      |
| Conversions to Open from Laparoscopy | Involvement of Multi-disciplinary team members (follow-up care) | Recovery Room Protocols      |
| Critical Care Bed Availability       | Left OR on support device                                       | Referral to Waitlist time    |
| Critical Care Protocols              | LOS in ICU/Step Down                                            | Surgical Protocols           |
| Diabetes (new onset post procedure)  | Overall LOS Mortality                                           | Surgical Skin Prep adherence |
| Discharge Planning                   | Mortality on WL                                                 | Surgical Time Out adherence  |
| Donor Acceptance Rates               |                                                                 | TEIDI Form Completion        |
| ED visits                            |                                                                 | Transplant rate vs. expected |
| Education                            |                                                                 | Unscheduled Returns to OR    |
|                                      |                                                                 | Updating UNET information    |

# Additional Examples

- Mechanical Ventilation time
- Re-intubations
- Seizures
- Infection: requiring IV therapy within first year
- Postoperative liver failure
- Dialysis within “X” days of transplant
- Patient Grievances
- Patient Satisfaction
- Death on Waitlist; Status at Time of Death
- Percent (%) of “Status 7” on Waitlist
- CMV (Cytomegalovirus) rate
- Rejections requiring IV therapy
- PTLD (Post transplant Lymphoproliferative Disorder)
- Skin Cancer post transplant
- “Donor Declination” Quality Review (organs accepted/transplanted by other programs after initial program refusal)
- Living Donor conversion rates
- Living Donors lost to follow-up
- Living Donor health maintenance from first evaluation to donation
- Living Donor lost to “change of mind”

# Summary: Survey Considerations

- Is the QAPI program using objective measures for a comprehensive evaluation of the performance of the transplant program, including services provided under contract or arrangement.
- Measures should cover all components of the program and all transplant and LD phases.
- Are the indicators appropriate to local organizational needs?
- How and why were the measures selected? (high risk, high or very low volume, problem prone)
- Are measures relating to adverse events being monitored to prevent evidence of re-occurrence?
- Is data collected in accordance with a clear plan?
- Is data analyzed to produce actionable information?
- Is there action taken in response to the evaluation of data?
- How is this information communication up to leadership and down to staff?

# Q&A



# Contact Information

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