Quality Measurement in CRISIS SERVICES

I. Introduction

Mental health crisis systems are becoming increasingly sophisticated and multimodal as localities invest in addressing issues such as emergency department boarding, unnecessary law enforcement involvement in responses to non-criminal health care crises, and inadequate and inequitable access to mental health care services. Crisis systems often share the goals of providing rapid access to care for individuals experiencing mental health challenges to alleviate distress as quickly, safely and effectively as possible. As these systems evolve, it is necessary to use performance metrics that can advance these goals in a consistent, measurable way.

All systems are essentially an aggregation of linked processes working in concert to achieve and consistently replicate specific, intended outcomes. However, they are prone to error (human and otherwise), and few are as complex as the web of services that make up a mental health crisis care continuum. Measuring processes and outcomes provides the means to determine how closely these systems are adhering to their intended function and goals and to determine when deviations occur, so they can be corrected.

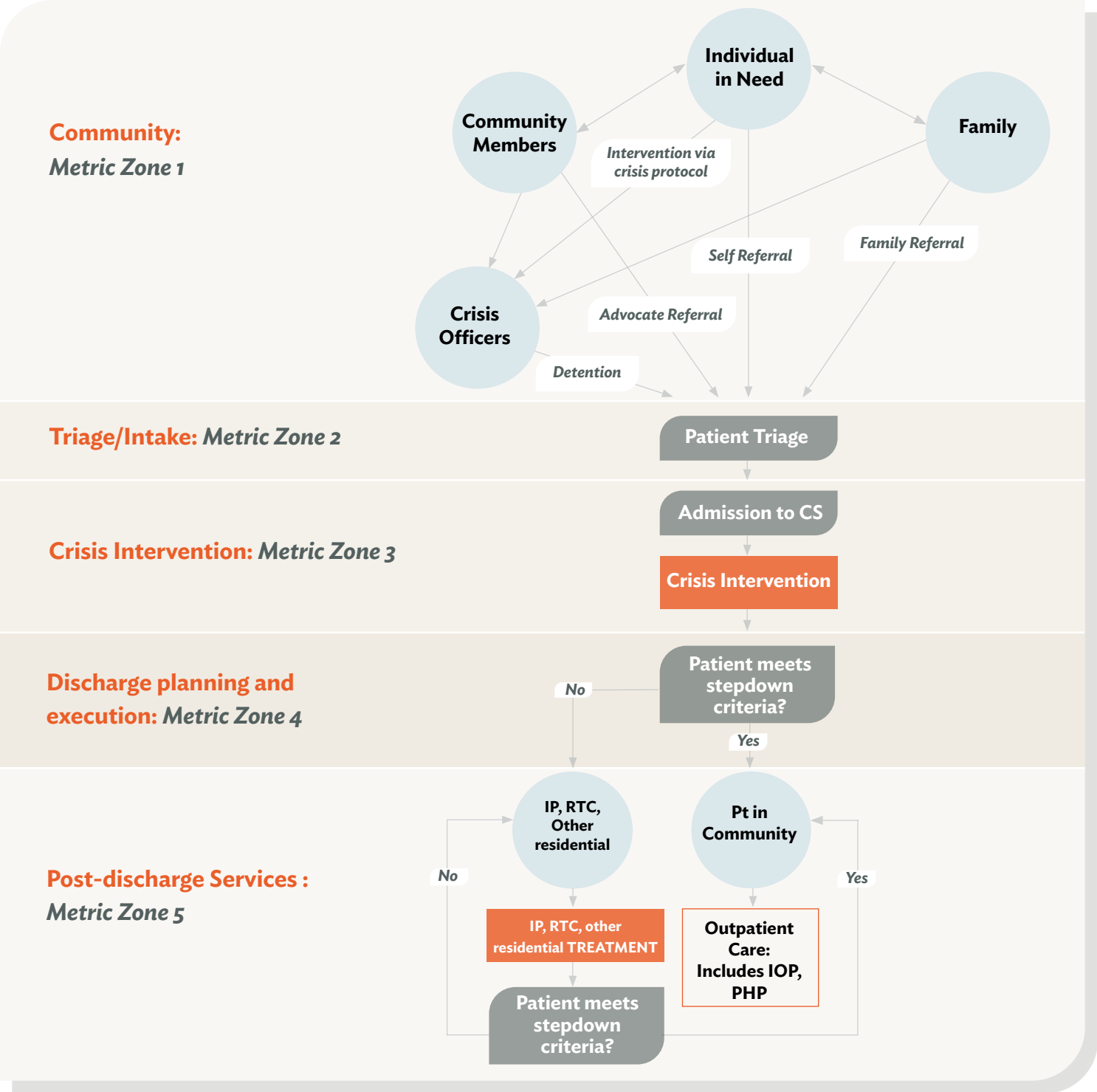
As crisis systems mature across the US, there are increasing demands for measuring their quality, including:

- Reporting mandates tied to funding and accreditation.
- Demonstrating success and value (or the lack thereof).
- Identifying weaknesses to inform continuous quality improvement (CQI) and plan-do-see-act cycles.
- Maintaining a focus on the needs of service recipients based on their own recovery goals.

For optimal performance, crisis systems should employ a "balanced scorecard" approach, i.e., an approach to measuring success that tracks system performance across a combination of different types of metrics. This brief report provides a framework for developing a set of metrics.

II. A Conventional Framework for Crisis Metrics

Health care delivery has been distinctly late in adopting foundational human engineering principles to ensure quality outcomes. An objective view of current crisis service outputs, outcomes, gaps and best practices is a critical starting point for most communities. Whether enhancing crisis services or designing them "from scratch," many funding streams, political pressures and community factors must be considered. In this section, we'll use a workflow engineering orientation to broadly define the organizational and treatment inputs that support optimal patient outcomes.



Five distinct zones along the workflow display critical data groupings:

Community: Is the community aware of crisis services, and can they use the services easily?

Triage/intake: Does the triage function facilitate efficient entry into the appropriate intervention?

Crisis intervention: Is the intervention effective and expertly tailored to the patient's condition and circumstance?

Discharge planning and execution: Did the patient arrive at the post-crisis service venue safe, without delay in service continuity, and able to participate in the services of the new venue?

Post-discharge services *(This metric lays the groundwork for local health system adequacy determinations):*

- Are the available ***service slots adequate*** for the volume of crisis service discharge referrals?
- Is the ***service intensit****y* array optimal for patient outcomes post-discharge from crisis services?
- Are ***specialized services*** available to facilitate optimal outcomes for crisis service patients post-discharge?

Metrics are also categorized and sorted:

Structural components and metrics include traditional infrastructure such as buildings/space, software, computers and space configuration. "Structural" also describes key functional areas with role-based accountabilities.

Process engineering and metrics refer to the design of workflows and automatic inputs as well as rapid, expert exception recognition and management.

Outcomes metrics refer to well-chosen, critical-to-success service result measures. Outcomes can be standalone items that are considered critical to the crisis program. The following categories are used to distinguish the types of outcomes commonly measured:

- ***Clinical:*** *Did both objective and subjective signs of the clinical condition(s) improve?*
- ***Satisfaction:*** *Did [stakeholder] find crisis services to be [positive attribute]?*
- ***Efficiency:*** *Were there fewer steps, transitions, later hospitalizations because of the service?*

III. Person-Centered Approach to Crisis Metrics

Crisis system metrics must look at the performance of the entire crisis system, as well as the performance of each individual service process or component. While they may follow the more conventional structure already described, there is a strong argument that measuring the quality of crisis services should be based on the experience of primary and secondary customers: the people served, their families and loved ones, first responders and other service providers with whom the crisis system collaborates.

By framing metrics from the customer's perspective, the crisis system's performance can be aligned with the values described by service recipients, as described in Table 1, which uses the mnemonic ACCESS TO HELP to describe a core set of measurement concepts that can guide metric development.

Table 1. When I (or the person I am involved with) experience a mental health or substance use crisis, I (we) experience ACCESS TO HELP.

	Value	Meaning	Examples
A	***Accessible/ Affordable***	I am welcomed wherever I go. I am not turned away.	• Percentage of help-seekers who receive appropriate care vs. all who have sought care. • Percentage of persons seeking care who are turned away due to lack of coverage vs declined due to not being able to afford care.
C	***Collaborative***	Helpers work in partnership with me, my family, my caregivers, and other responders.	• The programs assess consumer/family satisfaction surveys and/or net promoter scores.
C	***Comprehensive***	I get help for all my issues that are part of the crisis.	• Access to medical screening. • Able to treat co-occurring substance use disorder (SUD), intellectual/developmental disorder (I/DD), etc.
E	***Equitable***	The quality of services I receive are not affected by my race, ethnicity, gender, sexual orientation, etc.	• Stratify outcome metrics (e.g., return to crisis centers, access to care) by race/ethnicity and other key demographics (e.g., ZIP code). What percentage of poor outcomes are disproportionately influenced by performance in underrepresented populations?
S	***Safe***	My experience of help is safe and not harmful. I am never traumatized by asking for help.	• What percentage of individuals presenting in crisis end up injured, hurt or killed while doing so?
S	***Successful***	The care I receive meets my needs.	• Readmission rates. • Symptom reduction.

	Value	Meaning	Examples
T	***Timely***	I get help quickly enough to meet my needs.	• Time to intervention (e.g., call answer times, mobile dispatch times, facility door-to-doctor times). • Abandonment rate (e.g., call abandonment, left without being seen, etc.). • Lag time between seeking care and receiving care.
O	***Ongoing***	I receive help to move from my crisis situation to ongoing support that wrap around me to help me thrive.	• Successful linkage to continuing care at adequate intensity: 3-, 7-, 30-, 60-, 90-day follow up.

	Value	Meaning	Examples
H	***Hopeful***	I am helped to feel more hopeful, and I make better decisions as a result.	• Decrease in suicide, violence, self-harm. • Personal Outcome Measures (POMS).
E	***Engaging***	I am treated as a valuable customer, with respect and dignity.	• Complaints, adverse incidents, escalation.
L	***Least Intrusive***	I receive help in a place that is designed to meet my needs.	• Avoidance of inappropriate emergency department use or arrest diversion, voluntary conversion.
P	***Publicized***	I know who to call and/or where to go.	• Information about call lines and walk in centers, increased use of 988 vs. 911.

IV. How to Select Crisis System Metrics

Given that every system is different and has its own values, and because crisis systems involve multiple systems and stakeholders, it is essential to begin by developing consensus in defining the system's values and desired outcomes. A useful process for building consensus follows:

- Convene a stakeholder group composed of all users (providers, payers, service users and their families, law enforcement, emergency medical services, hospital systems, crisis workers, call center leads, mental health system leads).
- Define and memorialize the system's values, goals and intended results. These will serve as a foundation and framework for the system's definition of quality benchmarks.
- Determine component pieces of the system.
- Determine optimal operational flow through the system. (Logic models can be very effective here.)
- Assess current gaps. (Process maps, such as Ishikawa charts, also called fishbone diagrams, can be very helpful in this regard.)
- Define success and agree on how it is to be measured. Goals and intended results should be specific, measurable, actionable, realistic and time-bound (SMART).

For example, in Philadelphia's crisis system redesign, the stated values for the system include:

Reducing trauma. Relevant metrics include the rate of law enforcement involvement in behavioral health crisis situations and the use of coercive treatment (e.g., involuntary commitment).

Achieving equity. Relevant measures include tracking disparity at all levels in the system.

Increased crisis resolution in the community. Relevant metrics include call center metrics such as call answer rate, percentage of calls resolved by speaking with a counselor, rates of referral to community mental health services such as, mental health outpatient services.

Mobile team-specific metrics. These include timeliness, as measured by the time from dispatch to engagement of the individual on the scene. Other relevant metrics include the number of dispatches that result in a resolution of the crisis as compared to those that result in referral to a higher level of care.

Crisis Center Metrics. These reflect the value of reducing trauma and resolving crises at the least-restrictive level of care. They include facility door-to-care time, average length of stay and rates of referral to higher-level services such as inpatient care.

Increased individual, family, community satisfaction with crisis response: Relevant metrics include the percentage of service users who rate services as being at least satisfactory (i.e., 3 on a 5-point Likert scale).

CASE EXAMPLE: CALL CENTER METRICS

Systems that value crisis resolution in the community might choose to engage individuals in crisis by phone. Evidence suggests that up to 80% of crises can be resolved telephonically. Such systems might choose to track metrics such as call type, frequency, answer rate and approximate measures of acuity such as call duration and outcome. Paired with quality assessment processes such as randomized review of recordings, this set of call-related metrics would permit that system to track the functioning of the system's telephonic resolution of crisis calls.

V. How metrics inform CQI and Plan-Do-Study-Act (PDSA) cycles

Implementing quality improvement begins with stakeholders' consensus on chosen metrics. Next steps include collecting and sharing metrics, selecting members of the quality committee, determining quality improvement methodology, piloting interventions to improve performance and reviewing pilot results.

Methods for obtaining and calculating metrics need to be transparent and communicated to all stakeholders in a timely manner. For metrics involving the wider crisis system, members of the quality committee should represent all involved services, such as first responders, mobile crisis services, crisis centers, inpatient providers, outpatient providers and care transition providers, among others. It should also include key staff, such as psychiatrists and medical directors, content experts and those doing the work at the ground level. Reviews of metrics should occur at a frequency that supports sound patient care and timely piloting of corrective interventions.

Although one type of quality improvement methodology is not superior to any other, sustained focus on the goal of improved care and a multi-dimensional analysis of root causes — before jumping to conclusions or corrective actions – is essential. In addition, the system may need to validate the quality of the metrics, collect new metrics and/or review individual charts to clarify the source of the problem.

A deeper discussion of using crisis services metrics to improve system performance (both for individual crisis programs and the system as a whole) will be addressed in a subsequent publication from this group.

VI. Complexity in Measurement

Crisis services are among the most intersectional areas of health care, with interfaces between emergency and mental health specialty call centers, emergency medical services, mobile crisis teams, police and jails, and many other agencies.

Determining how well we are serving our clients goes beyond defining metrics using existing data — we must consider novel approaches to linking data systems to strengthen informatics opportunities. Measuring the performance of a crisis system requires a robust ability to share, aggregate and manage information across multiple types of providers. Best practices for linkages include matching along key identifiers (name, date of birth, social security number), though these data are rarely collected in full by call centers. Therefore, systems need to implement call-specific IDs that bridge data systems to facilitate retrospective linkages that can traverse call center, mobile unit, health system and criminal justice data systems. Fortunately, recent and pending changes to HIPAA, Office of the National Coordinator for Health Information Technology (ONC)/ Centers for Medicare & Medicaid Services (CMS) interoperability and 42 CFR part 2 and the common expanded permissions when the episode of care is an emergency make sharing information more feasible and efficient.

Such approaches allow for going beyond performance measures like response times and get into more meaningful process measures (e.g., post-crisis routine care utilization, post-crisis acute/crisis care reutilization, post-crisis arrest/jail entry, etc.) as well as actual outcomes (all-cause morbidity/mortality, housing status, patient-reported outcomes).

Interpreting such measures can be a complex task. Reutilization, for example, may be interpreted as a negative outcome since the crisis service was unable to divert from higher intensity care settings, but post-crisis acute service utilization for appropriate reasons (e.g., worsening symptoms, risky behaviors) should be encouraged. There is need to understand at a population level what a "reasonable" benchmark rate is for these key process outcomes. Furthermore, service providers may adopt practices akin to cherry-picking, in which certain groups are excluded from engaging with services; these practices can be accounted for in measurement with strategies such as risk adjustment.

Finally, equity must be an essential aim for crisis services measurement. To understand potential disparities in delivery of crisis care, it is necessary to routinely collect relevant demographic data such as gender identity, sexual orientation, race, ethnicity and language preferences. Reporting of metrics outcomes should be stratified by sub-groups to allow for identification of disparities and, when found, monitoring should ensure that remedies are effective at advancing equity in service delivery.

VII. Conclusion

Measuring the quality of care in crisis systems is no easy task. Fortunately, multiple approaches are available to systems that seek to ensure high-quality, person-centered, equitable delivery of crisis care. Whether using conventional or more person-centered approaches, systems can benefit from overcoming barriers to measurement and ensuring that they are employing CQI practices to improve crisis care for all.

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