

Introduction

- Digital mental health services are scaling rapidly, creating an urgent need to ensure that innovation is matched by safe, effective, high-quality care.
- There is no comprehensive system for clinical service quality measurement: Compliance tracking is necessary but not sufficient.
- We developed the first systems-level, multidimensional composite index for measuring quality in digital crisis intervention based on healthcare standards of the World Health Organization¹ and the U.S. Agency for Healthcare Research and Quality².

Methods

Framework Development

Design Principles

- **Scope:** Focus on clinical service delivery.
- **Evidence:** Based on existing healthcare quality frameworks.
- **Relevance:** To global systems and services.

Process

- **Background:** Conducted landscape scan to identify starting framework.
- **Expert panel:** Convened stakeholder group to define purpose, adapt framework for digital contexts, and guide index development.
- **External review:** Engaged global experts to review framework, methods, and resulting index.

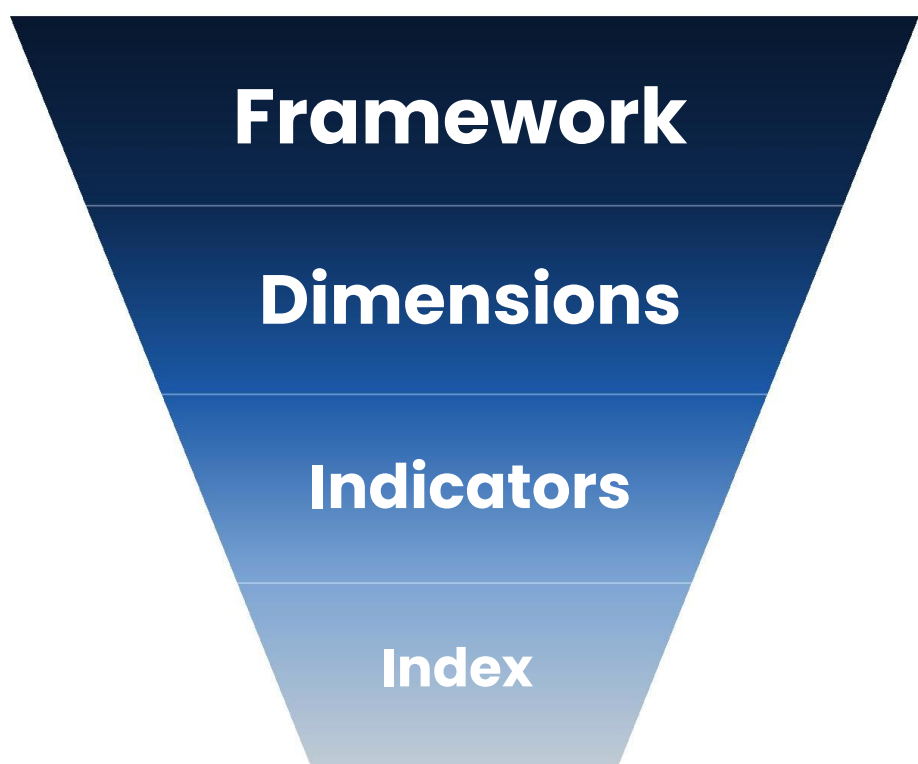


Figure 1. From Framework to Index

Index Development

Design Principles

- **Value:** To clinicians and business operations.
- **Representativeness:** Reflect and consistently measure the dimension.
- **Differentiation:** Distinctions between dimensions maximized, even if correlated.
- **Data-informed, expert-derived:** Historical data + expert judgment sets indicator ranges.
- **Methodological rigor:** Every choice justified against index construction standards.

Process: Followed standard index development methods.^{3,4}

1. **Indicator Selection:** Select organizational metrics for each dimension. Develop new metrics where necessary.
2. **Calibration:** Map raw values of each indicator to degrees of quality. Normative judgment calls that are data-informed, expert-derived.
3. **Standardization:** Align indicators on consistent scale.
4. **Weighting:** Assign relative importance of indicators within dimensions, based on the conceptual framework.
5. **Aggregation:** Specify appropriate mathematical expression to combine indicators.
6. **Validation:** Sensitivity, validity, reliability.

Results

Quality Framework

Clinical Service Quality Framework

1. **Safe:** Minimizes harm to people for whom the service is intended
2. **Effective:** Delivers evidence-informed services to improve clinical outcomes
3. **People-centered:** Provides care that responds to individual preferences, needs, and values within the context of the clinical framework
4. **Timely:** Minimizes wait times and increases speed to service across all levels of risk and points of intervention
5. **Efficient:** Maximizes the benefit of available resources and minimizes waste
6. **Connected:** Provides services that help connect individuals to the broader system of mental health care
7. **Equitable:** Provides a high standard of care, with services intentionally designed to reduce disparities in access, experience, and outcomes, so that no group systematically experiences worse results

Clinical Service Quality Index (CSQI)

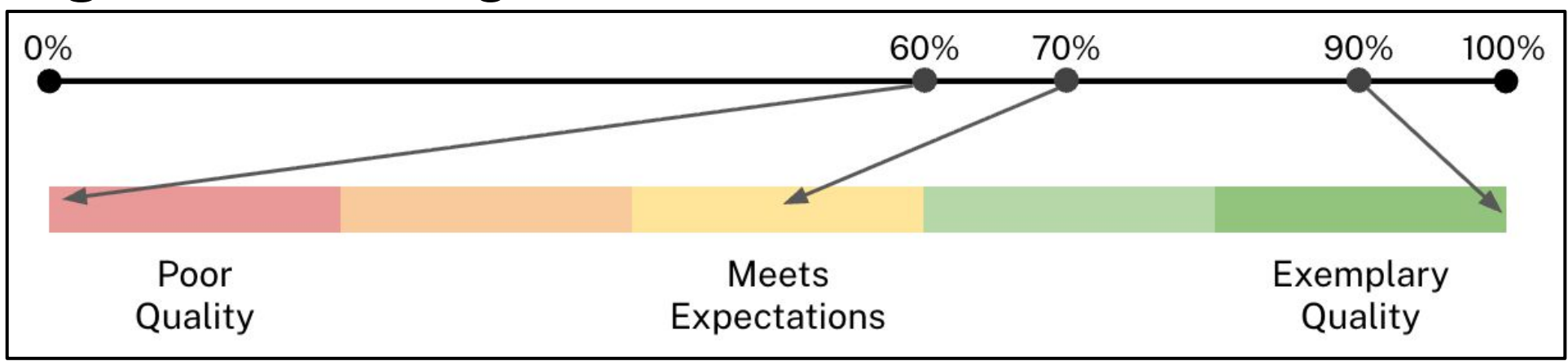
A single composite score summarizing performance across the quality framework

1. Indicators

- **Safety (2).** Policy / protocol compliance rates
- **Effectiveness (2).** Distress reduction and stabilization
- **People-centeredness (2).** Meeting individual's needs and preferences
- **Timeliness (2).** Wait times by risk level
- **Efficiency (1).** Service line demand vs. staffing capacity.

2. **Calibration:** Working group sessions mapped raw values to quality levels, producing cutoffs used in standardization (Figure 2).

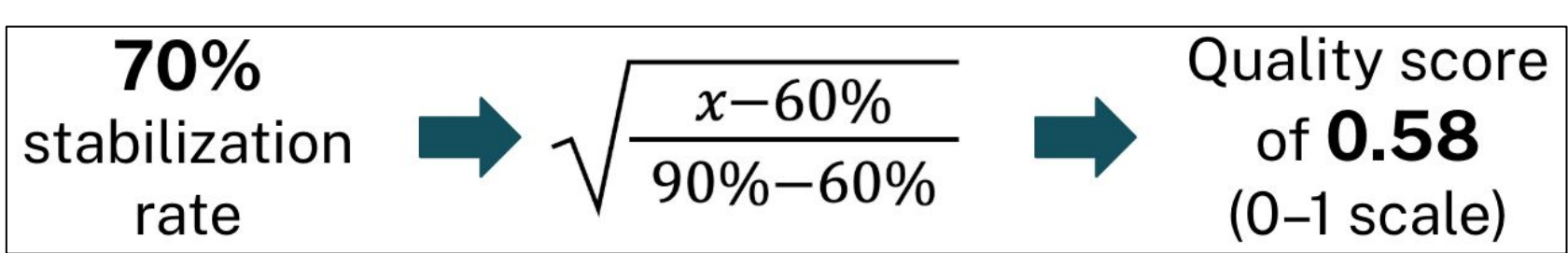
Figure 2. Calibrating Effectiveness (Stabilization Rate)



3. Standardization (Figure 3)

- **Scaled:** 0 (min) to 1 (max)
- **Winsorization:** Raw values at/below the min map to 0; raw values at/above the max map to 1.
- **Min-max Scaling:** Linearly rescale the range to a 0–1 scale.
- Nonlinear transformations align the calibrated midpoint.

Figure 3. Standardization of Stabilization Rate



4. **Weighting:** Equal weighting in absence of strong argument for differential weights.

5. Aggregation

- Safety is non-compensatory (must be met).
- Arithmetic mean of nine indicators.

CSQI Adaptation

Our vision: A global network standard for systematic tracking of clinical service quality for digital mental health.

Now: Working with affiliate partners in the United Kingdom and Ireland.

Next: Extend CSQI to Aquí Estoy for global Spanish.

Conclusion

- Already gaining invaluable insight into our clinical quality profile after just a few quarters of implementation.
- Proving to be a helpful single-number signal; real value is in unpacking its components to see what is driving changes in quality.
- Index development process is adaptable within the quality framework, to measure what is most meaningful to organizations.
- Next steps include continued psychometrics work to assess index reliability, validity, sensitivity and inform updates as needed; and broader global adaptation.

References

1. World Health Organization. (2025). *Measuring and monitoring quality of care to improve maternal, newborn, child and adolescent health services: A practical guide for programme managers*. WHO.
2. Agency for Healthcare Research and Quality. (2025). *Six domains of healthcare quality*. U.S. Department of Health and Human Services.
3. OECD, European Union, & European Commission Joint Research Centre. (2008). *Handbook on constructing composite indicators: Methodology and user guide*. OECD Publishing.
4. European Commission, Joint Research Centre. (2020). *10-step pocket guide to composite indicators and scoreboards*. Publications Office of the European Union.

Acknowledgements

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