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Beyond "Do No Harm": Re-engineering Safety in Psychiatric Care through Quality Improvement

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Abstract

Background: Safety in psychiatric care involves distinctive risks, self-harm, violence/coercion, medication and diagnostic harms, and unsafe transitions, often intensified in resource-constrained systems.

Objective: To synthesize what works, for whom, and under what conditions when quality improvement (QI) is used to reduce harm in psychiatric services.

Methods: Narrative review with realist synthesis examining context–mechanism–outcome patterns across QI projects, time-series and before–after studies, implementation reports, and guidance. Data were charted for setting, safety domain, QI strategy, implementation supports, measures (outcome/process/balancing), and equity/rights considerations.

Results: Effective programs paired a standardized core (e.g., de-escalation/Safewards, Six Core Strategies, post-discharge follow-up, antipsychotic metabolic bundles, red-flag diagnostic checklists) with locally adaptable workflows and run/SPC-based feedback. Success depended on addressed CFIR determinants (leadership, resources, workflow fit) and on psychological safety and supervision. In primary care/LMIC settings, mhGAP-aligned task-sharing and clear referral rules enabled scale without proportional budgets. Equity-stratified dashboards surfaced disparities. Economic signals favored portfolios combining de-escalation, safer transitions, and metabolic monitoring. Ethical governance (least-restrictive practice, data minimization, accountable review) underpinned trust.

Conclusions: Psychiatric safety improves when QI discipline, Safety-II/HRO mindsets, and equity-aware measurement are embedded in everyday work, delivering less harm without new harms elsewhere and enabling sustainable spread across inpatient, community, and primary-care interfaces.

Keywords: De-Escalation; Statistical Process Control; Implementation Science; Mhgap-Aligned Task-Sharing; Equity; Rights-Based Mental Health

1. Introduction

Patient safety is foundational to health systems, yet the risk profile of psychiatric care is distinct, spanning self-harm and suicide, aggression and coercion, seclusion and restraint, diagnostic overshadowing, medication-related harm, and

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unsafe transitions. Moving beyond aspiration to reliability requires engineered systems that anticipate variability and learn continuously in contextually constrained settings, including those in low- and middle-income countries (LMICs) where primary-care integration and task-sharing are essential [1], [2], [3], [4].

Quality improvement (QI) provides a pragmatic route to safer care by coupling frontline problem-solving with iterative testing and measurement for learning. Local evidence demonstrates feasibility and impact: a Plan-Do-Study-Act (PDSA) program in mental health facility strengthened staff and patient safety/security operations, showing how small, disciplined cycles can reduce operational risk and support a safer milieu [5]. Depression care in primary care further illustrates how guidelines, brief screens, and stepped care can be standardized through QI to improve detection and early treatment, thereby reducing downstream risk and readmissions [6], [7], [8].

Medication and physical-health safety are core psychiatric concerns. Cross-sectional monitoring in an outpatient clinic found elevated rates of impaired fasting glucose and diabetes among people on antipsychotics, reinforcing routine metabolic screening (e.g., BMI, waist circumference, glucose) as a low-cost, high-yield QI bundle that prevents downstream cardiometabolic harm [9]. Relatedly, antidepressant stewardship matters across specialties: neurologists frequently prescribe antidepressants for post-stroke depression, neuropathic pain, and Parkinson's disease, underlining the need for shared safety protocols (drug interactions, QTc, falls, hyponatremia) across mental health and neurology [10].

Diagnostic safety is equally pivotal. Non-convulsive status epilepticus (NCSE) can masquerade as behavioral change or delirium; early EEG and treatment avert morbidity, highlighting the value of "red-flag" checklists and rapid escalation pathways within psychiatric and emergency settings [11]. Psychosis pathways also benefit from standardized diagnostic and treatment bundles that prioritize early identification, pharmacotherapy, psychosocial rehabilitation, and family engagement to mitigate risk, shorten unsafe episodes, and promote recovery [12], [13]. Special populations require tailored safety approaches: adults with autism spectrum disorder (ASD) may present with atypical agitation, catatonia, or psychosis, necessitating sensory-aware de-escalation, communication adaptations, and careful medication use to avoid iatrogenic harm [14].

Safety is inseparable from workforce well-being and system resilience. During COVID-19, mental-health staff experienced high stress with measurable symptoms, reminding leaders that QI for safety must encompass staff psychological safety, reliable supply chains, and supportive supervision; these are preconditions for safe, compassionate patient care [1], [4], [15], [16]. Primary-care–based integration, collaborative care, and digital tools (telepsychiatry, decision support) can extend reach if implemented with governance for privacy, equity, and algorithmic fairness [2], [3], [4].

This narrative, realist-informed review synthesizes what works, for whom, and under what circumstances when QI is used to improve psychiatric safety. We examine how mechanisms (real-time feedback, team huddles, co-production, standard work) interact with contexts (leadership, staffing, environment, digital infrastructure, legal frameworks) to produce outcomes (reduced restraint, safer medications, fewer readmissions, better transitions), with explicit attention to equity, rights, and LMIC primary-care integration.

2. Methods

Design and approach. We conducted a narrative review informed by realist principles to explain what works, for whom, in which contexts, and why when QI strategies are used to enhance safety in psychiatric care. The synthesis sought context–mechanism–outcome (CMO) patterns across heterogeneous evidence (QI projects, time-series, before–after studies, descriptive/observational work, implementation reports, and relevant guidance).

Eligibility criteria. We included reports addressing (a) psychiatric or integrated primary-care mental health settings; (b) safety-relevant outcomes (e.g., self-harm/suicide, aggression/violence, seclusion/restraint, medication and physical-health safety, diagnostic safety, readmissions/transitions, workforce safety); and (c) an explicit QI component (e.g., PDSA, standard work, huddles, audits/feedback, bundles, dashboards). We excluded purely biomedical efficacy trials without service-delivery implications and opinion pieces lacking actionable methods.

Information sources and search. We combined targeted database/grey searches with snowballing from key publications and locally produced studies relevant to low- and middle-income countries (LMICs) and primary-care integration. Sources included peer-reviewed journals and program reports.

Study selection. Two reviewers independently screened titles/abstracts, then full texts, resolving disagreements by discussion. We documented reasons for exclusion at full-text stage.

Data charting. For each study we extracted: setting, population, safety domain, QI strategy, implementation supports, measures (outcome/process/balancing), results (including run/SPC charts where available), unintended consequences, resources, and equity/rights considerations. Where applicable we captured digital components, task-sharing, and primary-care interfaces.

Synthesis. We iteratively grouped evidence by safety domain and QI mechanism, then developed provisional CMO configurations (e.g., when leadership walkrounds + daily huddles (mechanisms) are introduced in acute wards with high staff turnover (context), restraint rates decline and staff injury does not increase (outcomes)). We compared patterns across inpatient, emergency, community, and PHC settings, with special attention to LMIC adaptability.

Quality and certainty. Because QI evidence is often practice-based, we appraised credibility and contribution rather than excluding for design alone. Signals of effect (run/SPC shifts, interrupted time-series) and coherence with hypothesized mechanisms increased confidence; unclear temporality, untracked balancing measures, or high implementation drift lowered confidence.

Patient and public involvement. We prioritized studies reporting co-design, lived-experience input, and least-restrictive care governance, and we reflect these perspectives in the interpretation of CMO findings.

Ethics. All included sources were publicly available; no human subjects procedures were required.

3. Conceptual Model for Psychiatric Safety

We model psychiatric safety improvement as a chain from contexts → mechanisms → interventions → measures → outcomes.

Contexts (where change lands). Psychiatric care is delivered in volatile clinical environments—acute wards, emergency/liaison, community and primary care, shaped by leadership, resources, workflows, legal mandates, and culture. We use the Consolidated Framework for Implementation Research (CFIR) to surface determinants (inner/outer setting, characteristics of individuals, intervention attributes, and implementation processes) that condition success [17]. For population reach and equity, we also consider RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) when planning spread and scale [18]. In many LMIC settings, context includes perinatal vulnerability (e.g., stress, low social support, poverty in pregnant adolescents), access barriers for people with substance use disorders, and neurocognitive morbidity after injury, each shaping safety priorities and the feasibility of change ideas. [19], [20], [21].

Mechanisms (why change works). Drawing on the Model for Improvement (aims, measures, rapid Plan-Do-Study-Act cycles), teams iteratively test change ideas under real-world conditions [22]. Contemporary safety science adds Safety-II—studying how everyday work succeeds and amplifying conditions that make success likely—and High-Reliability Organizing (preoccupation with failure, sensitivity to operations, deference to expertise, commitment to resilience) to anticipate and contain risk [23], [24]. Team learning depends on psychological safety, enabling staff and service users to speak up about hazards and near misses without fear of blame [25].

Interventions (what we change). Change ideas cluster by safety domain, for example: (a) violence/agitation—de-escalation bundles and the Safewards approach to reduce conflict and containment [26]; (b) seclusion/restraint—governance and post-event learning grounded in the Six Core Strategies [27]; (c) medication/physical-health safety—standardized monitoring for high-risk psychotropics; (d) diagnostic safety—red-flag checklists for medical causes of psychiatric presentations; and (e) transitions of care—reliable handovers and early follow-up. In primary care and low-resource settings, mhGAP-aligned task-sharing and supervision help embed these practices [28].

Violence/agitation & containment: De-escalation bundles and Safewards reduce conflict/containment on acute wards [26].

- Seclusion/restraint governance: Leadership, data transparency, workforce development, and post-event learning (Six Core Strategies) [27].
- Medication & physical-health safety: Standardized monitoring for psychotropics (e.g., metabolic checks with antipsychotics) and cross-specialty stewardship where neurology/psychiatry intersect (dopamine

agonists, antidepressants) to prevent iatrogenesis (falls, QTc, impulse-control disorders). It is important to highlight pharmacovigilance needs and care-pathway standardization [29], [30], [31].
- Diagnostic safety: Red-flag checklists and escalation pathways for medical mimics (e.g., neurocognitive sequelae post-RTA; substance-related presentations; induced delusional disorder requiring family-systems assessment) [20], [21], [32], [33].
- Transitions of care & primary care integration: Reliable handovers, early follow-up, and mhGAP-aligned task-sharing; antenatal and adolescent pathways addressing alcohol use and prenatal depression to reduce downstream harm [19], [34], [35], [36].
- Special populations: ADHD care bundles (screening, teacher input, comorbidity checks) and behavioral-addictions pathways (gambling) with harm-minimization and safeguarding [36], [37], [38], [39], [40].

Measurement (how we learn). Measurement is for learning, not judgment. We track outcome, process, and balancing measures and visualize data with statistical process control (SPC) to distinguish common-cause variation from real improvement [41], [42]. Program-level dashboards aggregate signals (e.g., restraints per 1,000 bed-days, staff injury rates, follow-up within 7 days, metabolic screening completion) and support daily management.

Outcomes (what success looks like). The proximal aim is less harm (fewer self-harm incidents, assaults, restraints, medication adverse events, missed medical morbidity) with no deterioration in balancing measures (e.g., absconding, staff injury). Distal aims include improved experience, equity, and reliability.

How the pieces fit. In our synthesis, effective programs paired (i) clear aims and run-time feedback (Model for Improvement + SPC) with (ii) practice designs that enable success (Safety-II/HRO), within (iii) contexts ready for change (CFIR determinants addressed), producing virtuous learning cycles that travel across inpatient, community, and primary-care interfaces.

4. Results: What Works, Where, and Why

Violence/agitation and containment. Multicomponent de-escalation programs built around the Safewards model reduced conflict and containment on acute wards when paired with daily huddles, visible leadership, and rapid feedback of incident data; crucially, services that tracked balancing measures (absconding, staff injury) did not see offsetting harms [26], [41], [42].

Seclusion/restraint. Units adopting the Six Core Strategies, leadership for change, use of data, workforce development, prevention tools, service-user roles, and post-event learning, reported sustained reductions in restraint/seclusion when debriefs were routine and dashboards were reviewed in governance forums; effects waned with turnover or loss of coaching, underscoring context-sensitivity [27], [42].

Medication and physical-health safety. Standardized metabolic bundles (BMI/waist, glucose, follow-up prompts) for people on antipsychotics increased screening and detection of dysglycaemia with minimal added workload when owned by nursing teams and embedded in daily management systems [9]. Cross-specialty antidepressant stewardship (neurology/primary care/psychiatry) reduced iatrogenic risk where protocols for QTc, falls, hyponatraemia, and drug–drug interactions were agreed and audited [7], [8], [10]. Service-level quality work was more durable when framed within broader system strengthening (supply chains, supervision, referral clarity) [3], [4].

Diagnostic safety (medical and developmental mimics). Red-flag checklists and rapid escalation pathways improved recognition of NCSE presenting with behavioral change, shortening time to EEG and treatment [11]. Early-psychosis pathways that standardized assessment (including medical exclusion), antipsychotic initiation, psychoeducation, and family work achieved earlier stabilization and fewer unsafe episodes when fidelity and supervision were monitored [12], [13]. In paediatrics, systematic neuropsychological screening uncovered high rates of executive-function and attention deficits among children with sickle-cell disease, informing referral and educational support plans that mitigated downstream risk [43].

Special populations and pragmatic pharmacotherapy. In settings with limited access to stimulants for ADHD, a local quasi-experimental series found that fluoxetine improved attention, executive function, and memory at 4 weeks, supporting a carefully monitored, stepped-care "bridge" tactic within clear review points [44]. A routine-practice case report of childhood depression highlighted recurrent diagnostic/treatment challenges (comorbidity, partial SSRI response, weight gain), reinforcing stepped assessment and MDT review to prevent deterioration [45]. A practice-oriented review of childhood-onset schizophrenia supported structured MDT pathways with safety monitoring adapted to resource constraints [46].

Transitions of care and readmissions. Readmissions clustered where handovers were variable and early follow-up capacity was limited; services that introduced standard handovers plus proactive ≤7-day contacts, and that reviewed run-chart feedback weekly with community teams, reported fewer "bounce-backs" [6]. Addressing health-seeking barriers (staffing, medicines, stigma, transport) through clinic flow redesign and community linkage improved engagement, particularly for substance-use populations [20].

Cross-cutting mechanisms. Programs that combined (i) clear aims and SPC-based feedback, (ii) practice designs that make the safe action the easy action (checklists, standard work, visual management), and (iii) visible leadership and psychological safety achieved the most reliable harm reduction across inpatient, community, and primary-care interfaces—especially when workforce wellbeing, strained during COVID-19, was actively supported [3], [4], [15], [26], [27], [41], [42].

5. Measurement for Improvement in Psychiatry

Purpose and philosophy. Measurement in QI is for learning, not judgment. Teams use timely, minimally burdensome data to test changes, understand variation, and decide next steps, anchored in the Model for Improvement (clear aims, practical measures, rapid Plan–Do–Study–Act cycles) [22]. Measure sets should reflect the local theory of change and determinants surfaced with CFIR (workflows, leadership, resources) and spread considerations from RE-AIM (reach, adoption, maintenance) [17], [18].

What to measure. Every safety aim needs a compact trio of outcomes, process, and balancing measures:

Violence/containment: outcome - assaults and restraint/seclusion per 1,000 bed-days; process - % shifts with safety huddles completed; balancing - staff injuries and absconding (especially when using Safewards/de-escalation bundles) [26], [27].

Self-harm/suicide risk: outcome - self-harm incidents; process - post-discharge contact within 7 days; balancing - ED crowding or bed pressure following bundle rollout [22].

Medication/physical-health safety: outcome - adverse drug event rate; process - metabolic bundle completion (BMI, waist, glucose) for antipsychotic users; balancing—missed clinical time due to added monitoring [9].

Diagnostic safety: outcome - time to EEG for suspected NCSE; process - use of red-flag checklists; balancing - unnecessary investigations [11].

Transitions/PHC integration: outcome - 30-day readmissions; process - warm handovers and referral acceptance; balancing - clinic wait times [6], [28].

To advance equity, stratify key indicators by age, sex, socioeconomic proxy, and setting, aligning with WHO guidance (Mental Health Atlas; HEAT toolkit) [36], [47].

How to analyze. Use run charts and statistical process control (SPC) - p/u/x charts, to separate common-cause variation from real change; apply signal rules (shifts, trends) and annotate change tests directly on charts [41], [42]. Prefer small, frequent samples over exhaustive audits; a practical rolling denominator (e.g., bed-days, clinic sessions) enables faster learning than waiting for perfect data [41], [42].

Operational definitions & data quality. Publish one-line operational definitions for every metric (numerator/denominator, inclusions/exclusions, source, frequency). Embed simple verification (weekly spot-checks) and display data completeness beside outcomes to prevent false signals. Where electronic data are limited, paper tallies or whiteboard counters captured at end-of-shift are acceptable if definitions are stable and sampling is consistent [42].

Making it usable. Build a single-page safety dashboard per unit with 3–6 measures (one outcome, one–two processes, one balancing, plus equity stratifies). Review in daily huddles and monthly governance, linking signals to action (e.g., if 7-day follow-up drops, trigger a root-cause huddle focused on scheduling/phone access) [22], [41], [42]. Align measures to mhGAP-compatible pathways so primary care teams can adopt the same indicators under shared supervision and referral rules [28].

Bottom line. Small, disciplined, context-aware, SPC-driven measurement, equity-stratified and tied to concrete change ideas, lets psychiatric teams see reliability improve and course-correct before harm accumulates [17], [18], [22], [28], [36], [41], [42], [47].

6. Implementation, Scale-up, and Spread

Implementation approach. We treat implementation as the disciplined integration of QI changes into routine work, guided by practical determinants from the CFIR and tracked with clear implementation outcomes (acceptability, feasibility, fidelity, penetration, sustainability) [17], [48]. We draw on the ERIC compilation to select strategies such as identifying champions, audit-and-feedback, ongoing training/TA, and adapting to context while preserving core components [49].

From pilot to system-wide. Successful spread pairs a standardized core (the "non-negotiables" of the change bundle) with a locally adaptable periphery (roles, tools, workflows). The Institute for Healthcare Improvement advises a deliberate sequence, package the change, ready receiving sites, create a pull for adoption, and use real-time data to course-correct during scale-up [50]. Diffusion is faster when adopters perceive relative advantage, compatibility, simplicity, trialability, and observability, and when organizations leverage networks, leadership, and absorptive capacity [51], [52].

Capabilities and learning systems. Spread sticks when frontline capability grows. We combine team-based coaching, audit and feedback (effective when baseline performance is low, messages are specific, and feedback is repeated by a credible source), and psychological safety so staff can surface hazards without blame [25], [53]. Data systems must be "good enough, soon enough": simple run/SPC charts at the unit level, reviewed in huddles and governance, support rapid problem-solving and protect fidelity during adaptation [42], [50].

Working across settings. For LMIC and primary-care interfaces, mhGAP-aligned task-sharing with clear referral rules and supervision enables scale while guarding safety; supervision cadence and supply chain reliability are typical rate-limiters to plan for up front [28]. To avoid equity back-sliding, stratify key indicators (e.g., 7-day follow-up, restraint rates) and monitor for unintended consequences as services expand [48], [50].

Sustainability. Programs that build local ownership (unit-level aims and measures), institutionalize leadership routines (walkrounds, dashboard reviews), and budget for training/TA are more likely to sustain gains. In our context, bundles that made the safe action the easy action, paired with visible leadership and real-time feedback, spread reliably across inpatient, community, and primary-care interfaces [17], [25], [28], [42], [48], [49], [50], [51], [52].

7. Economic & Resource Considerations

Designing safety as routine work is not only clinically necessary; it is economically rational. Mental disorders already impose multi-trillion–dollar productivity losses; systems that reduce preventable harm recover capacity, staff time, and public trust [54], [55]. In resource-constrained settings, the binding constraints are supervision time, medicines/supplies, and data infrastructure; QI helps target these scarce inputs to the few changes that reliably move safety outcomes.

What pays for itself quickly. "Low-cost, high-yield" bundles, e.g., metabolic monitoring for people on antipsychotics (BMI/waist/glucose at set intervals), detect dysglycaemia earlier, averting emergency care and cardiovascular admissions; nursing-owned workflows and simple prompts minimize marginal cost [9]. Standard handovers plus ≤7-day post-discharge contact reduce bounce-backs, freeing bed-days and transport costs linked to readmissions [6]. De-escalation packages (e.g., Safewards) paired with safety huddles reduce conflict/containment, which lowers overtime, injury leave, and security call-outs—typical hidden costs in psychiatric units [54], [55].

Primary care integration and task-sharing. Economic evidence shows collaborative/task-shared care for common mental disorders in primary care is cost-effective in LMICs, with favorable cost per disability-adjusted life-year (DALY) averted and strong returns on investment at scale [2], [28], [36], [56]. In practice, the affordable path is a standardized core (screen–treat–follow-up protocol; referral rules) plus a locally adaptable periphery (who does what; supervision cadence), with periodic cost "huddles" to track supervision hours, supply use, and missed-appointment waste [3], [4].

How to budget for QI. Treat improvement capability as capital formation. Minimal viable resourcing typically includes: (i) protected team huddles (≤15 minutes/shift); (ii) one QI coach per several units; (iii) paper or basic digital run/SPC

charts; and (iv) micro-purchases for visual management (whiteboards, checklists). These items reallocate time from rework and incident response toward prevention, which is why measurement for learning is central to the business case [36], [56].

Equity and financial risk protection. Stratifying safety indicators by sex/age/poverty proxy helps target "safety poverty traps" (e.g., missed follow-up due to transport costs). Aligning indicators and supervision with mhGAP lets systems extend coverage without proportionate budget growth, protecting households from out-of-pocket spending [28], [36].

Bottom line. A pragmatic portfolio, metabolic safety, safer transitions, de-escalation, and primary-care task-sharing, has the best ratio of effect to spend. When paired with simple SPC dashboards and reliable supervision, these changes generate near-term cost offsets and long-run productivity gains while improving safety and equity [2], [3], [4], [9], [28], [36], [55], [56].

8. Ethical, Legal, and Data-Governance Issues

Psychiatric safety improvement must be grounded in rights-based, least-restrictive care. International human-rights law, especially the UN Convention on the Rights of Persons with Disabilities (CRPD), requires services to prevent degrading treatment, ensure equal recognition before the law, and provide supports for decision-making; restrictive measures must be exceptional, proportionate, and reviewable [57]. The WHO's guidance on community mental health services operationalizes these duties through person-centred models, co-production, and governance that continually monitors coercion, appeals mechanisms, and equity impacts [34]. These principles frame QI: teams should pair harm-reduction aims (e.g., restraint reduction) with balancing measures (staff injury, absconding) and routine post-event learning (e.g., Six Core Strategies) to avoid shifting risk while strengthening accountability and transparency [27].

Consent and autonomy require communication supports, advance preferences, and culturally safe practice; where capacity is impaired, substitute or supported decision-making must follow clear legal standards, with time-limited review and documentation of the least-restrictive alternative [59], [60].

Data governance underpins trustworthy improvement. Health data must meet lawfulness, purpose-limitation, data-minimization, and security standards (e.g., GDPR; HIPAA Privacy Rule) with role-based access, audit trails, and proportional retention [58], [59]. For digital tools and AI, WHO recommends documented intended use, performance and bias testing on local populations, human oversight, and post-deployment monitoring for drift or inequity [60]. Dashboards and SPC charts should be de-identified where possible; when identifiable, they require legitimate basis, minimum necessary fields, and explicit rules for secondary use [58], [59], [60].

Fairness and non-discrimination demand equity stratification (age, sex, socioeconomic proxy) of key safety indicators and periodic governance review of disparities. Adoption of digital clinical decision support should meet independent evidence standards for effectiveness, privacy, and security before scale-up [61]. These guardrails align with the manuscript's rights- and equity-centred QI stance.

9. Discussion

This review shows that psychiatric safety improves most reliably when CMO patterns are engineered, not merely when isolated tools are adopted. Across settings, pairing a standardized core (e.g., de-escalation routines, post-event learning, metabolic bundles) with locally adaptable workflows, and wiring real-time feedback into daily work, yielded durable harm reduction without offsetting increases in absconding or staff injury [26], [27], [41], [42].

Our findings align with and extend prior evidence. The Safewards trial demonstrated reductions in conflict/containment on acute wards when teams rehearsed practical scripts and mutual-help cues [26]. The Six Core Strategies framework consistently linked leadership, workforce development, and post-event debriefing to restraint/seclusion declines [27]. Critically, programs that treated data as a tool for learning—using run/SPC charts reviewed in huddles and governance, distinguished signal from noise and prevented regression during staff turnover or supply disruptions [41], [42].

Implementation matters as much as intervention content. Determinants synthesized in CFIR (e.g., leadership engagement, available resources, compatibility with workflows) and strategy menus from ERIC (champions, audit-and-feedback, training/technical assistance, adapting while protecting core components) explain why similar bundles flourish in some units but stall in others [17] ,[49]. Tracking implementation outcomes, acceptability, feasibility, fidelity, penetration, sustainability, helped teams see when a change was not yet "ready to spread," averting premature scale-up

[48]. Safety science perspectives (Safety-II, High-Reliability Organizing) clarify how to make the safe action the easy action: sensitivity to operations, deference to frontline expertise, and a psychologically safe culture where staff and service users speak up about weak signals before they become harm [23], [24].

For LMIC and primary-care interfaces, mhGAP-aligned task sharing, clear referral rules, and supervision cadence allowed scale without proportional budget growth; this is consistent with economic data on the cost-effectiveness and ROI of scaled common-disorder care [28], [56]. However, workforce strain and inequities, exposed during COVID-19, remain rate-limiting steps, requiring governance that monitors coercion, equity gaps, and staff well-being [1].

Limitations of the evidence include heterogeneous designs (before–after, practice-based QI) and variable reporting of balancing measures; nonetheless, coherence of CMO patterns, replication across settings, and SPC-demonstrated shifts increase confidence.

Future work should prioritize pragmatic/cluster trials of safety bundles, validated patient-reported safety measures, equity-stratified dashboards, and rigorous evaluation/assurance of digital decision support before scale-up [41], [42], [28], [61].

10. Conclusion

Psychiatric safety can be designed, not merely hoped for. Across heterogeneous settings, the strongest and most durable gains arose when teams paired a standardized core of change ideas (e.g., de-escalation routines, post-event learning, metabolic bundles) with locally adaptable workflows and real-time feedback using run/SPC charts. Implementation quality was decisive: addressing context via CFIR determinants (leadership, resources, workflow fit) and protecting fidelity during adaptation distinguished successful programs from stalled ones.

Scale and equity improved when primary-care platforms adopted mhGAP-aligned pathways with clear referral rules, supervision cadence, and shared indicators, allowing reach to expand without proportional budgets. Economic evidence suggests that such portfolios, safer transitions, de-escalation, metabolic monitoring, produce near-term cost offsets and favorable returns on investment at scale, particularly in LMICs.

Finally, a rights-based stance is non-negotiable: restraint reduction, data transparency, and co-production must proceed within least-restrictive, accountable governance frameworks that monitor coercion and disparities.

To move beyond do no harm, build a learning system, routine QI discipline, Safety-II/HRO ways of working, and equity-aware measurement embedded in daily practice, so psychiatric services achieve safer care without creating new harms, and do so sustainably.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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